



## new tests fri

AMD Ryzen Threadripper 3990X 64-Core testing with a Gigabyte TRX40 AORUS PRO WIFI (F6 BIOS) and AMD Radeon RX 5700 8GB on Ubuntu 23.04 via the Phoronix Test Suite.

### Automated Executive Summary

*a had the most wins, coming in first place for 69% of the tests.*

*Based on the geometric mean of all complete results, the fastest (a) was 1.005x the speed of the slowest (d). b was 0.996x the speed of a, c was 0.999x the speed of b, d was 0.999x the speed of c.*

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

*John The Ripper (Test: MD5) at 1.034x*

*Glibc Benchmarks (Benchmark: sqrt) at 1.031x*

*John The Ripper (Test: bcrypt) at 1.025x*

*Glibc Benchmarks (Benchmark: exp) at 1.022x*

*Glibc Benchmarks (Benchmark: sinh) at 1.019x*

*Darmstadt Automotive Parallel Heterogeneous Suite (Backend: OpenMP - Kernel: Euclidean Cluster) at 1.014x*

*Glibc Benchmarks (Benchmark: modf) at 1.014x*

*John The Ripper (Test: WPA PSK) at 1.011x*

*Glibc Benchmarks (Benchmark: cos) at 1.011x*

Darmstadt Automotive Parallel Heterogeneous Suite (Backend: OpenMP - Kernel: NDT Mapping) at 1.011x.

## Test Systems:

a

b

c

d

Processor: AMD Ryzen Threadripper 3990X 64-Core @ 2.90GHz (64 Cores / 128 Threads), Motherboard: Gigabyte TRX40 AORUS PRO WIFI (F6 BIOS), Chipset: AMD Starship/Matisse, Memory: 128GB, Disk: Samsung SSD 970 EVO Plus 500GB, Graphics: AMD Radeon RX 5700 8GB (1750/875MHz), Audio: AMD Navi 10 HDMI Audio, Monitor: DELL P2415Q, Network: Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 23.04, Kernel: 6.1.0-16-generic (x86\_64), Desktop: GNOME Shell, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 22.3.6 (LLVM 15.0.7 DRM 3.49), Compiler: GCC 12.2.0, File-System: ext4, Screen Resolution: 3840x2160

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-multiaarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-defaulted --enable-offload-targets=nvptx-none=/build/gcc-12-TwSidC/gcc-12-12.2.0/debian/tmp-nvptx/usr,amdgc-n-amdhsa=/build/gcc-12-TwSidC/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) - CPU Microcode: 0x8301055

Security Notes: itlb\_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio\_stale\_data: Not affected + retbleed: Mitigation of untrained return thunk; SMT enabled with STIBP protection + spec\_store\_bypass: Mitigation of SSB disabled via prctl + spectre\_v1: Mitigation of usercopy/swappgs barriers and \_\_user pointer sanitization + spectre\_v2: Mitigation of Retpolines IBPB: conditional STIBP: always-on RSB filling PBRBS-eIBRS: Not affected + srbds: Not affected + tsx\_async\_abort: Not affected

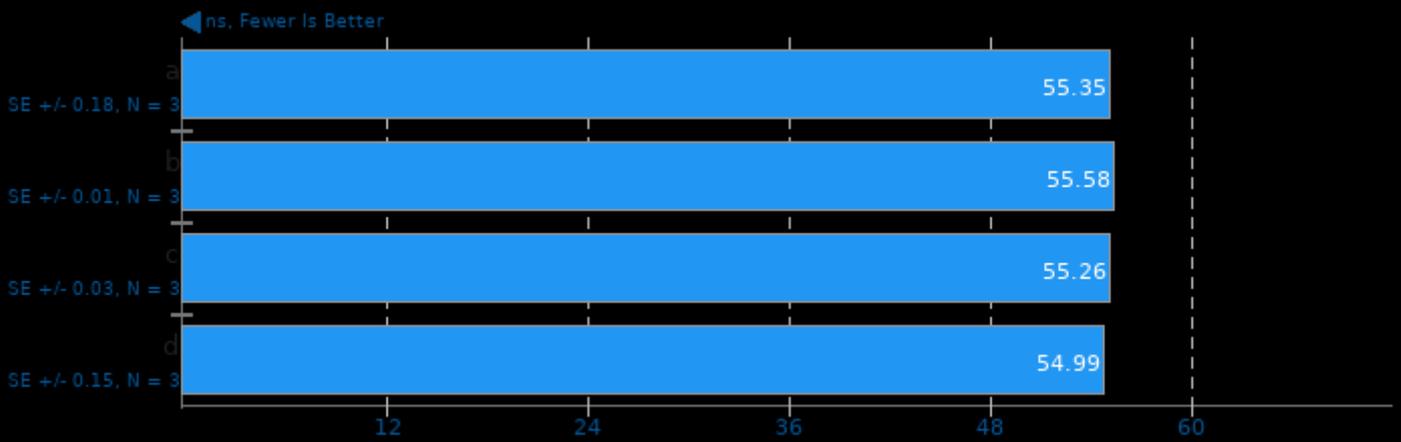
	a	b	c	d
<b>Glibc Benchmarks - cos (ns)</b>	55.3477	<b>55.5809</b>	55.2566	<b>54.9880</b>
Normalized	99.35%	98.93%	99.51%	100%
Standard Deviation	0.6%	0%	0.1%	0.5%
<b>Glibc Benchmarks - exp (ns)</b>	<b>13.0530</b>	13.1305	<b>13.3450</b>	13.1919
Normalized	100%	99.41%	97.81%	98.95%
Standard Deviation	2.5%	2.5%	0.6%	2.5%
<b>Glibc Benchmarks - ffs (ns)</b>	<b>5.39243</b>	5.41915	<b>5.42256</b>	5.40912
Normalized	100%	99.51%	99.44%	99.69%
Standard Deviation	0.3%	0.2%	0.2%	0%
<b>Glibc Benchmarks - pow (ns)</b>	<b>32.2750</b>	<b>32.3908</b>	32.3694	32.3629
Normalized	100%	99.64%	99.71%	99.73%

