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**worldzhang**

KVM testing on CentOS Linux 8 via the Phoronix Test Suite.

## **Test Systems:**

**s52xl16.x86.tx-smallpt**

**s52xl16.x86.tx-coremark**

**s52xl16.x86.tx-cache-read**

**s52xl16.x86.tx-ipc**

**s52xl16.x86.tx-glibc**

**s52xl16.x86.tx-7zip**

Processor: Intel Xeon Platinum 8255C (8 Cores), Motherboard: Tencent Cloud CVM v3.0

(seabios-1.9.1-qemu-project.org BIOS), Chipset: Intel 440FX 82441FX PMC, Memory: 1 x 16384 MB RAM Smdbmnds, Disk: 50GB, Graphics: Cirrus Logic GD 5446, Network: Red Hat Virtio device

OS: CentOS Linux 8, Kernel: 4.18.0-80.el8.x86\_64 (x86\_64), Compiler: GCC 8.3.1 20191121, File-System: ext4, Screen Resolution: 1024x768, System Layer: KVM

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: CPU Microcode: 0x1

Security Notes: I11f: Mitigation of PTE Inversion + meltdown: Mitigation of PTI + spec\_store\_bypass: Vulnerable + spectre\_v1: Mitigation of \_\_user pointer sanitization + spectre\_v2: Mitigation of Full generic retpoline STIBP: disabled RSB filling

	s52xl16.x86.t	s52xl16.x86.t	s52xl16.x86.t	s52xl16.x86.t	s52xl16.x86.t	s52xl16.x86.t
	x-smallpt	x-coremark	x-cache-read	x-ipc	x-glibc	x-7zip
<b>Smallpt - G.I.R.1.S (sec)</b>	30.617					
Standard Deviation	0.2%					
<b>Coremark - CoreMark Size</b>		117564				
<b>666 - I.P.S (Iterations/Sec)</b>						
Standard Deviation	0.5%					
<b>CacheBench - Read (MB/s)</b>		2607				
Standard Deviation	0%					
<b>IPC_benchmark - TCP</b>				1454664		
<b>Socket - 128 (Messages/sec)</b>						
Standard Deviation	0.9%					
<b>IPC_benchmark - TCP</b>				1295148		
<b>Socket - 256 (Messages/sec)</b>						
Standard Deviation	0.1%					
<b>IPC_benchmark - TCP</b>				1243589		
<b>Socket - 512 (Messages/sec)</b>						
Standard Deviation	0.4%					
<b>IPC_benchmark - TCP</b>				1122776		
<b>Socket - 1024</b>						
Standard Deviation	0.6%					
<b>IPC_benchmark - Unnamed</b>				1194510		
<b>Pipe - 128 (Messages/sec)</b>						
Standard Deviation	7.3%					
<b>IPC_benchmark - Unnamed</b>				1183593		
<b>Pipe - 256 (Messages/sec)</b>						
Standard Deviation	4.1%					
<b>IPC_benchmark - Unnamed</b>				1109257		
<b>Pipe - 512 (Messages/sec)</b>						
Standard Deviation	2.6%					
<b>IPC_benchmark - Unnamed</b>				1075337		
<b>Pipe - 1024 (Messages/sec)</b>						
Standard Deviation	0.3%					

