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# cascade may

Intel Core i9-10980XE testing with a ASRock X299 Steel Legend (P1.30 BIOS) and NVIDIA GeForce GTX 1080 Ti 11GB on Ubuntu 22.04 via the Phoronix Test Suite.

**Automated Executive Summary**

*A had the most wins, coming in first place for 53% of the tests.*

*Based on the geometric mean of all complete results, the fastest (B) was 1.173x the speed of the slowest (A). C was 0.947x the speed of B and A was 0.9x the speed of C.*

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

*TensorFlow Lite (Model: Inception V4) at 27.965x*
*TensorFlow Lite (Model: SqueezeNet) at 20.438x*
*TensorFlow Lite (Model: Mobilenet Float) at 7.834x*
*TensorFlow Lite (Model: NASNet Mobile) at 4.592x*
*TensorFlow Lite (Model: Inception ResNet V2) at 2.68x*
*Stress-NG (Test: NUMA) at 1.432x*
*Stress-NG (Test: Futex) at 1.272x*
*Renaissance (Test: In-Memory Database Shootout) at 1.151x*
*Renaissance (Test: Genetic Algorithm Using Jenetics + Futures) at 1.148x*

*Renaissance (Test: Random Forest) at 1.087x.*

# Test Systems:

## A

## B

Processor: Intel Core i9-10980XE @ 4.80GHz (18 Cores / 36 Threads), Motherboard: ASRock X299 Steel Legend (P1.30 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32GB, Disk: Samsung SSD 970 PRO 512GB, Graphics: NVIDIA GeForce GTX 1080 Ti 11GB, Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: Intel I219-V + Intel I211

OS: Ubuntu 22.04, Kernel: 5.15.0-23-generic (x86_64), Desktop: GNOME Shell 40.5, Display Server: X Server 1.20.13, Display Driver: NVIDIA 495.46, OpenGL: 4.6.0, OpenCL: OpenCL 3.0 CUDA 11.5.103, Vulkan: 1.2.186, Compiler: GCC 11.2.0, 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-bootstrap --enable-cet --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-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-pWTZs6/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-pWTZs6/gcc-11-11.2.0/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-build-config=bootstrap-lto-lean --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: intel_cpufreq schedutil - CPU Microcode: 0x5003102
OpenCL Notes: GPU Compute Cores: 3584
Java Notes: OpenJDK Runtime Environment (build 11.0.13+8-Ubuntu-0ubuntu1)
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Mitigation of TSX disabled

## C

Processor: Intel Core i9-10980XE @ 4.80GHz (18 Cores / 36 Threads), Motherboard: ASRock X299 Steel Legend (P1.30 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32GB, Disk: Samsung SSD 970 PRO 512GB, Graphics: NVIDIA GeForce GTX 1080 Ti 11GB, Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: Intel I219-V + Intel I211

OS: Ubuntu 22.04, Kernel: 5.15.0-23-generic (x86_64), Desktop: GNOME Shell 40.5, Display Server: X Server 1.20.13, Display Driver: NVIDIA 495.46, OpenGL: 4.6.0, OpenCL: OpenCL 3.0 CUDA 11.5.103, Vulkan: 1.2.204, Compiler: GCC 11.2.0, 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-bootstrap --enable-cet --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-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-pWTZs6/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-pWTZs6/gcc-11-11.2.0/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-build-config=bootstrap-lto-lean --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: intel_cpufreq schedutil - CPU Microcode: 0x5003102
OpenCL Notes: GPU Compute Cores: 3584
Java Notes: OpenJDK Runtime Environment (build 11.0.13+8-Ubuntu-0ubuntu1)
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + 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 Enhanced IBRS IBPB:

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conditional RSB filling + srbds: Not affected + tsx_async_abort: Mitigation of TSX disabled

| | A | B | C |
|---|---|---|---|
| Blender - Barbershop - CPU-Only (sec) | 3589 | | |
| Blender - Fishy Cat - CPU-Only (sec) | 994.05 | | 996.33 |
| Normalized | 100% | | 99.77% |
| Blender - Classroom - CPU-Only (sec) | 914.56 | 924.14 | 921.4 |
| Normalized | 100% | 98.96% | 99.26% |
| Blender - BMW27 - CPU-Only (sec) | 721.23 | 722.59 | 723.06 |
| Normalized | 100% | 99.81% | 99.75% |
| WebP2 Image Encode - Q.1.L.C (sec) | 691.804 | 678.078 | 673.697 |
| Normalized | 97.38% | 99.35% | 100% |
| Renaissance - ALS Movie Lens (ms) | 16735 | 16432 | 16486 |
| Normalized | 98.19% | 100% | 99.67% |
| Renaissance - A.U.C.T (ms) | 13513 | 14273 | 14407 |
| Normalized | 100% | 94.68% | 93.79% |
| WebP2 Image Encode - Q.9.C.E.7 (sec) | 283.252 | 284.917 | 280.823 |
| Normalized | 99.14% | 98.56% | 100% |
| Renaissance - G.A.U.J.F (ms) | 5922 | 5160 | 5166 |
| Normalized | 87.13% | 100% | 99.87% |
| Renaissance - Savina Reactors.IO (ms) | 10743 | 10817 | 11277 |
| Normalized | 100% | 99.32% | 95.26% |
| TensorFlow Lite - NASNet Mobile (us) | 6651910 | 1448520 | 2268610 |
| Normalized | 21.78% | 100% | 63.85% |
| Renaissance - A.S.P (ms) | 3874 | 3971 | 3911 |
| Normalized | 100% | 97.55% | 99.04% |
| WebP2 Image Encode - Q.7.C.E.7 (sec) | 135.231 | 135.2 | 133.27 |
| Normalized | 98.55% | 98.57% | 100% |
| Renaissance - Apache Spark ALS (ms) | 3869 | 3879 | 3910 |
| Normalized | 100% | 99.74% | 98.93% |
| GROMACS - MPI CPU - water_GMX50_bare (Ns/Day) | 1.581 | 1.502 | 1.522 |
| Normalized | 100% | 95% | 96.27% |
| TensorFlow Lite - I.R.V (us) | 3355600 | 1738120 | 1252140 |
| Normalized | 37.31% | 72.04% | 100% |
| TensorFlow Lite - Inception V4 (us) | 3073600 | 109910 | 449916 |
| Normalized | 3.58% | 100% | 24.43% |
| Renaissance - I.M.D.S (ms) | 6070 | 5438 | 5272 |
| Normalized | 86.87% | 96.95% | 100% |
| Renaissance - Scala Dotty (ms) | 939.7 | 958.3 | 977.9 |
| Normalized | 100% | 98.06% | 96.09% |
| Renaissance - F.H.R (ms) | 5179 | 5184 | 4846 |
| Normalized | 93.58% | 93.48% | 100% |
| TensorFlow Lite - SqueezeNet (us) | 549322 | 26877 | 121496 |
| Normalized | 4.89% | 100% | 22.12% |
| TensorFlow Lite - Mobilenet Float (us) | 345091 | 44051 | 74338 |
| Normalized | 12.76% | 100% | 59.26% |
| TensorFlow Lite - Mobilenet Quant (us) | 45050 | 44598 | 44696 |
| Normalized | 99% | 100% | 99.78% |