	Standard Deviation	1%	0.5%	0.3%	0.1%
<b>Glibc Benchmarks - sin (ns)</b>		<b>47.8809</b>	<b>48.2404</b>	48.1999	48.1882
	Normalized	100%	99.25%	99.34%	99.36%
	Standard Deviation	0.1%	0%	0.3%	0.2%
<b>Glibc Benchmarks - log2 (ns)</b>		<b>16.8289</b>	16.9105	16.9162	<b>16.9563</b>
	Normalized	100%	99.52%	99.48%	99.25%
	Standard Deviation	0%	0.2%	0.1%	0.1%
<b>Glibc Benchmarks - modf (ns)</b>		<b>6.06947</b>	6.13084	<b>6.15395</b>	6.10661
	Normalized	100%	99%	98.63%	99.39%
	Standard Deviation	0.2%	0.9%	1.3%	0.1%
<b>Glibc Benchmarks - sinh (ns)</b>		<b>21.2619</b>	21.5250	21.6137	<b>21.6726</b>
	Normalized	100%	98.78%	98.37%	98.1%
	Standard Deviation	2%	1.3%	2.5%	0.9%
<b>Glibc Benchmarks - sqrt (ns)</b>		<b>6.97099</b>	6.93358	6.76053	<b>6.75908</b>
	Normalized	96.96%	97.48%	99.98%	100%
	Standard Deviation	4.7%	4.4%	0.1%	0%
<b>Glibc Benchmarks - tanh (ns)</b>		<b>29.6581</b>	29.8407	29.8713	<b>29.8891</b>
	Normalized	100%	99.39%	99.29%	99.23%
	Standard Deviation	0.1%	0.1%	0.2%	0.1%
<b>Glibc Benchmarks - asinh (ns)</b>		<b>24.1440</b>	24.2571	24.2619	<b>24.3583</b>
	Normalized	100%	99.53%	99.51%	99.12%
	Standard Deviation	0.1%	0%	0%	0.8%
<b>Glibc Benchmarks - atanh (ns)</b>		<b>28.9581</b>	<b>29.1805</b>	29.1086	29.0810
	Normalized	100%	99.24%	99.48%	99.58%
	Standard Deviation	0.2%	0.3%	0.1%	0.2%
<b>Glibc Benchmarks - ffsll (ns)</b>		<b>4.70755</b>	<b>4.74857</b>	4.74260	4.74132
	Normalized	100%	99.14%	99.26%	99.29%
	Standard Deviation	0.1%	0.2%	0.1%	0.1%
<b>Glibc Benchmarks - sincos (ns)</b>		<b>32.4657</b>	32.7399	32.6723	<b>32.7872</b>
	Normalized	100%	99.16%	99.37%	99.02%
	Standard Deviation	0.4%	0.3%	0.4%	0.3%
<b>Glibc Benchmarks - pthread_once</b>		<b>4.69876</b>	<b>4.73469</b>	4.73092	4.72915
	Normalized	100%	99.24%	99.32%	99.36%
	Standard Deviation	0%	0.1%	0%	0%
<b>John The Ripper - bcrypt (Real C/S)</b>		84782	<b>85926</b>	85667	<b>83811</b>
	Normalized	98.67%	100%	99.7%	97.54%
	Standard Deviation	2.5%	2.1%	0.5%	2.5%
<b>John The Ripper - WPA PSK (Real</b>		172338	172039	<b>172456</b>	<b>170537</b>
	Normalized	99.93%	99.76%	100%	98.89%
	Standard Deviation	0.9%	0.9%	1%	0.9%
<b>John The Ripper - Blowfish (Real C/S)</b>		<b>84247</b>	84013	84163	<b>83568</b>
	Normalized	100%	99.72%	99.9%	99.19%
	Standard Deviation	0.4%	0.6%	0.5%	0.6%
<b>John The Ripper - HMAC-SHA512</b>		<b>42626667</b>	42629000	42689000	<b>42706667</b>
	(Real C/S)				
	Normalized	99.81%	99.82%	99.96%	100%
	Standard Deviation	1.5%	0.1%	0.6%	0.5%
<b>John The Ripper - MD5 (Real C/S)</b>		3101333	<b>3109000</b>	<b>3007750</b>	3040143
	Normalized	99.75%	100%	96.74%	97.79%
	Standard Deviation	2%	2.5%	2.4%	2.5%

<b>Darmstadt Automotive Parallel Heterogeneous Suite - OpenMP - NDT Mapping (Test Cases/min)</b>	<b>1037</b>	1031	1033	<b>1026</b>
Normalized	100%	99.39%	99.59%	98.93%
Standard Deviation	0.3%	0.2%	0.5%	0.2%
<b>Darmstadt Automotive Parallel Heterogeneous Suite - OpenMP - Points2Image (Test Cases/min)</b>	16359	16329	<b>16461</b>	<b>16317</b>
Normalized	99.38%	99.2%	100%	99.12%
Standard Deviation	0.6%	0.2%	0.7%	0.8%
<b>Darmstadt Automotive Parallel Heterogeneous Suite - OpenMP - Euclidean Cluster (Test Cases/min)</b>	<b>1242</b>	1230	<b>1224</b>	1239
Normalized	100%	99.09%	98.58%	99.81%
Standard Deviation	0.4%	0.7%	0.3%	0.4%