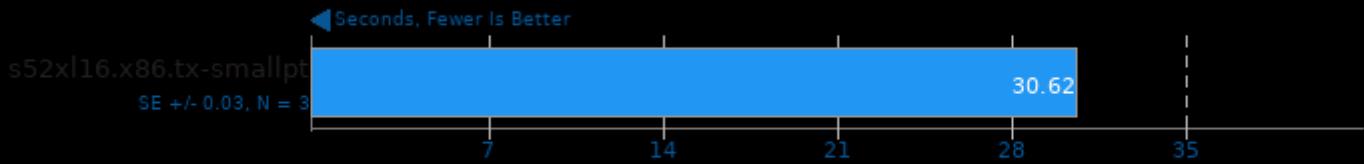
<b>IPC_benchmark - FIFO</b>		1081347
<b>Named Pipe - 128</b>		
Standard Deviation	4.6%	
<b>IPC_benchmark - FIFO</b>		1073166
<b>Named Pipe - 256</b>		
Standard Deviation	2.9%	
<b>IPC_benchmark - FIFO</b>		1053591
<b>Named Pipe - 512</b>		
Standard Deviation	2.4%	
<b>IPC_benchmark - FIFO</b>		1040619
<b>Named Pipe - 1024</b>		
Standard Deviation	3%	
<b>IPC_benchmark - U.U.D.S - 128 (Messages/sec)</b>		1033800
Standard Deviation	0.6%	
<b>IPC_benchmark - U.U.D.S - 256 (Messages/sec)</b>		969574
Standard Deviation	0.4%	
<b>IPC_benchmark - U.U.D.S - 512 (Messages/sec)</b>		976739
Standard Deviation	2.2%	
<b>IPC_benchmark - U.U.D.S - 1024 (Messages/sec)</b>		932675
Standard Deviation	2%	
<b>glibc bench - cos (nanoseconds)</b>		70.3102
Standard Deviation	0%	
<b>glibc bench - exp (nanoseconds)</b>		9.73406
Standard Deviation	0.5%	
<b>glibc bench - ffs (nanoseconds)</b>		2.40655
Standard Deviation	0.1%	
<b>glibc bench - sin (nanoseconds)</b>		69.2109
Standard Deviation	0%	
<b>glibc bench - log2 (nanoseconds)</b>		12.2887
Standard Deviation	0%	
<b>glibc bench - modf (nanoseconds)</b>		3.40040
Standard Deviation	0.2%	
<b>glibc bench - sinh (nanoseconds)</b>		15.2270
Standard Deviation	0%	
<b>glibc bench - sqrt (nanoseconds)</b>		2.73556
Standard Deviation	0.2%	
<b>glibc bench - tanh (nanoseconds)</b>		17.3603
Standard Deviation	0.1%	

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<b>glibc bench - asinh (nanoseconds)</b>	20.6506
Standard Deviation	0.1%
<b>glibc bench - atanh (nanoseconds)</b>	16.3065
Standard Deviation	0.1%
<b>glibc bench - ffsll (nanoseconds)</b>	2.41299
Standard Deviation	0%
<b>glibc bench - sincos (nanoseconds)</b>	20.3425
Standard Deviation	0.1%
<b>glibc bench - pthread_once (nanoseconds)</b>	2.43063
Standard Deviation	0.1%
<b>7-Zip Compression - C.S.T (MIPS)</b>	21029
Standard Deviation	1.5%

## Smallpt 1.0

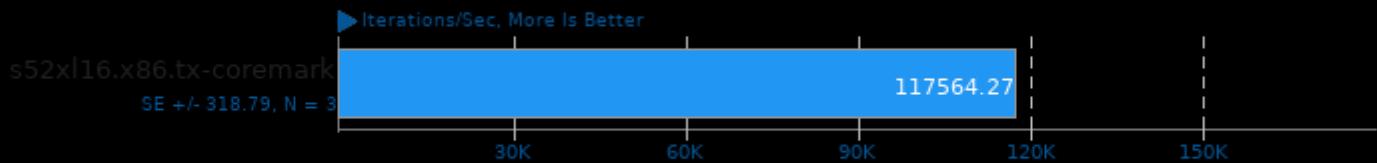
Global Illumination Renderer; 128 Samples



1. (CXX) g++ options: -fopenmp -O3

## Coremark 1.0

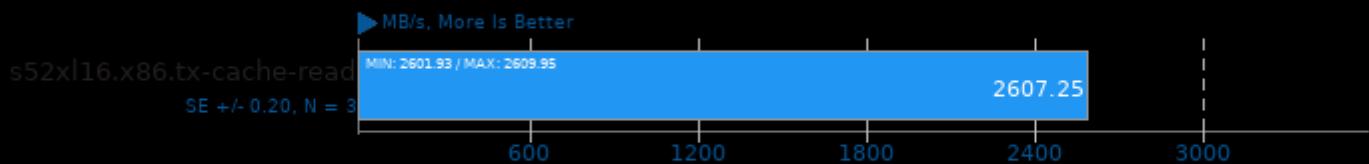
CoreMark Size 666 - Iterations Per Second