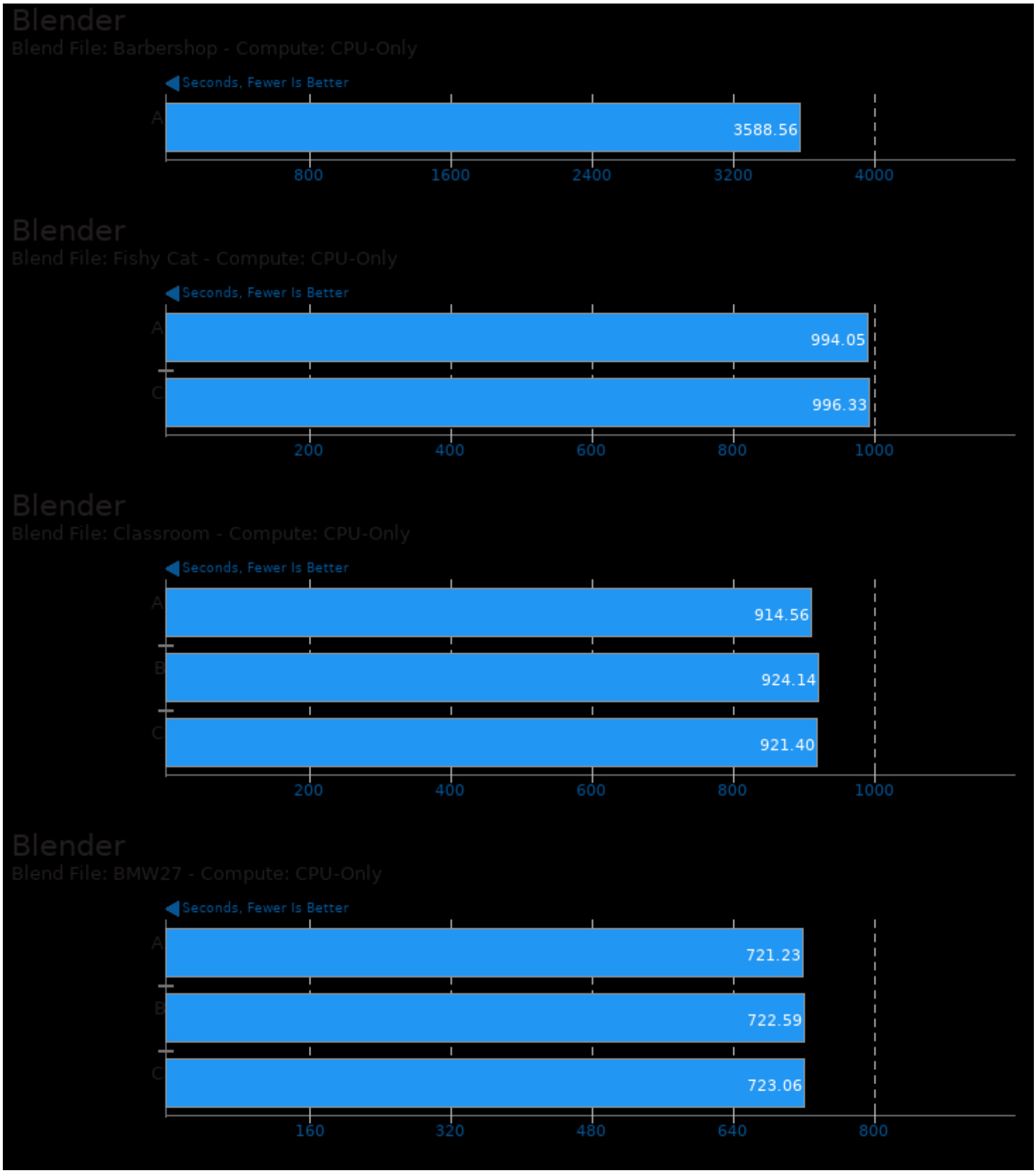
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| | | | |
|---|---|---|---|
| **Renaissance - Rand Forest (ms)** | **993.2** | 972.9 | **913.6** |
| **Normalized** | 91.99% | 93.9% | 100% |
| **Renaissance - Apache Spark Bayes (ms)** | **1101** | **1120** | 1117 |
| **Normalized** | 100% | 98.34% | 98.57% |
| **Stress-NG - x86_64 RdRand (Bogo Ops/s)** | **183700** | 183814 | **183827** |
| **Normalized** | 99.93% | 99.99% | 100% |
| **Stress-NG - NUMA (Bogo Ops/s)** | **366.57** | **256.05** | 273.12 |
| **Normalized** | 100% | 69.85% | 74.51% |
| **Stress-NG - Malloc (Bogo Ops/s)** | **30698931** | **30032469** | 30199763 |
| **Normalized** | 100% | 97.83% | 98.37% |
| **Stress-NG - IO_uring (Bogo Ops/s)** | **53829** | **51484** | 53017 |
| **Normalized** | 100% | 95.64% | 98.49% |
| **Stress-NG - Futex (Bogo Ops/s)** | **1575411** | 1282626 | **1238856** |
| **Normalized** | 100% | 81.42% | 78.64% |
| **Stress-NG - Atomic (Bogo Ops/s)** | **212776** | 223457 | **228263** |
| **Normalized** | 93.22% | 97.89% | 100% |
| **Stress-NG - Crypto (Bogo Ops/s)** | 22818 | **22789** | **22831** |
| **Normalized** | 99.94% | 99.82% | 100% |
| **Stress-NG - Memory Copying (Bogo Ops/s)** | 2115 | **2086** | **2143** |
| **Normalized** | 98.69% | 97.33% | 100% |
| **Stress-NG - CPU Stress (Bogo Ops/s)** | 40340 | **40367** | **39876** |
| **Normalized** | 99.93% | 100% | 98.78% |
| **Stress-NG - MMAP (Bogo Ops/s)** | **445.56** | **435.49** | 442.34 |
| **Normalized** | 100% | 97.74% | 99.28% |
| **Stress-NG - G.Q.D.S (Bogo Ops/s)** | 246.43 | **248** | **246.23** |
| **Normalized** | 99.37% | 100% | 99.29% |
| **Stress-NG - CPU Cache (Bogo Ops/s)** | 95.79 | **93.82** | **101.56** |
| **Normalized** | 94.32% | 92.38% | 100% |
| **Stress-NG - MEMFD (Bogo Ops/s)** | **1089** | **1082** | 1085 |
| **Normalized** | 100% | 99.31% | 99.58% |
| **Stress-NG - SENDFILE (Bogo Ops/s)** | **339073** | 338938 | **338842** |
| **Normalized** | 100% | 99.96% | 99.93% |
| **Stress-NG - G.C.S.F (Bogo Ops/s)** | **1076644** | 1075194 | **1070475** |
| **Normalized** | 100% | 99.87% | 99.43% |
| **Stress-NG - Vector Math (Bogo Ops/s)** | 69511 | **69463** | **69557** |
| **Normalized** | 99.93% | 99.87% | 100% |
| **Stress-NG - Matrix Math (Bogo Ops/s)** | 88011 | **87934** | **88061** |
| **Normalized** | 99.94% | 99.86% | 100% |
| **Stress-NG - Forking (Bogo Ops/s)** | **70369** | 69296 | **68342** |
| **Normalized** | 100% | 98.48% | 97.12% |
| **Stress-NG - S.V.M.P (Bogo Ops/s)** | **6779586** | 6845860 | **6869544** |
| **Normalized** | 98.69% | 99.66% | 100% |
| **Stress-NG - Socket Activity (Bogo Ops/s)** | **8829** | **8855** | 8843 |
| **Normalized** | 99.7% | 100% | 99.86% |
| **Stress-NG - Context Switching (Bogo Ops/s)** | 1766749 | **1719548** | **1805491** |
| **Normalized** | 97.85% | 95.24% | 100% |
| **Stress-NG - Semaphores (Bogo Ops/s)** | **3635351** | **3624589** | 3629436 |
| **Normalized** | 100% | 99.7% | 99.84% |
| **Glibc Benchmarks - exp (ns)** | **14.4795** | 14.8901 | **15.23** |
| **Normalized** | 100% | 97.24% | 95.07% |
| **WebP2 Image Encode - Q.1.C.E.5 (sec)** | **3.88** | **3.849** | 3.879 |
| **Normalized** | 99.2% | 100% | 99.23% |
| **Glibc Benchmarks - sin (ns)** | **56.1902** | 59.0461 | **59.4429** |