## Glibc Benchmarks 2.37

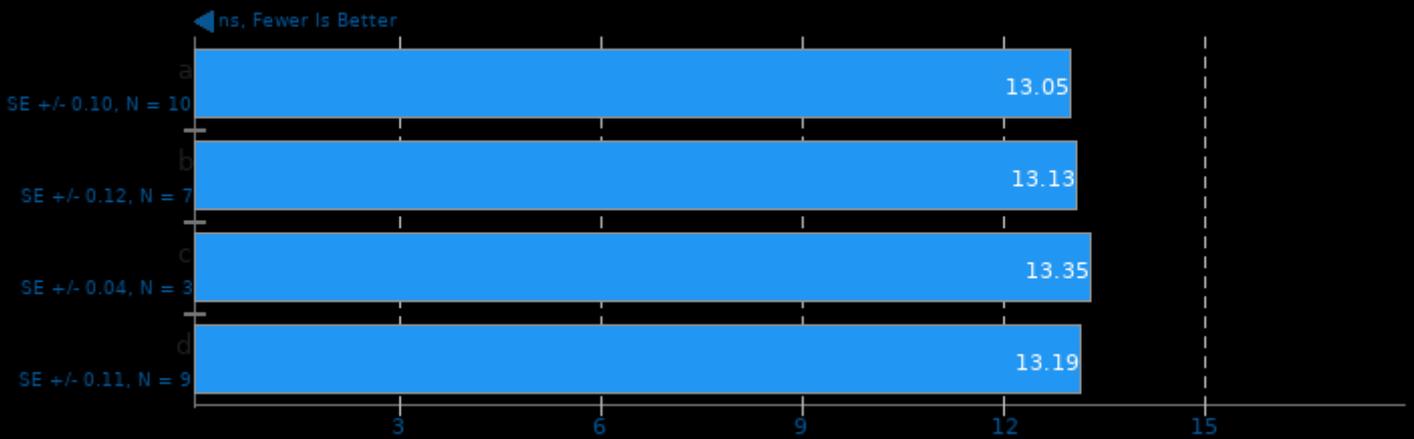
Benchmark: cos



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc\_s

## Glibc Benchmarks 2.37

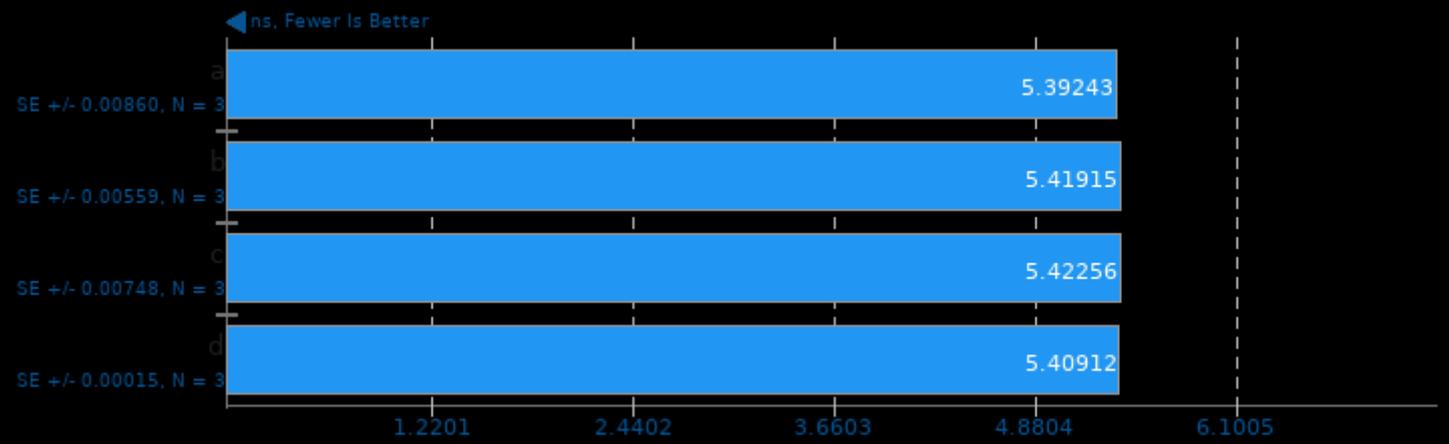
Benchmark: exp



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc\_s

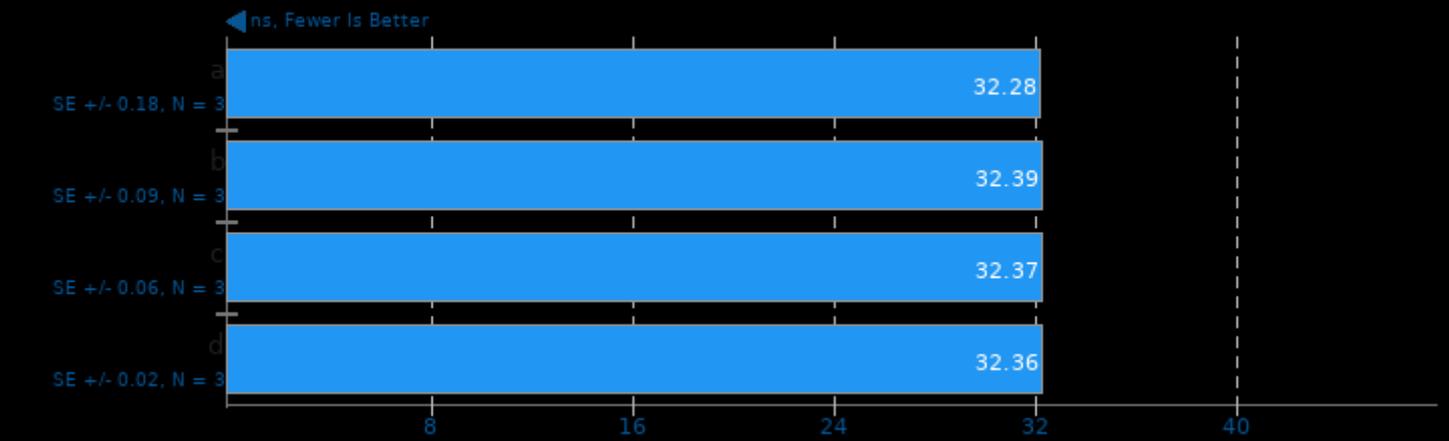
## Glibc Benchmarks 2.37

Benchmark: ffs



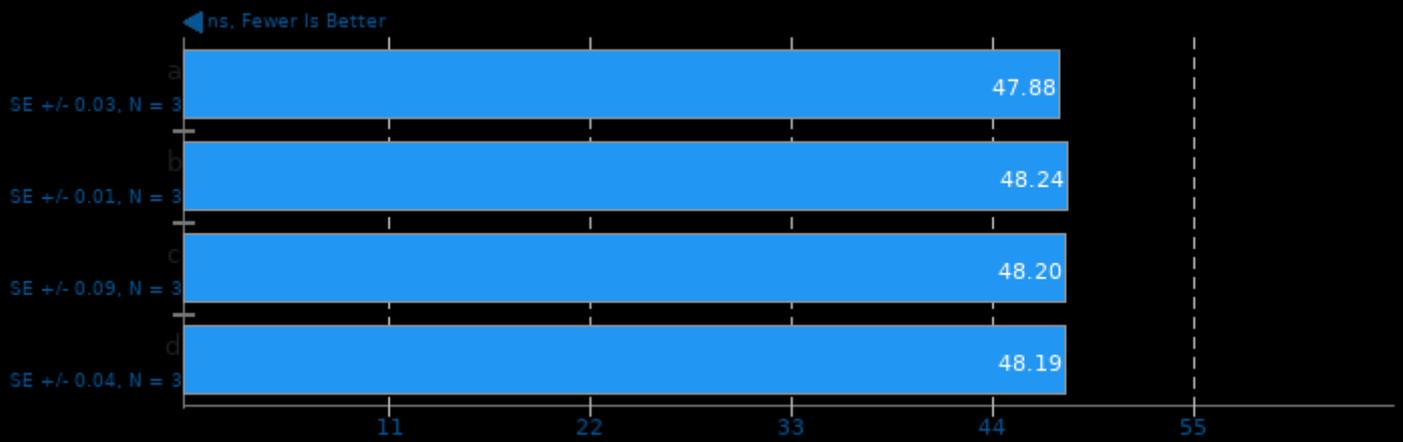
## Glibc Benchmarks 2.37

Benchmark: pow



## Glibc Benchmarks 2.37

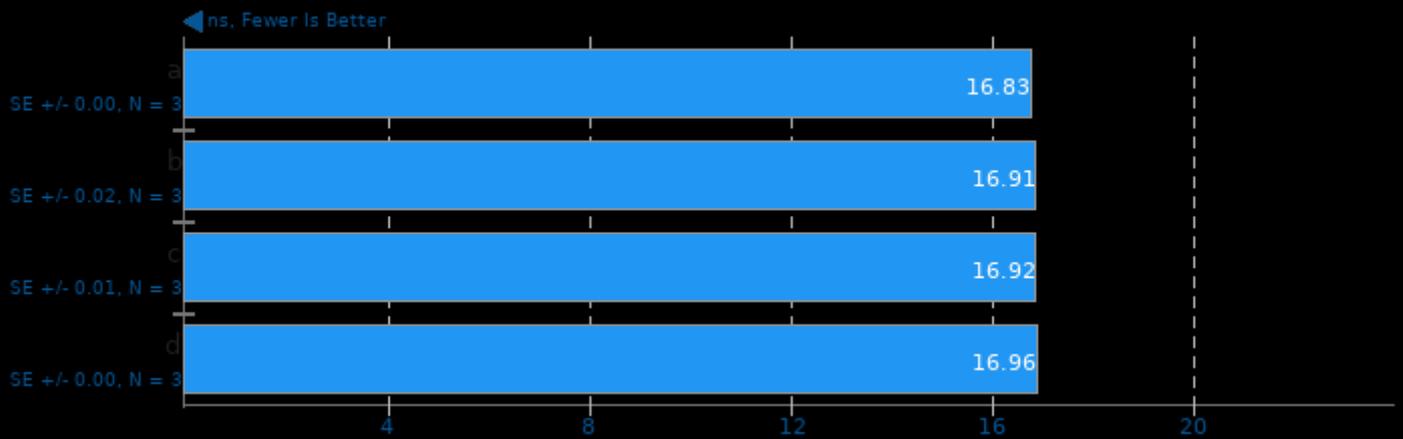
Benchmark: sin