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

## CacheBench

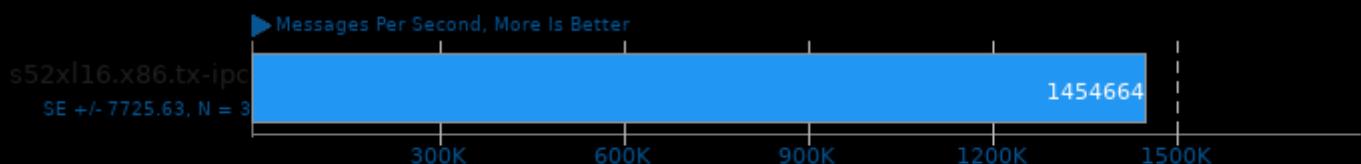
Test: Read



1. (CC) gcc options: -lrt

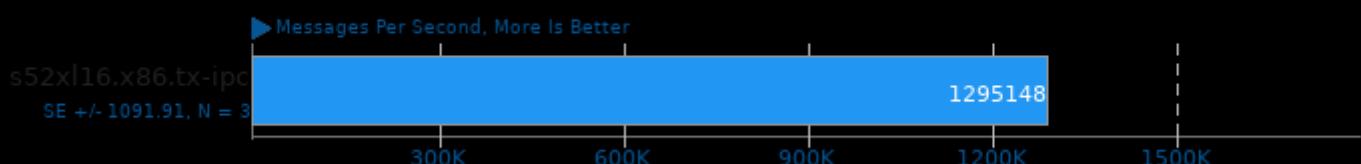
## IPC\_benchmark

Type: TCP Socket - Message Bytes: 128



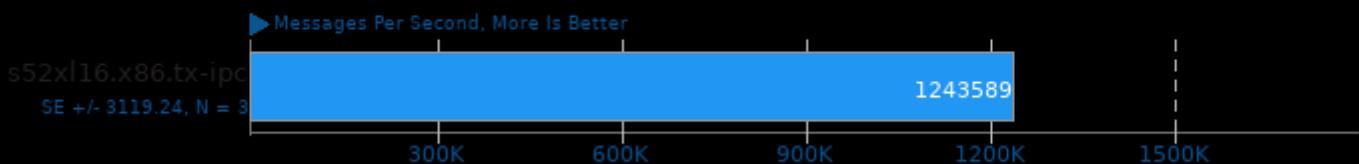
## IPC\_benchmark

Type: TCP Socket - Message Bytes: 256

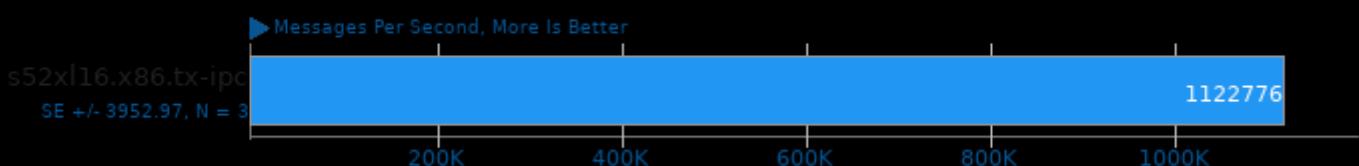


**IPC\_benchmark**

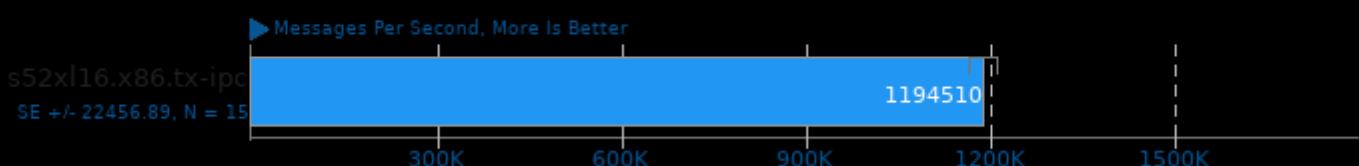