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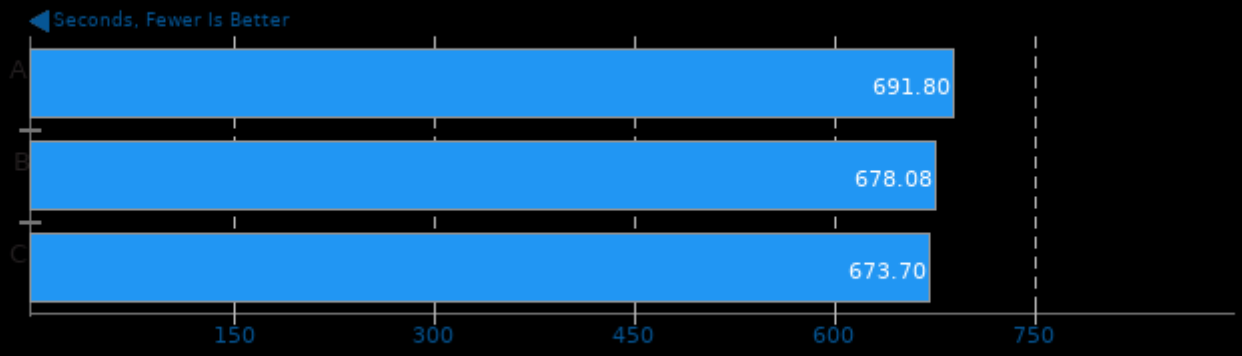
| | | | |
|---|---|---|---|
| Normalized | 100% | 95.16% | 94.53% |
| **WebP2 Image Encode - Default (sec)** | 2.845 | **2.97** | **2.789** |
| Normalized | 98.03% | 93.91% | 100% |
| **Glibc Benchmarks - sincos (ns)** | **42.109** | 42.8734 | **43.4328** |
| Normalized | 100% | 98.22% | 96.95% |
| **Glibc Benchmarks - cos (ns)** | **66.6064** | 67.505 | **69.8979** |
| Normalized | 100% | 98.67% | 95.29% |
| **Glibc Benchmarks - ffs (ns)** | **4.45617** | 4.52621 | **4.61773** |
| Normalized | 100% | 98.45% | 96.5% |
| **Glibc Benchmarks - asinh (ns)** | **27.4457** | 28.0497 | **28.3699** |
| Normalized | 100% | 97.85% | 96.74% |
| **Glibc Benchmarks - pthread_once (ns)** | **4.00745** | 4.06966 | **4.11887** |
| Normalized | 100% | 98.47% | 97.29% |
| **Glibc Benchmarks - ffsll (ns)** | **4.69983** | 4.76771 | **4.79896** |
| Normalized | 100% | 98.58% | 97.93% |
| **Glibc Benchmarks - atanh (ns)** | **32.4944** | **31.9899** | 32.3407 |
| Normalized | 98.45% | 100% | 98.92% |
| **Glibc Benchmarks - tanh (ns)** | **34.9775** | 35.5004 | **36.1667** |
| Normalized | 100% | 98.53% | 96.71% |
| **Glibc Benchmarks - sqrt (ns)** | **5.98245** | 6.10421 | **6.16684** |
| Normalized | 100% | 98.01% | 97.01% |
| **Glibc Benchmarks - sinh (ns)** | **24.3514** | 24.8483 | **25.0249** |
| Normalized | 100% | 98% | 97.31% |
| **Glibc Benchmarks - log2 (ns)** | **17.1661** | **17.9569** | 17.8706 |
| Normalized | 100% | 95.6% | 96.06% |
| **Glibc Benchmarks - modf (ns)** | **7.35843** | 7.46762 | **7.53575** |
| Normalized | 100% | 98.54% | 97.65% |

# cascade may


Blender
Blend File: Barbershop - Compute: CPU-Only
Seconds, Fewer Is Better
A
3588.56
800
1600
2400
3200
4000
Blender
Blend File: Fishy Cat - Compute: CPU-Only
Seconds, Fewer Is Better
A
994.05
C
996.33
200
400
600
800
1000
Blender
Blend File: Classroom - Compute: CPU-Only
Seconds, Fewer Is Better
A
914.56
B
924.14
C
921.40
200
400
600
800
1000
Blender
Blend File: BMW27 - Compute: CPU-Only
Seconds, Fewer Is Better
A
721.23
B
722.59
C
723.06
160
320
480
640
800

## WebP2 Image Encode 20220422

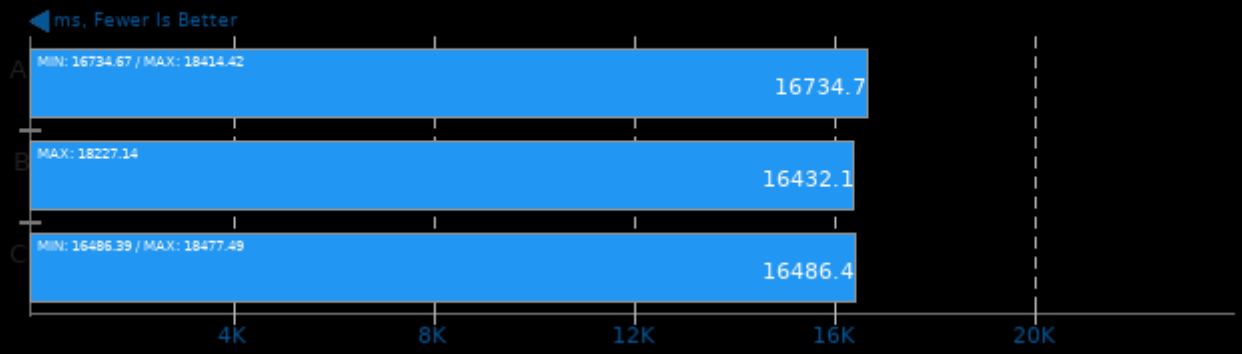
Encode Settings: Quality 100, Lossless Compression