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc\_s

## Glibc Benchmarks 2.37

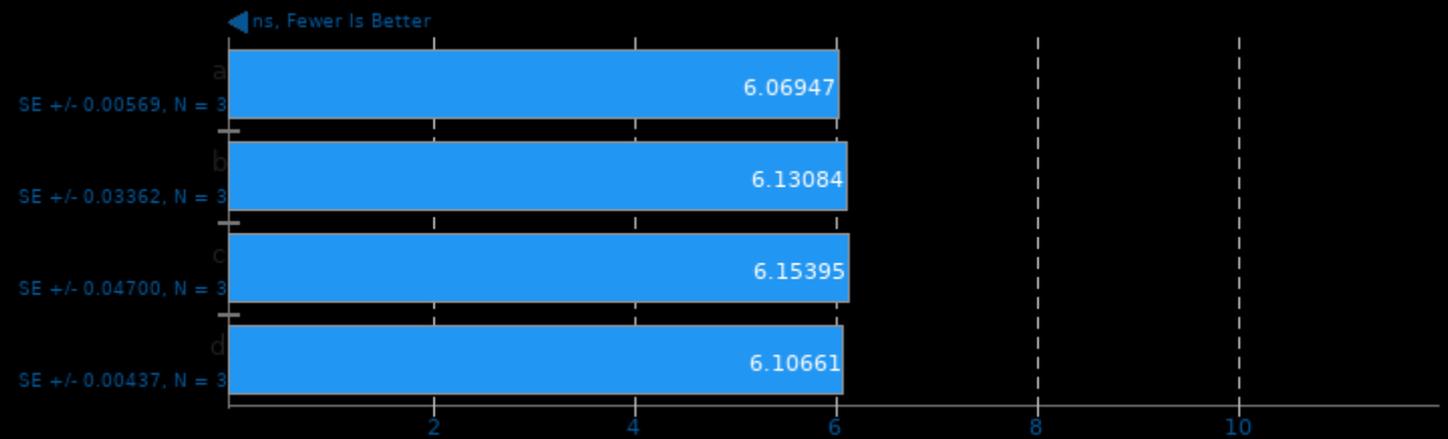
Benchmark: log2



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc\_s

## Glibc Benchmarks 2.37

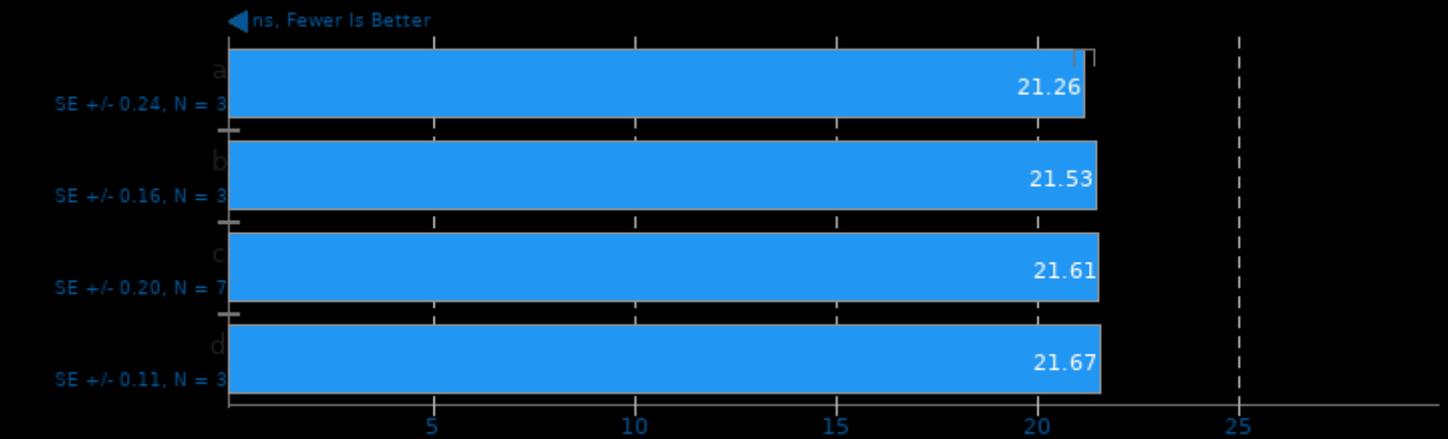
Benchmark: modf



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc\_s

## Glibc Benchmarks 2.37

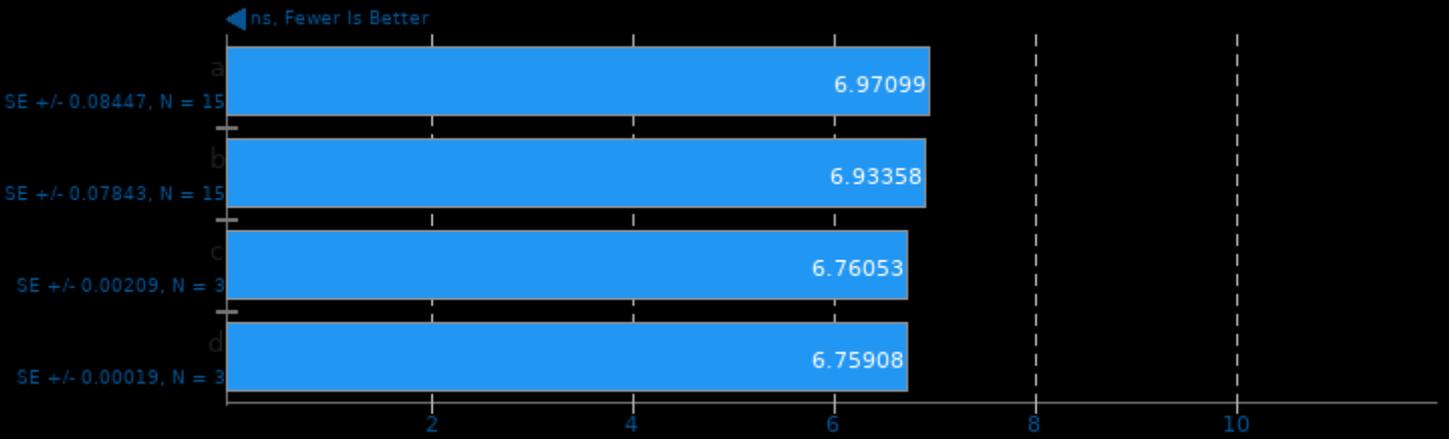
Benchmark: sinh



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc\_s

## Glibc Benchmarks 2.37

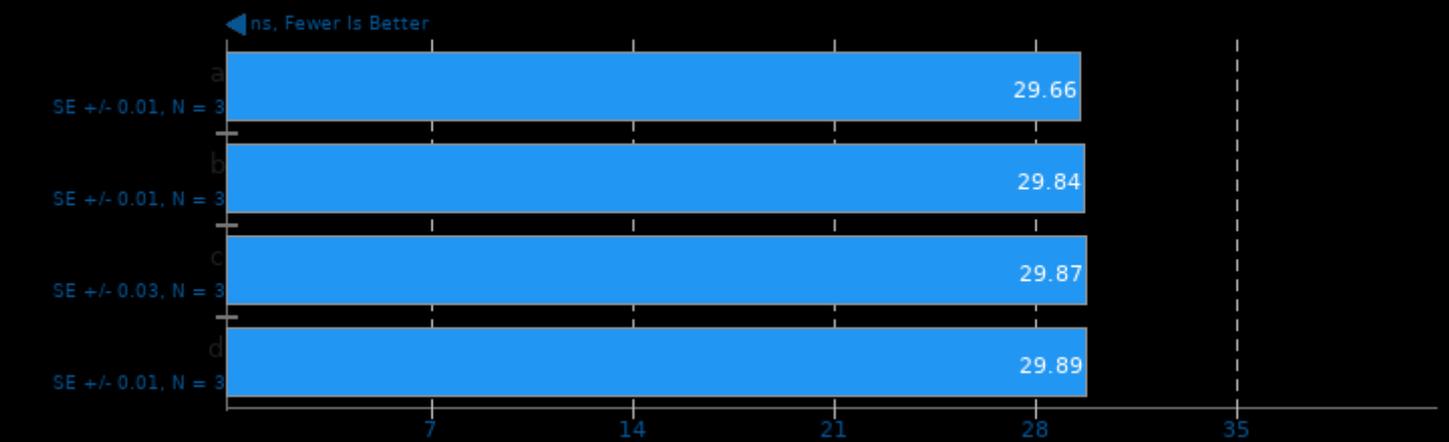