Type: TCP Socket - Message Bytes: 512

**IPC\_benchmark**

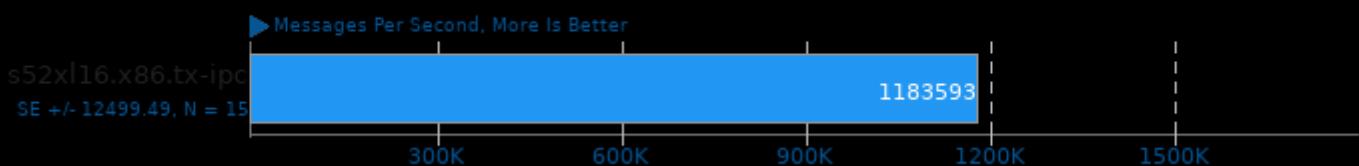
Type: TCP Socket - Message Bytes: 1024

**IPC\_benchmark**

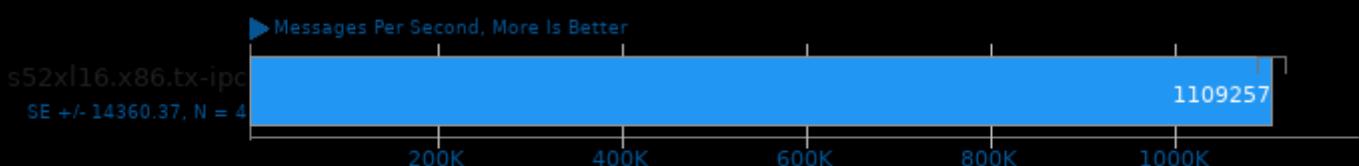
Type: Unnamed Pipe - Message Bytes: 128

**IPC\_benchmark**

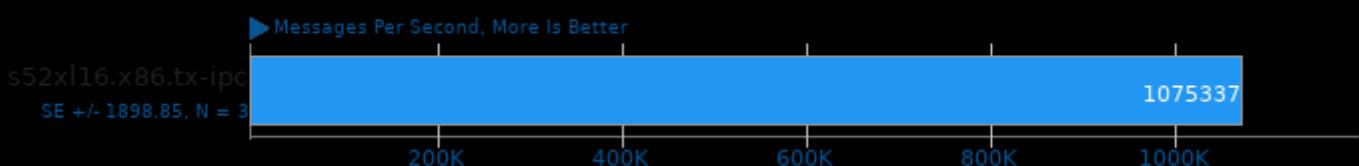
Type: Unnamed Pipe - Message Bytes: 256

**IPC\_benchmark**

Type: Unnamed Pipe - Message Bytes: 512