1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -ldl

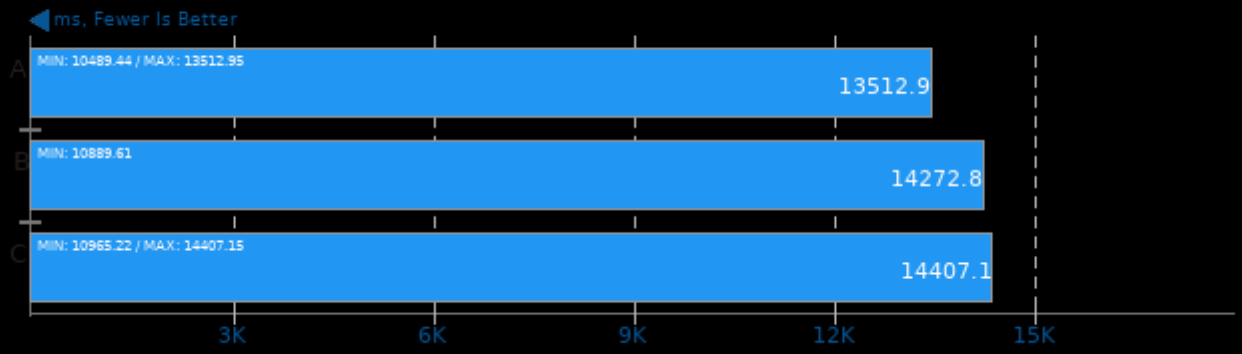
## Renaissance 0.14

Test: ALS Movie Lens



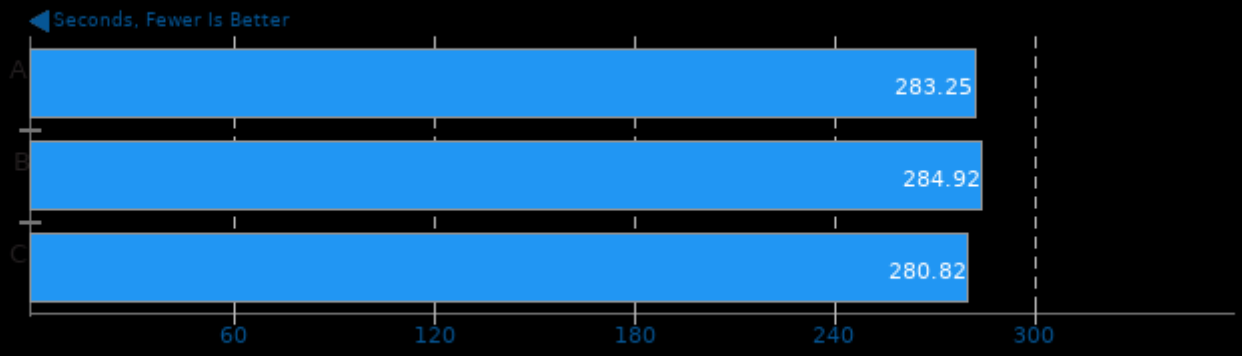

## Renaissance 0.14

Test: Akka Unbalanced Cobwebbed Tree



## WebP2 Image Encode 20220422

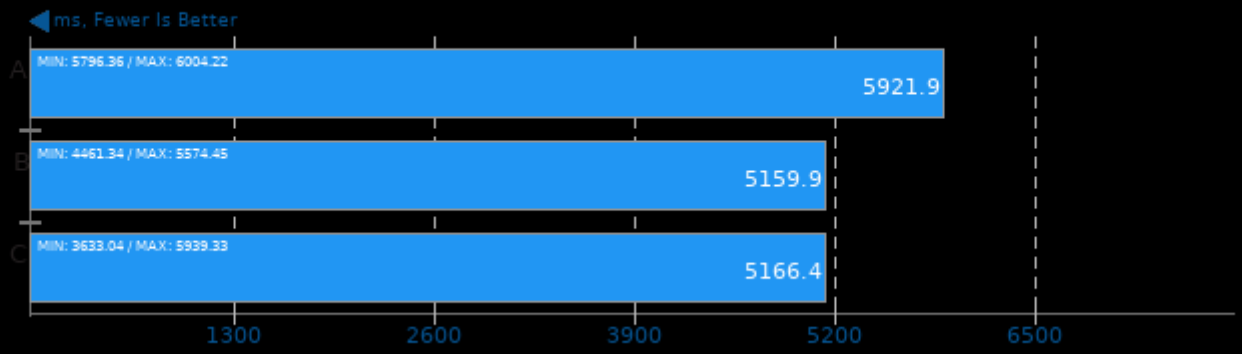
Encode Settings: Quality 95, Compression Effort 7




1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -ldl

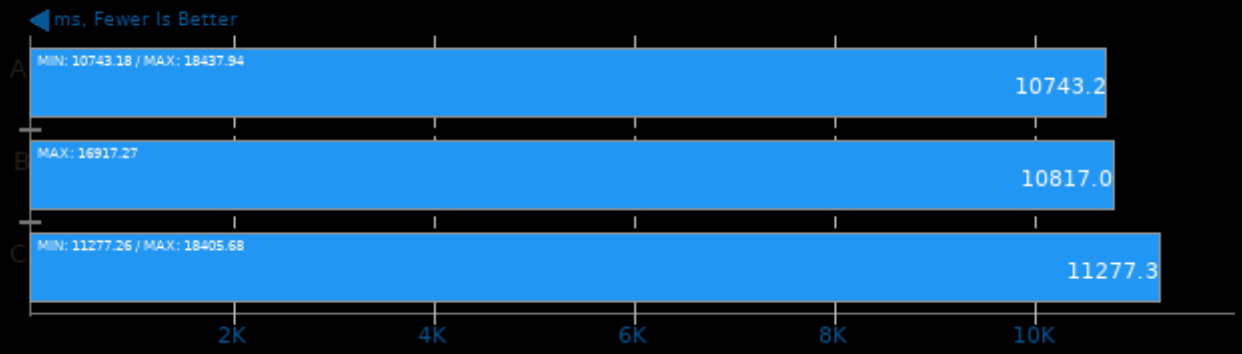
## Renaissance 0.14

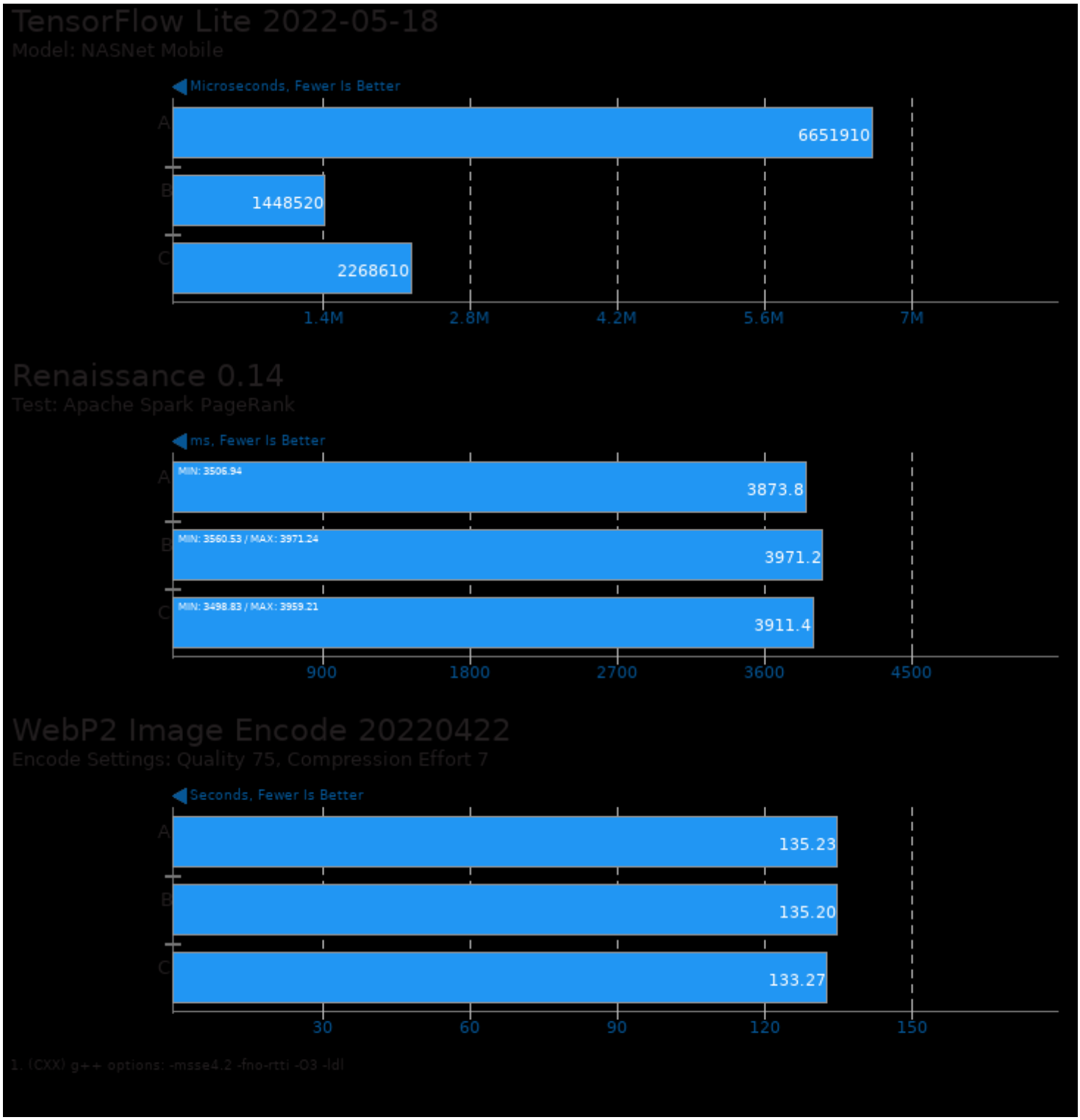
Test: Genetic Algorithm Using Jenetics + Futures