Benchmark: sqrt



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc\_s

## Glibc Benchmarks 2.37

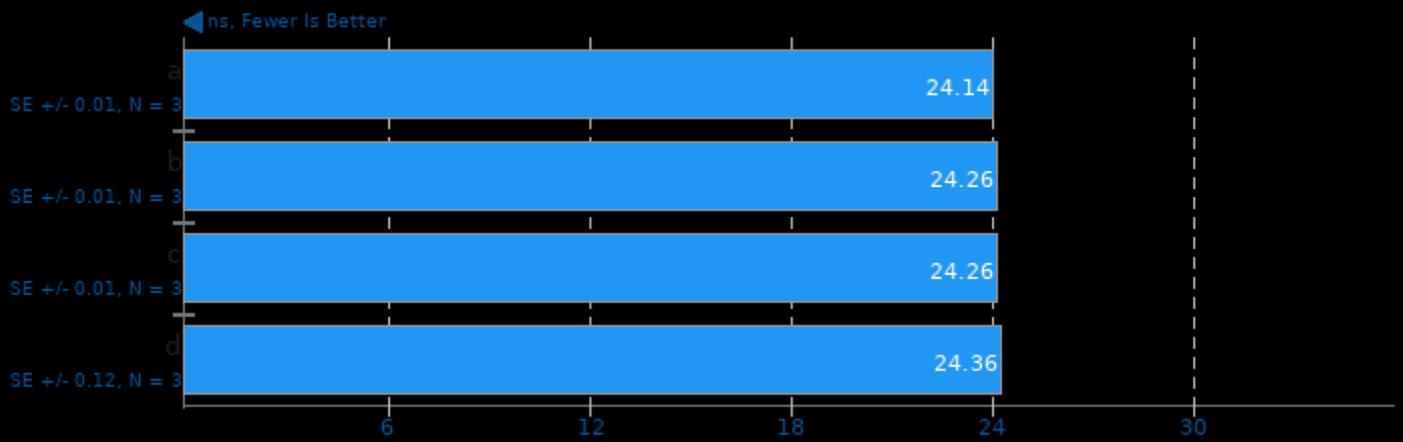
Benchmark: tanh



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc\_s

## Glibc Benchmarks 2.37

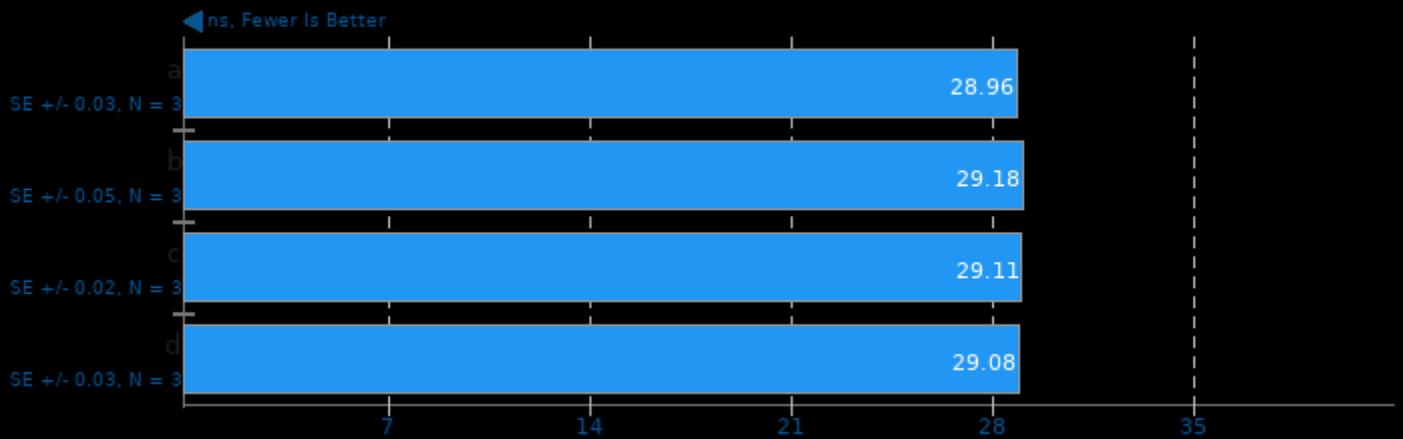
Benchmark: asinh



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc\_s

## Glibc Benchmarks 2.37

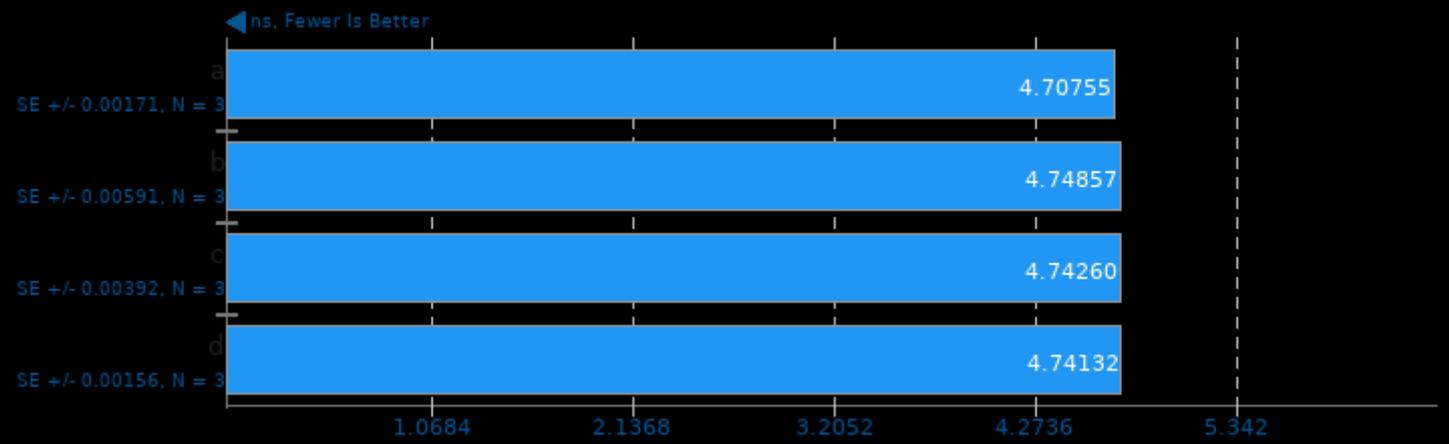
Benchmark: atanh



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc\_s