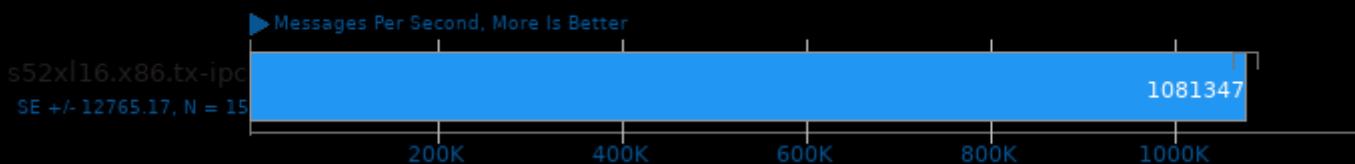
**IPC\_benchmark**

Type: Unnamed Pipe - Message Bytes: 1024

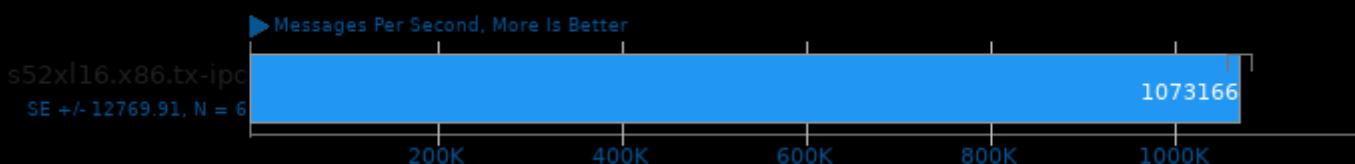


**IPC\_benchmark**

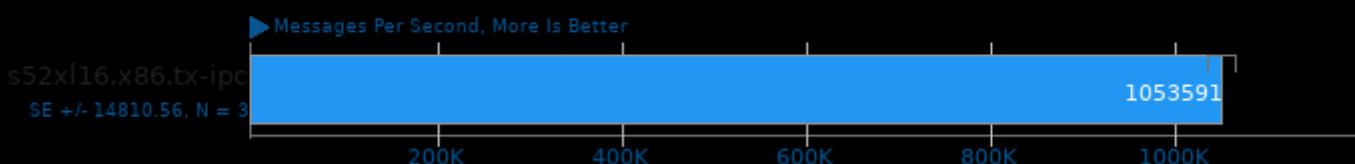
Type: FIFO Named Pipe - Message Bytes: 128

**IPC\_benchmark**

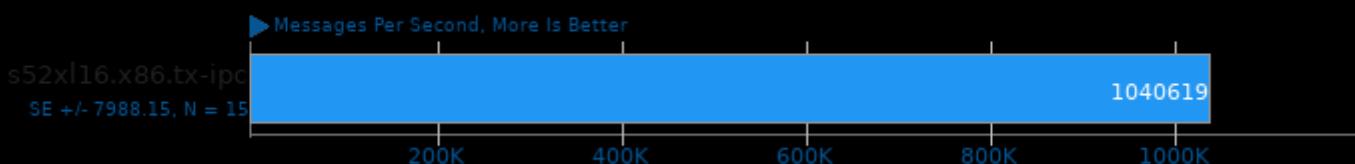
Type: FIFO Named Pipe - Message Bytes: 256

**IPC\_benchmark**

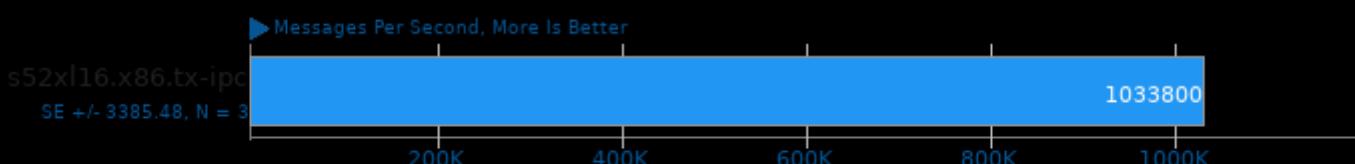
Type: FIFO Named Pipe - Message Bytes: 512