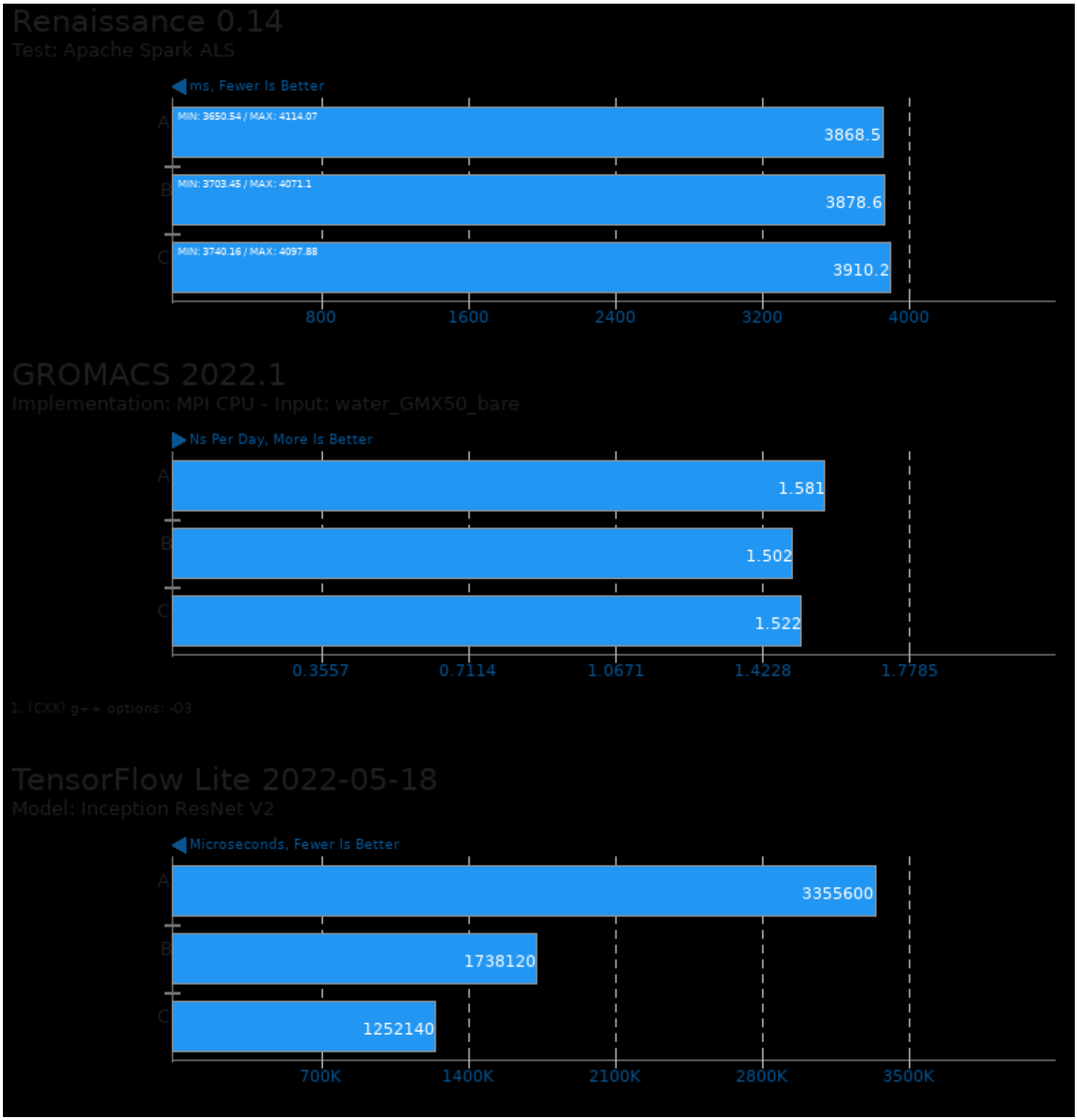

## Renaissance 0.14

Test: Savina Reactors.IO

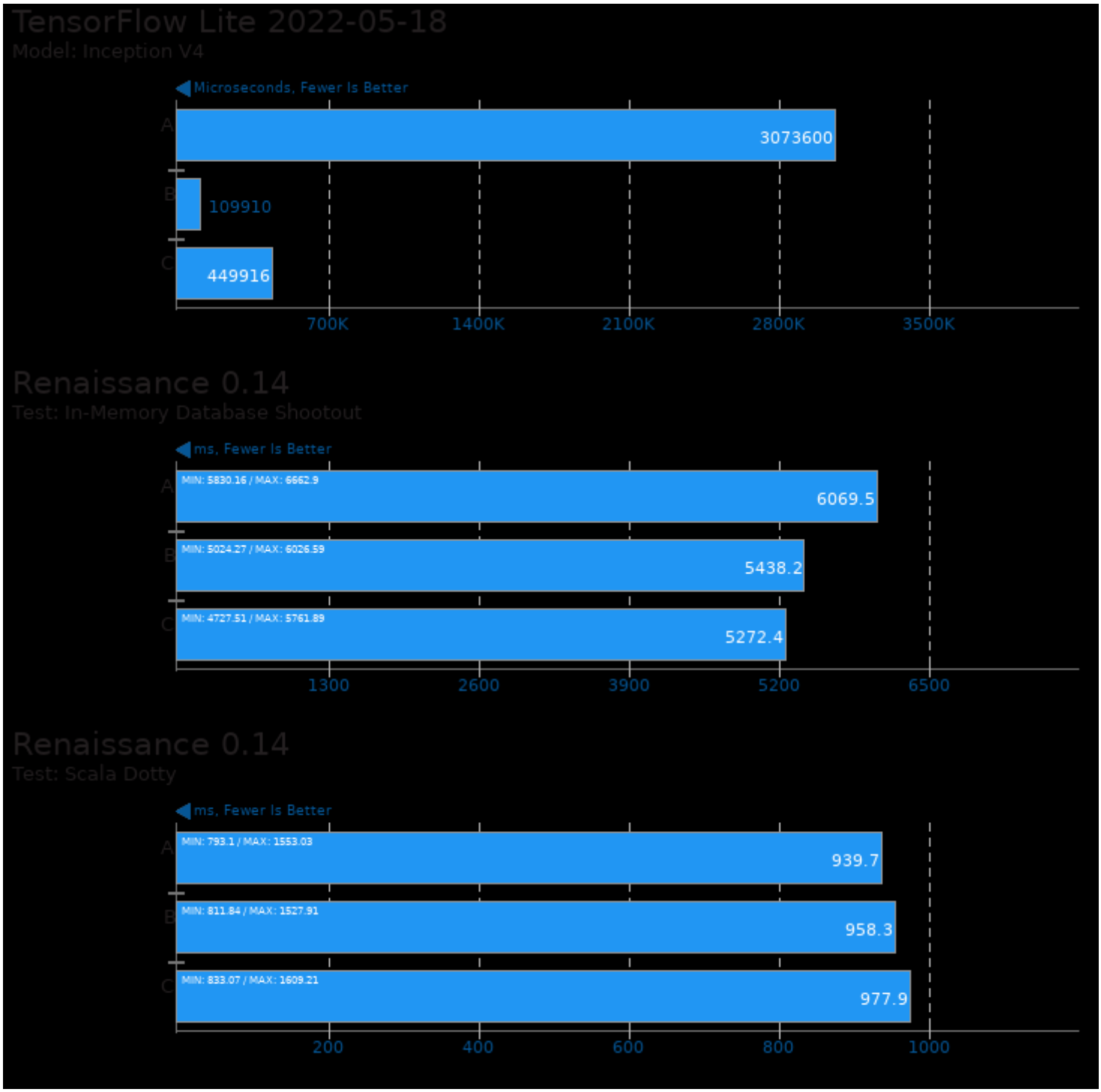



TensorFlow Lite 2022-05-18
Model: NASNet Mobile
Microseconds, Fewer Is Better
A
6651910
B
1448520
C
2268610
1.4M
2.8M
4.2M
5.6M
7M
Renaissance 0.14
Test: Apache Spark PageRank
ms, Fewer Is Better
A
MIN: 3506.94
3873.8
B
MIN: 3560.53 / MAX: 3971.24
3971.2
C
MIN: 3498.83 / MAX: 3959.21
3911.4
900
1800
2700
3600
4500
WebP2 Image Encode 20220422
Encode Settings: Quality 75, Compression Effort 7
Seconds, Fewer Is Better
A
135.23
B
135.20
C
133.27
30
60
90
120
150
1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -ldl