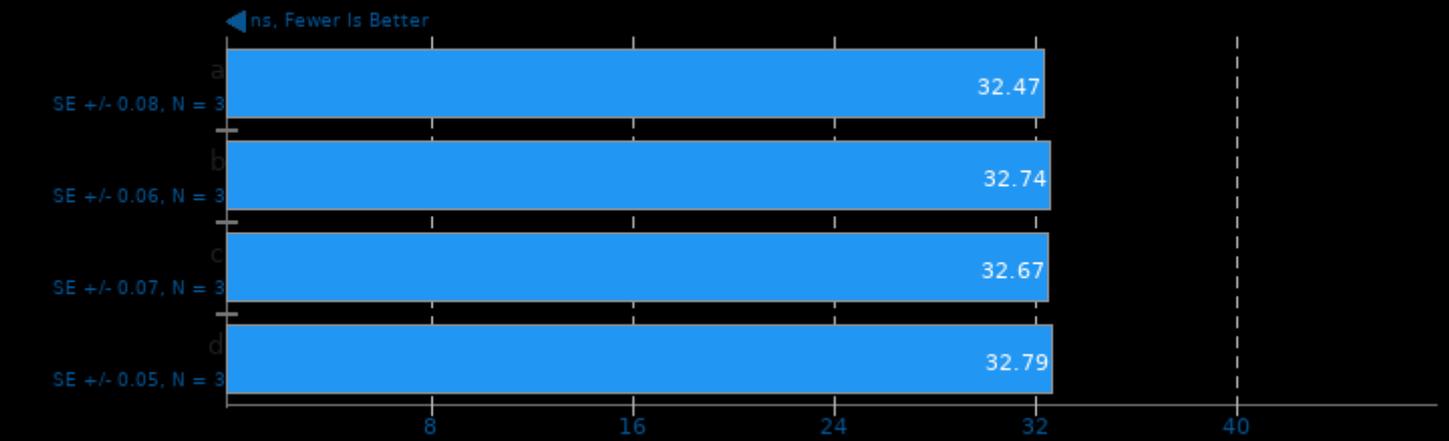
## Glibc Benchmarks 2.37

Benchmark: ffsll



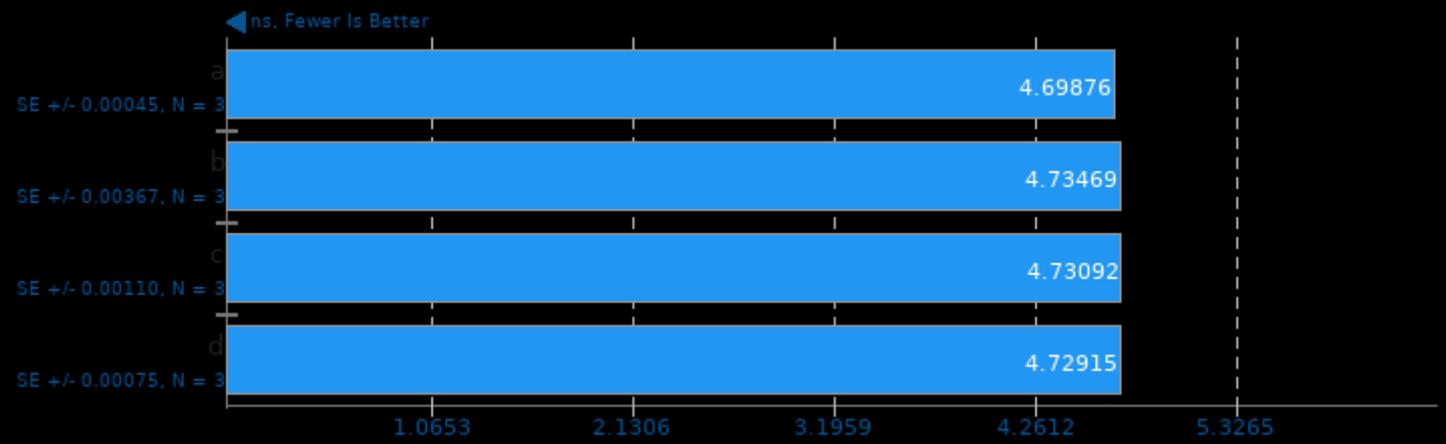
## Glibc Benchmarks 2.37

Benchmark: sincos



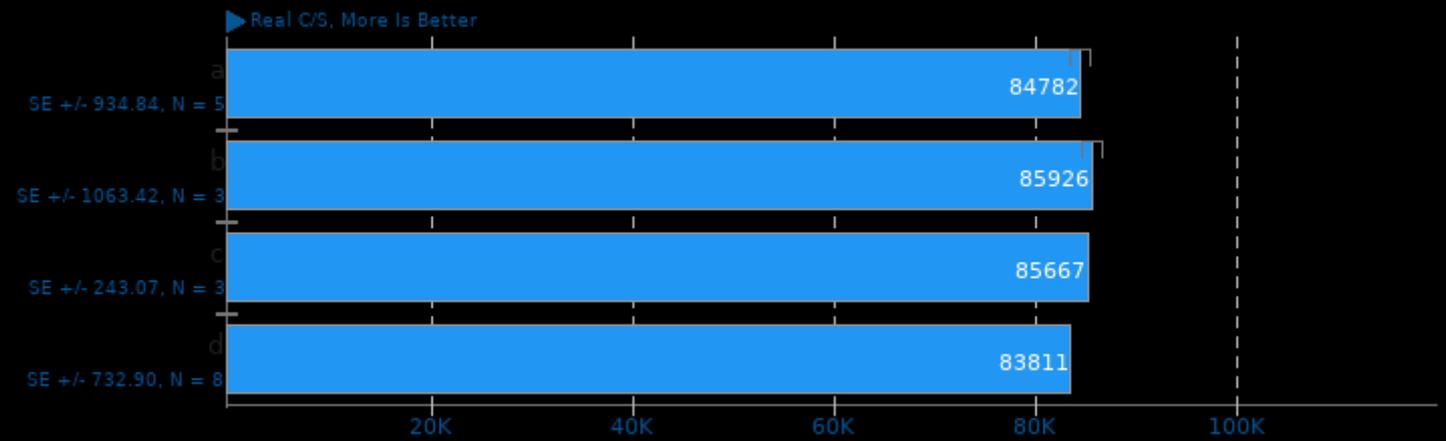
### Glibc Benchmarks 2.37

Benchmark: pthread\_once



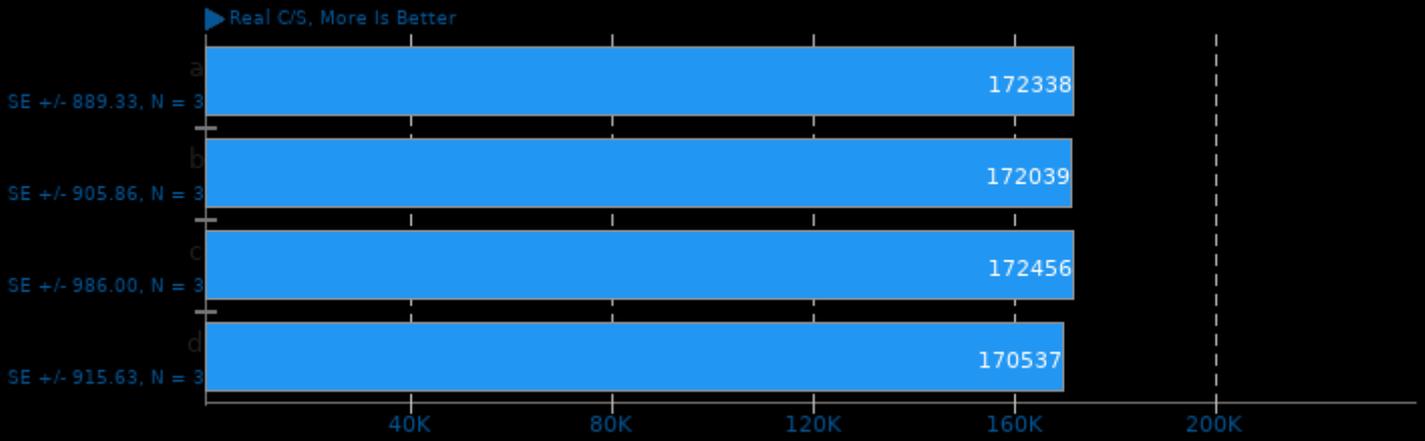
### John The Ripper 2023.03.14

Test: bcrypt



### John The Ripper 2023.03.14

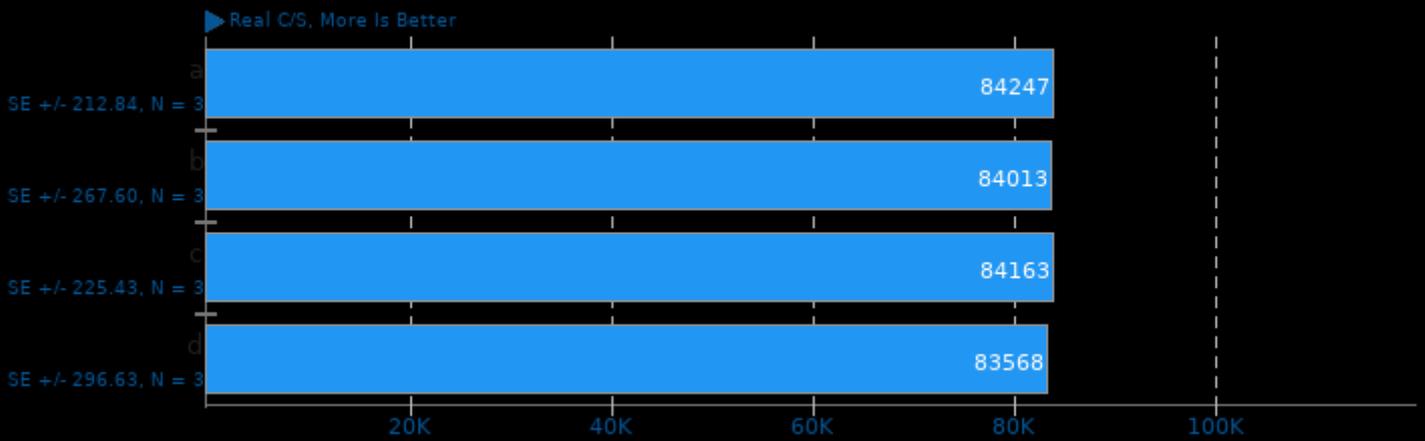
Test: WPA PSK



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -lm -lrt -lz -ldl -lcrypt -lbz2