**IPC\_benchmark**

Type: FIFO Named Pipe - Message Bytes: 1024

**IPC\_benchmark**

Type: Unnamed Unix Domain Socket - Message Bytes: 128

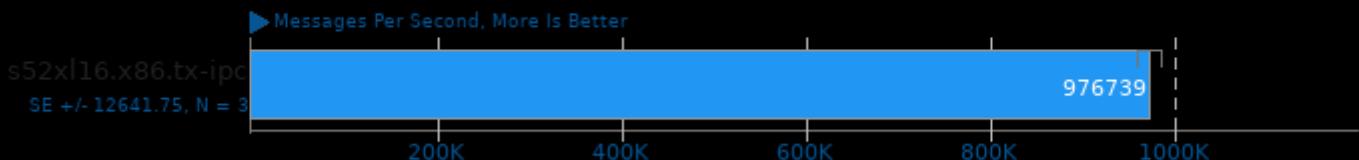
**IPC\_benchmark**

Type: Unnamed Unix Domain Socket - Message Bytes: 256



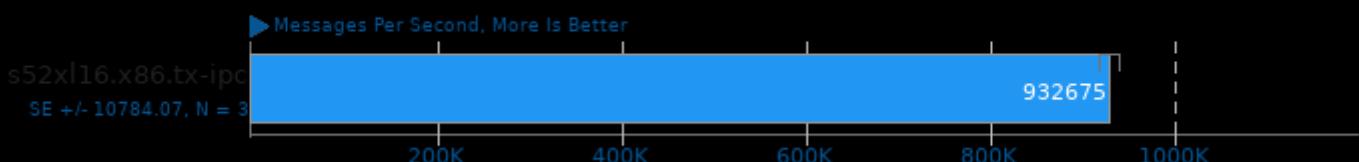
## IPC\_benchmark

Type: Unnamed Unix Domain Socket - Message Bytes: 512



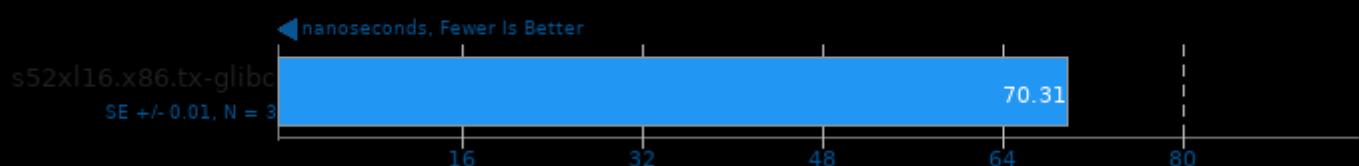
## IPC\_benchmark

Type: Unnamed Unix Domain Socket - Message Bytes: 1024



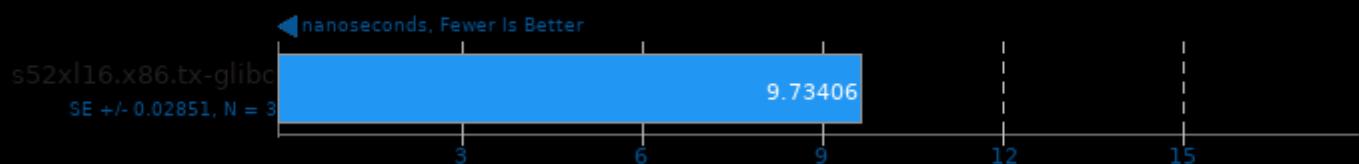
## glibc bench 1.0

Benchmark: cos