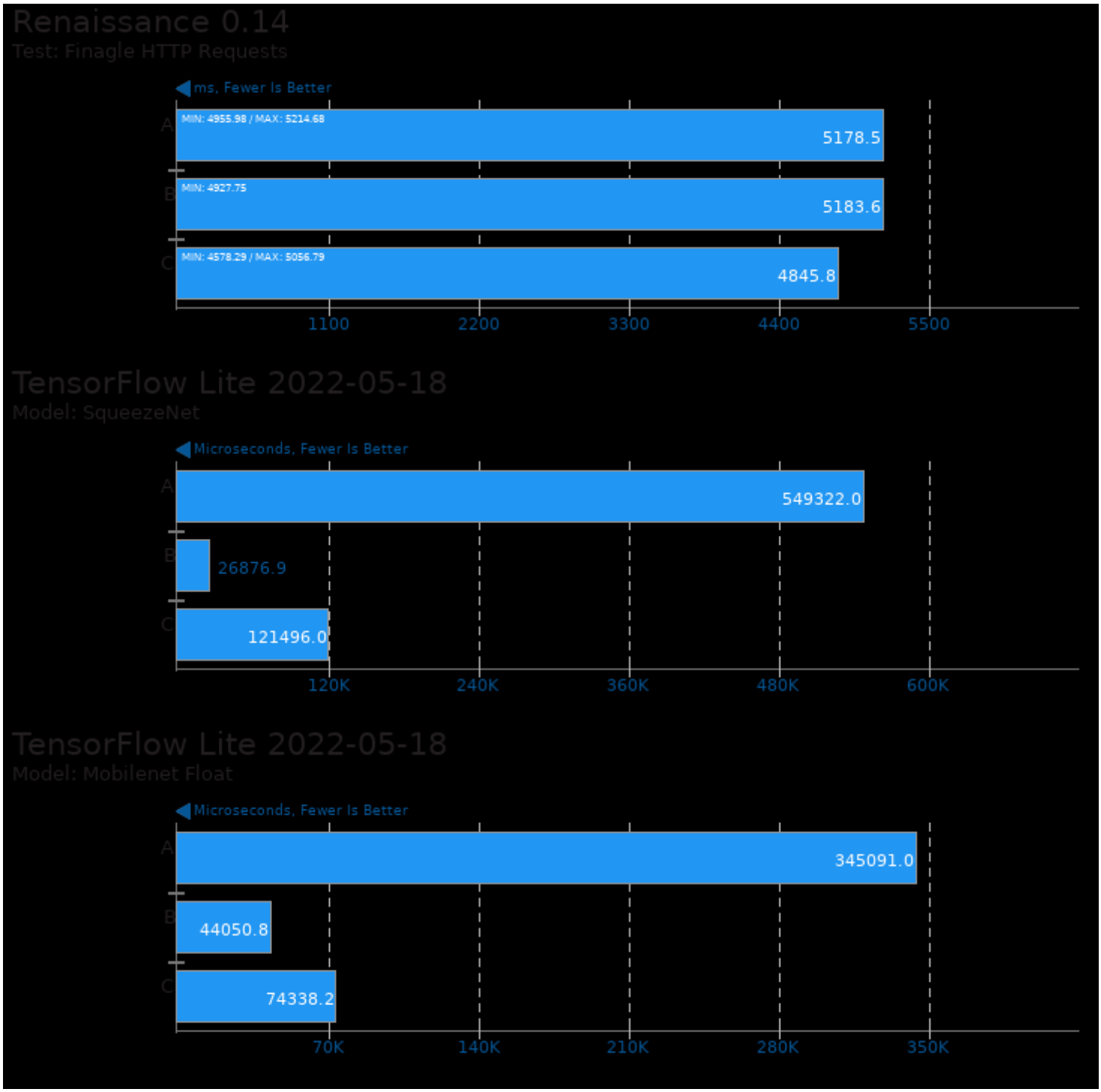
# cascade may

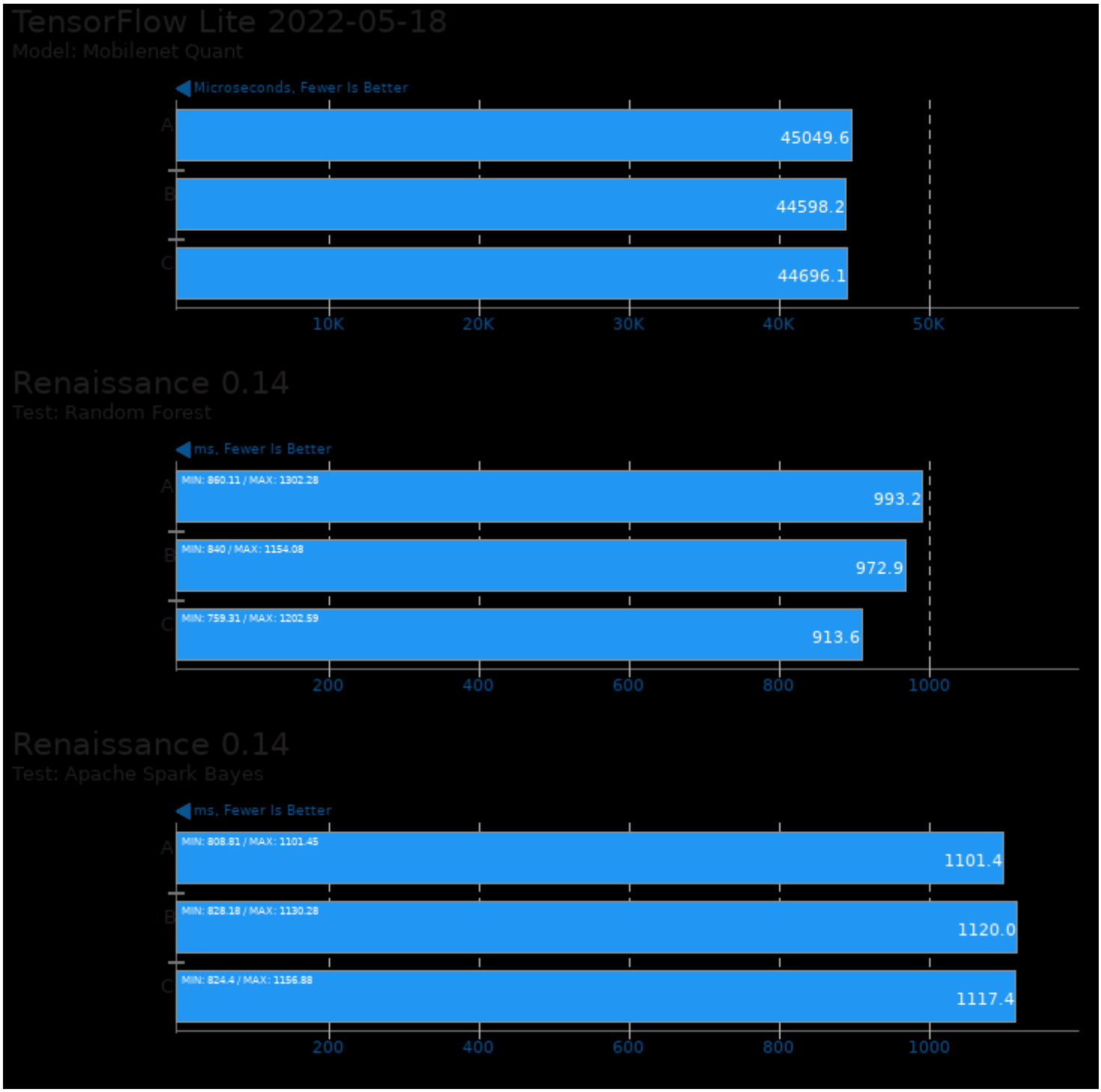

Renaissance 0.14
Test: Apache Spark ALS
ms, Fewer Is Better
A
MIN: 3650.54 / MAX: 4114.07
3868.5
B
MIN: 3703.45 / MAX: 4071.1
3878.6
C
MIN: 3740.16 / MAX: 4097.88
3910.2
800
1600
2400
3200
4000
GROMACS 2022.1
Implementation: MPI CPU - Input: water_GMX50_bare
Ns Per Day, More Is Better
A
1.581
B
1.502
C
1.522
0.3557
0.7114
1.0671
1.4228
1.7785
1. (CXX) g++ options: -O3
TensorFlow Lite 2022-05-18
Model: Inception ResNet V2
Microseconds, Fewer Is Better
A
3355600
B
1738120
C
1252140
700K
1400K
2100K
2800K
3500K

# cascade may


TensorFlow Lite 2022-05-18
Model: Inception V4
Microseconds, Fewer Is Better
A
3073600
B
109910
C
449916
700K
1400K
2100K
2800K
3500K
Renaissance 0.14
Test: In-Memory Database Shootout
ms, Fewer Is Better
A
MIN: 5830.16 / MAX: 6662.9
6069.5
B
MIN: 5024.27 / MAX: 6026.59
5438.2
C
MIN: 4727.51 / MAX: 5761.89
5272.4
1300
2600
3900
5200
6500
Renaissance 0.14
Test: Scala Dotty
ms, Fewer Is Better
A
MIN: 793.1 / MAX: 1553.03
939.7
B
MIN: 811.84 / MAX: 1527.91