### John The Ripper 2023.03.14

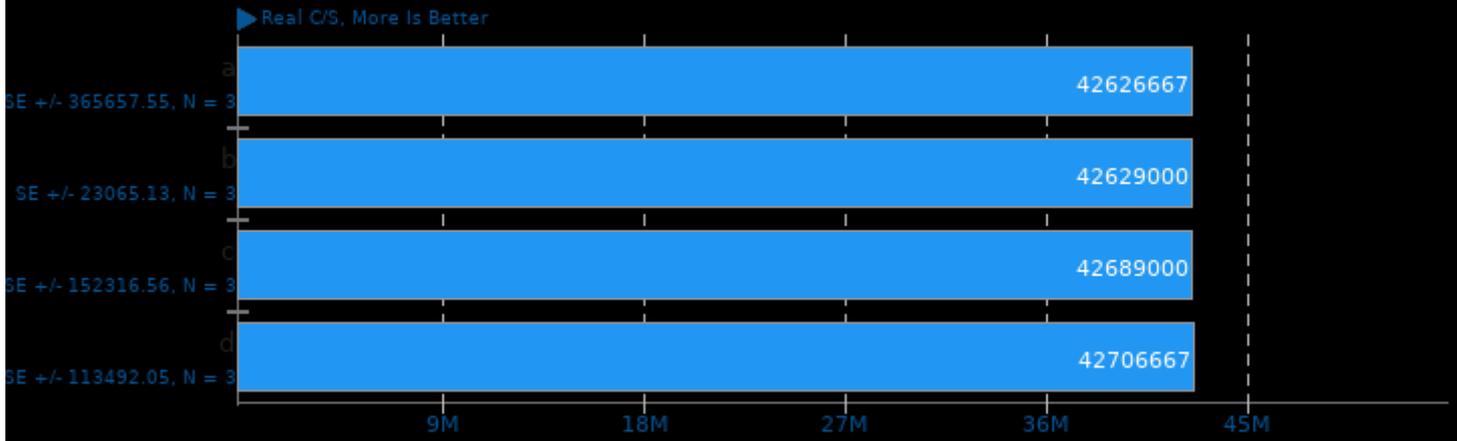
Test: Blowfish



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -lm -lrt -lz -ldl -lcrypt -lbz2

### John The Ripper 2023.03.14

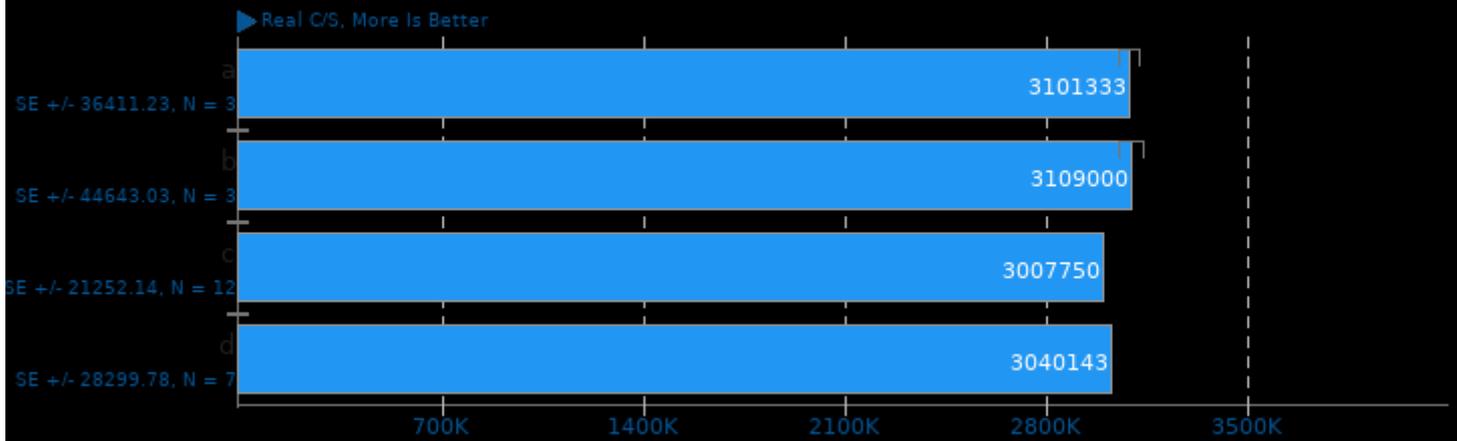
Test: HMAC-SHA512



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -lm -lrt -lz -ldl -lcrypt -lbz2

### John The Ripper 2023.03.14

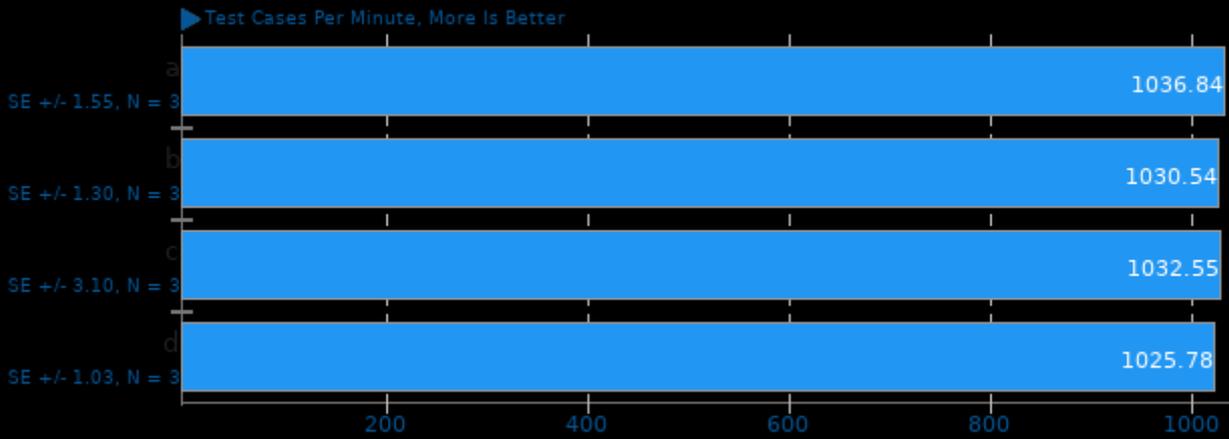
Test: MD5



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -lm -lrt -lz -ldl -lcrypt -lbz2