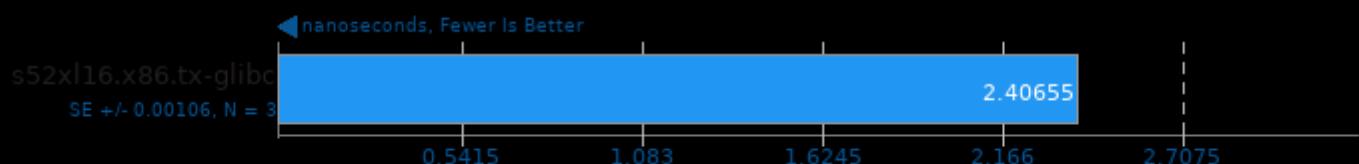
## glibc bench 1.0

Benchmark: exp



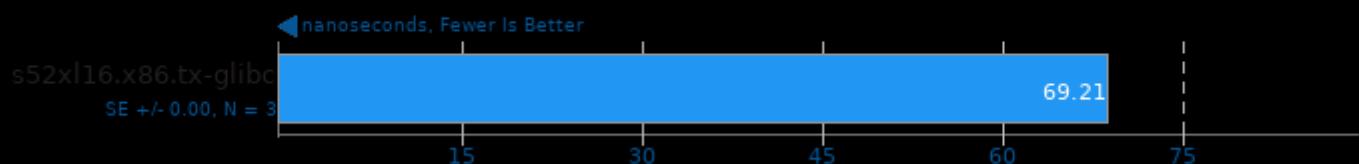
## glibc bench 1.0

Benchmark: ffs



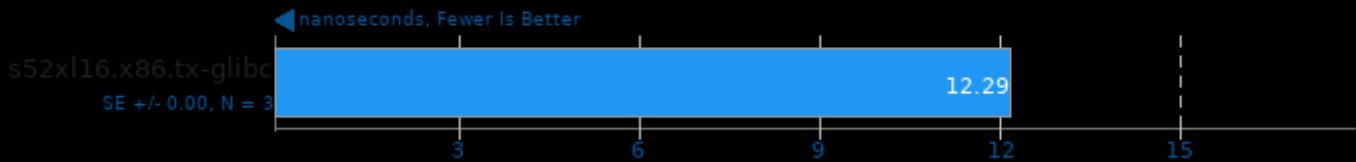
## glibc bench 1.0

Benchmark: sin

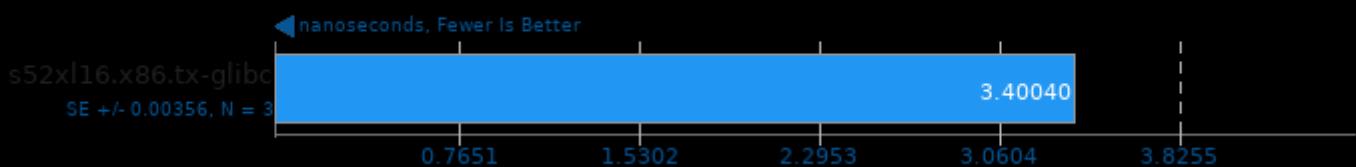


**glibc bench 1.0**

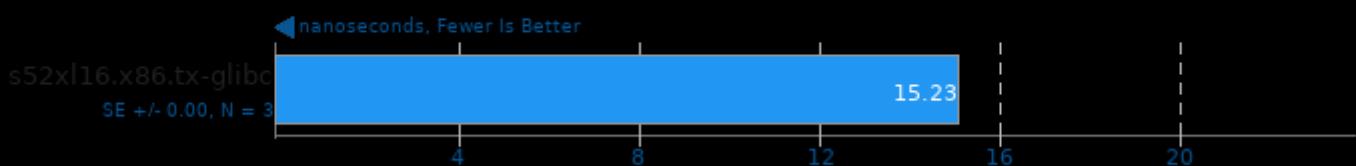
Benchmark: log2

**glibc bench 1.0**

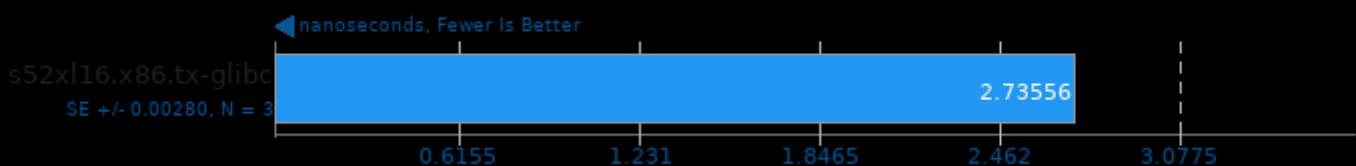
Benchmark: modf

**glibc bench 1.0**

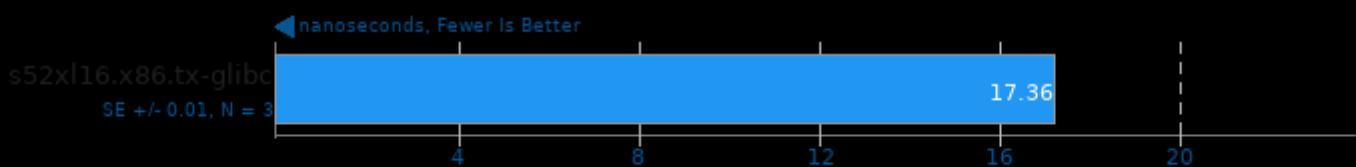
Benchmark: sinh

**glibc bench 1.0**

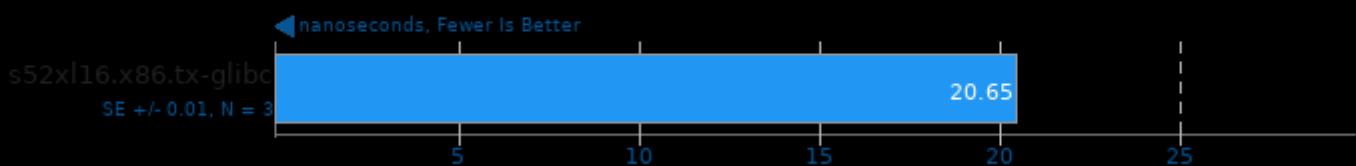
Benchmark: sqrt