958.3
C
MIN: 833.07 / MAX: 1609.21
977.9
200
400
600
800
1000

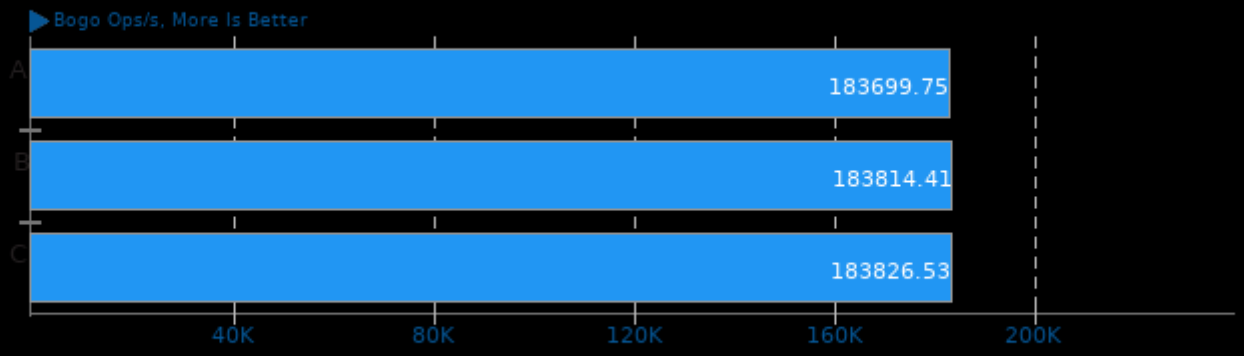
# cascade may


Renaissance 0.14
Test: Finagle HTTP Requests
ms, Fewer Is Better
A
MIN: 4955.98 / MAX: 5214.68
5178.5
B
MIN: 4927.75
5183.6
C
MIN: 4578.29 / MAX: 5056.79
4845.8
1100
2200
3300
4400
5500
TensorFlow Lite 2022-05-18
Model: SqueezeNet
Microseconds, Fewer Is Better
A
549322.0
B
26876.9
C
121496.0
120K
240K
360K
480K
600K
TensorFlow Lite 2022-05-18
Model: Mobilenet Float
Microseconds, Fewer Is Better
A
345091.0
B
44050.8
C
74338.2
70K
140K
210K
280K
350K


TensorFlow Lite 2022-05-18
Model: Mobilenet Quant
Microseconds, Fewer Is Better
A
45049.6
B
44598.2
C
44696.1
10K
20K
30K
40K
50K
Renaissance 0.14
Test: Random Forest
ms, Fewer Is Better
A
MIN: 860.11 / MAX: 1302.28
993.2
B
MIN: 840 / MAX: 1154.08
972.9
C
MIN: 759.31 / MAX: 1202.59
913.6
200
400
600
800
1000
Renaissance 0.14
Test: Apache Spark Bayes
ms, Fewer Is Better
A
MIN: 808.81 / MAX: 1101.45
1101.4
B
MIN: 828.18 / MAX: 1130.28
1120.0
C
MIN: 824.4 / MAX: 1156.88
1117.4
200
400
600
800
1000