### Darmstadt Automotive Parallel Heterogeneous Suite 2021.11.02

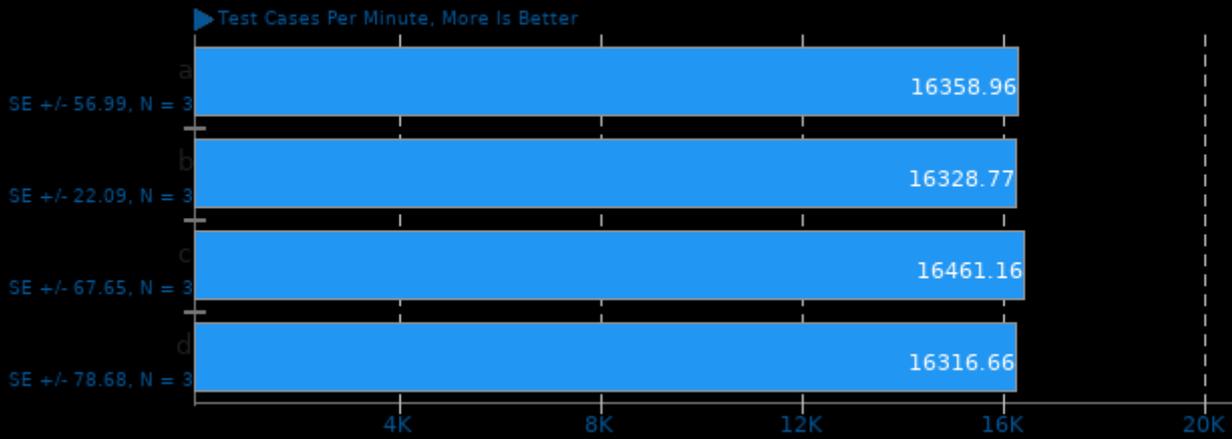
Backend: OpenMP - Kernel: NDT Mapping



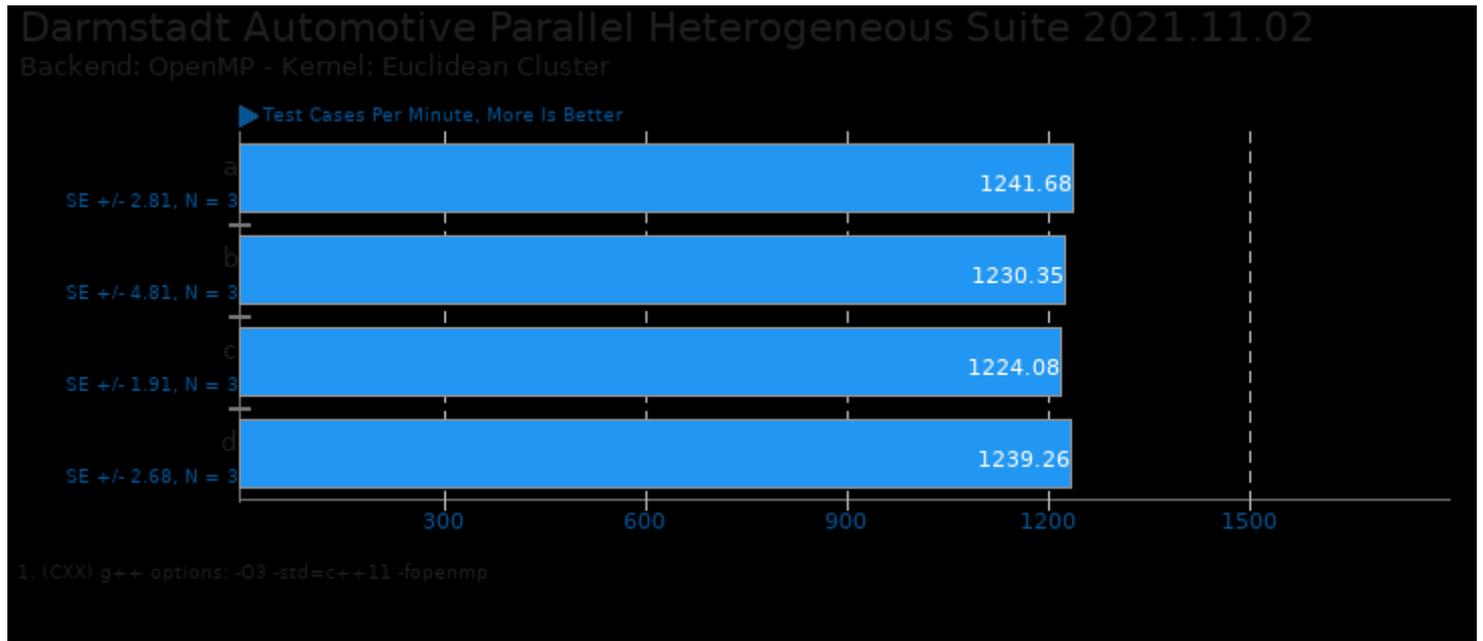
1. (CXX) g++ options: -O3 -std=c++11 -fopenmp

### Darmstadt Automotive Parallel Heterogeneous Suite 2021.11.02

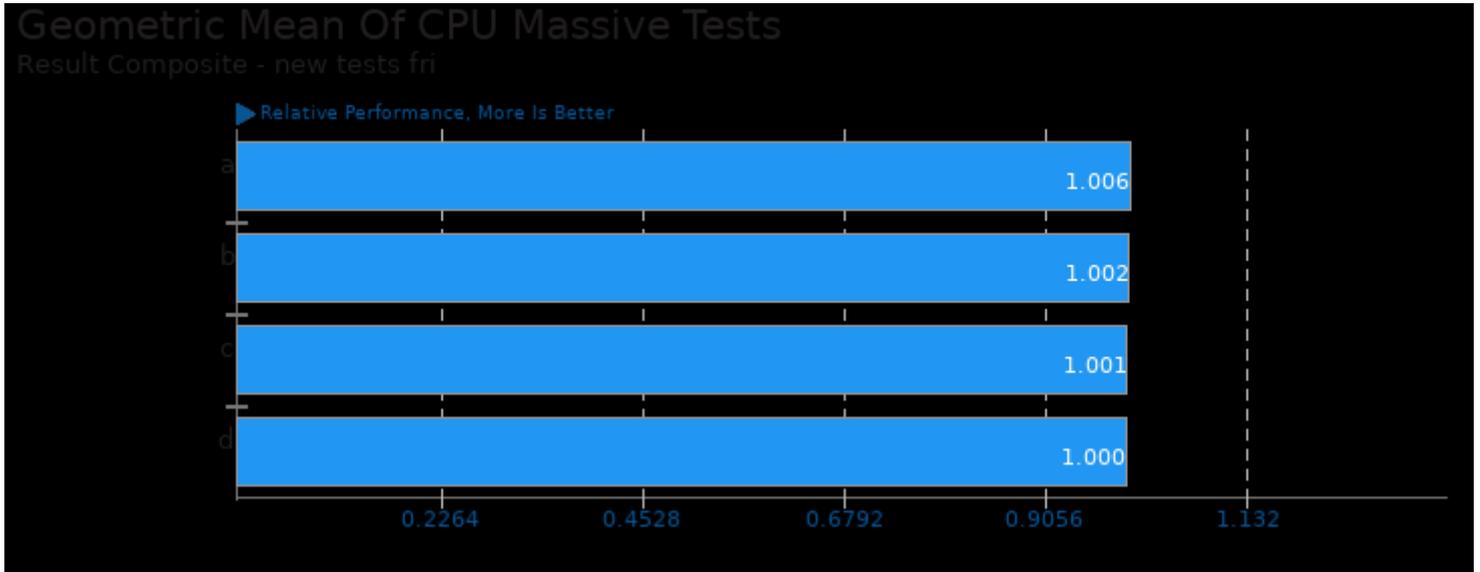
Backend: OpenMP - Kernel: Points2Image



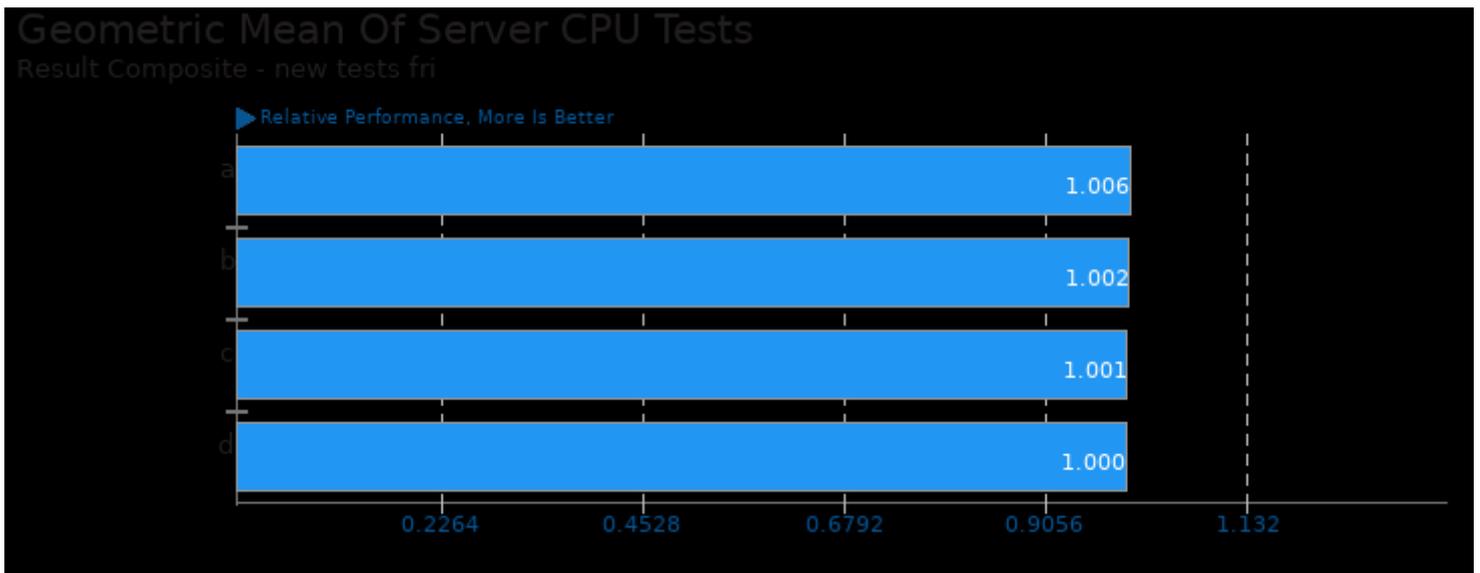
1. (CXX) g++ options: -O3 -std=c++11 -fopenmp



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



Geometric mean based upon tests: pts/glibc-bench and pts/john-the-ripper



Geometric mean based upon tests: pts/john-the-ripper and pts/glibc-bench

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 09:35.*