**glibc bench 1.0**

Benchmark: tanh

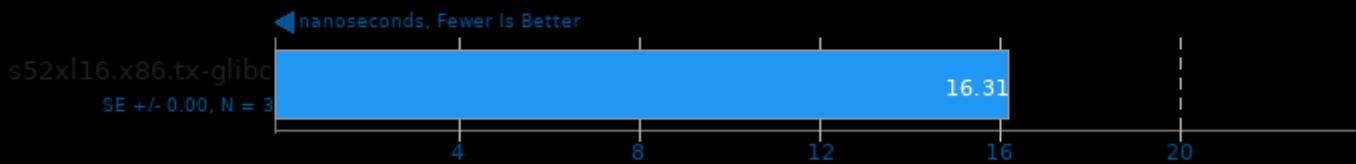
**glibc bench 1.0**

Benchmark: asinh

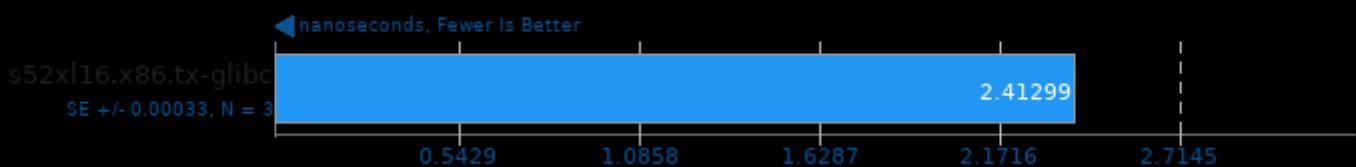


**glibc bench 1.0**

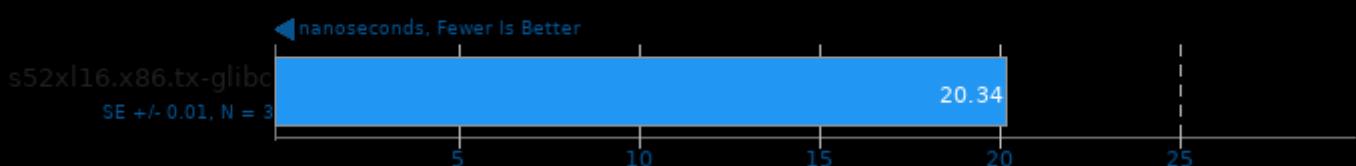
Benchmark: atanh

**glibc bench 1.0**

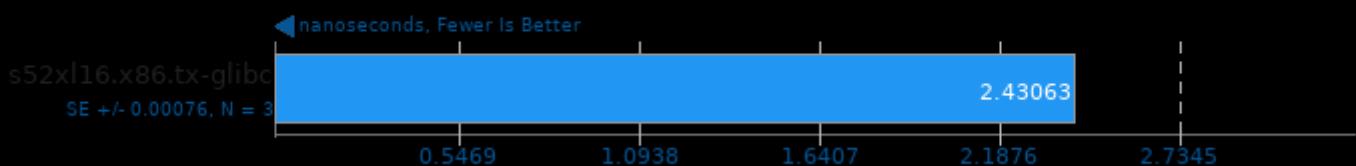
Benchmark: ffsl

**glibc bench 1.0**

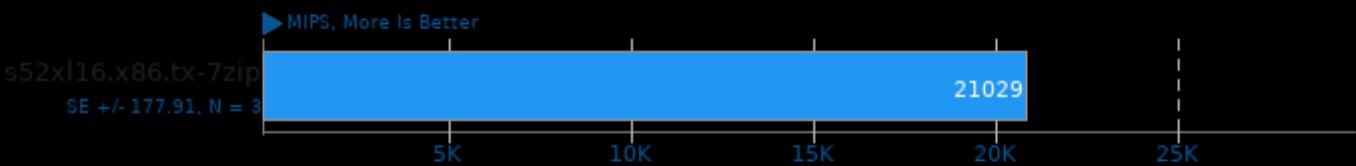
Benchmark: sincos

**glibc bench 1.0**

Benchmark: pthread\_once

**7-Zip Compression 16.02**

Compress Speed Test



1. (CXX) g++ options: -pipe -lpthread

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