## Stress-NG 0.14

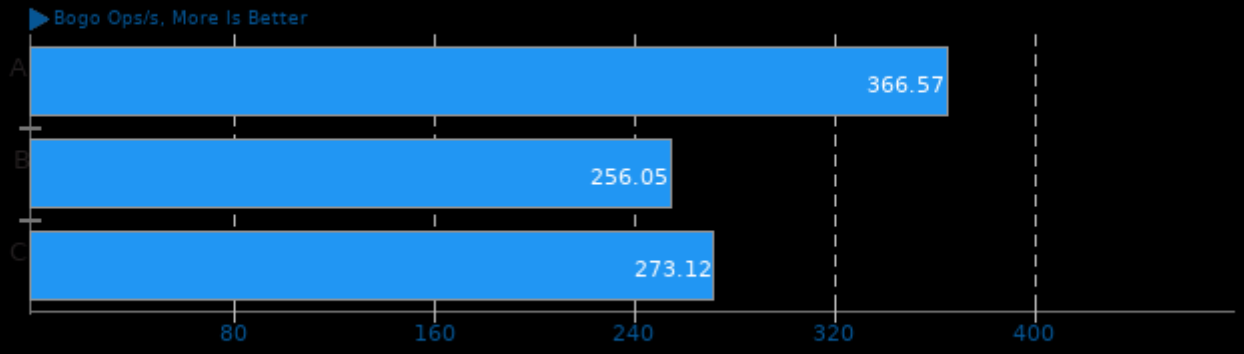
Test: x86_64 RdRand




1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

## Stress-NG 0.14

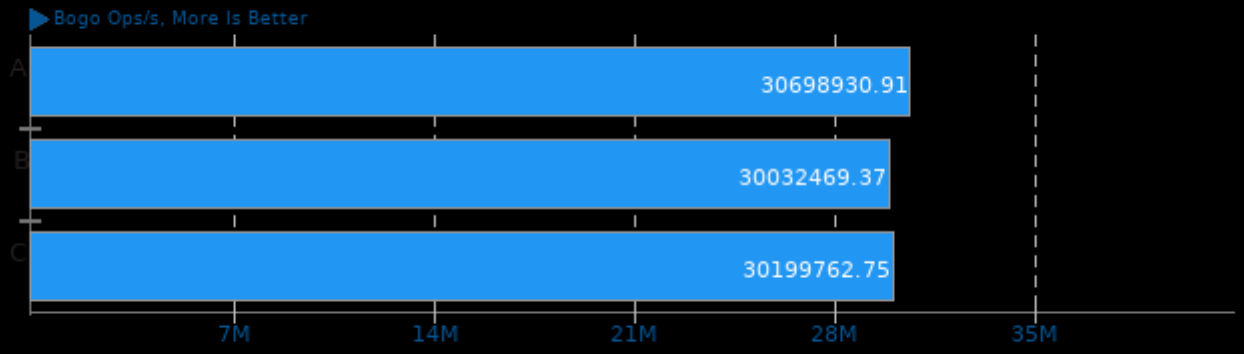
Test: NUMA



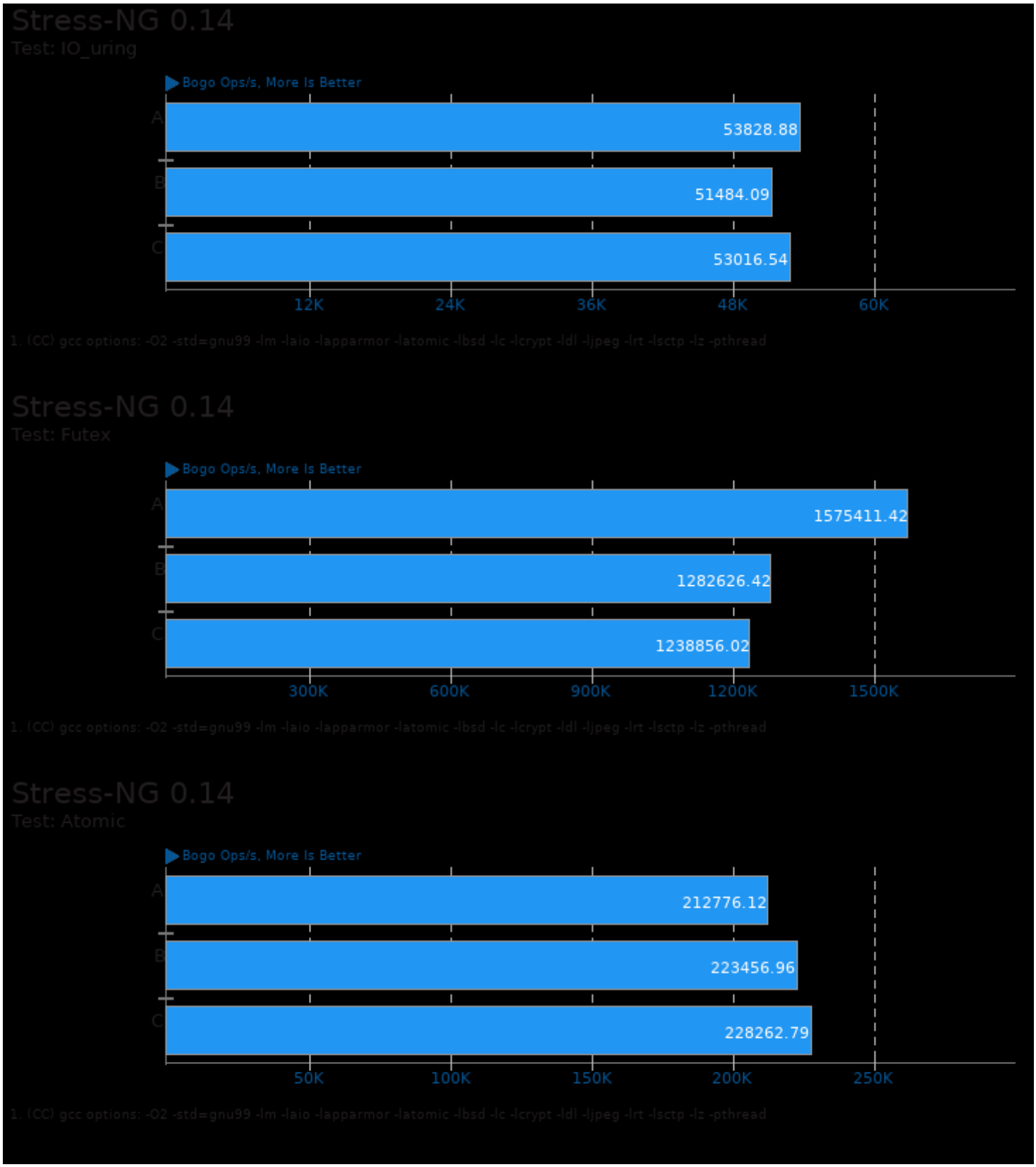

1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

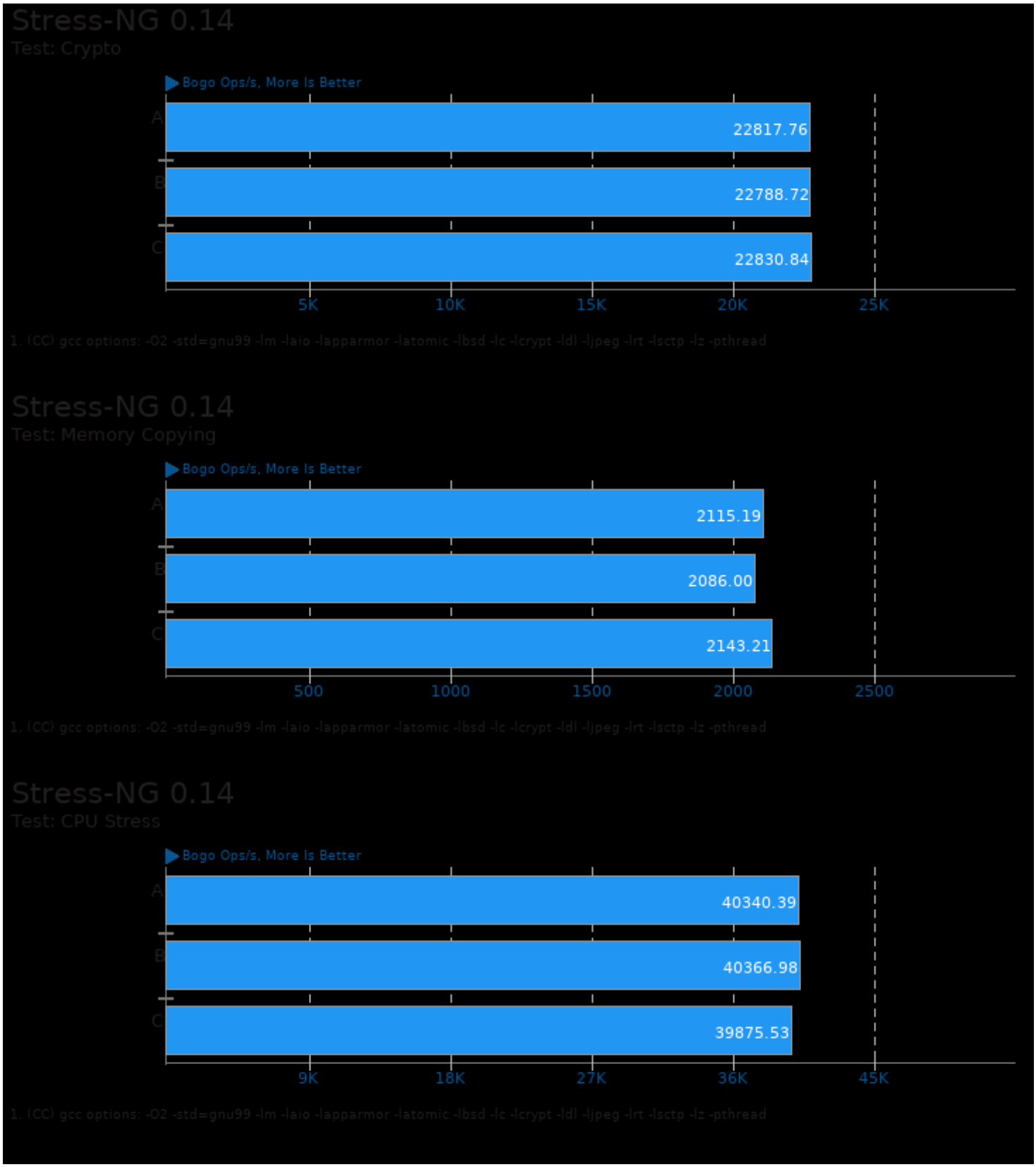
## Stress-NG 0.14

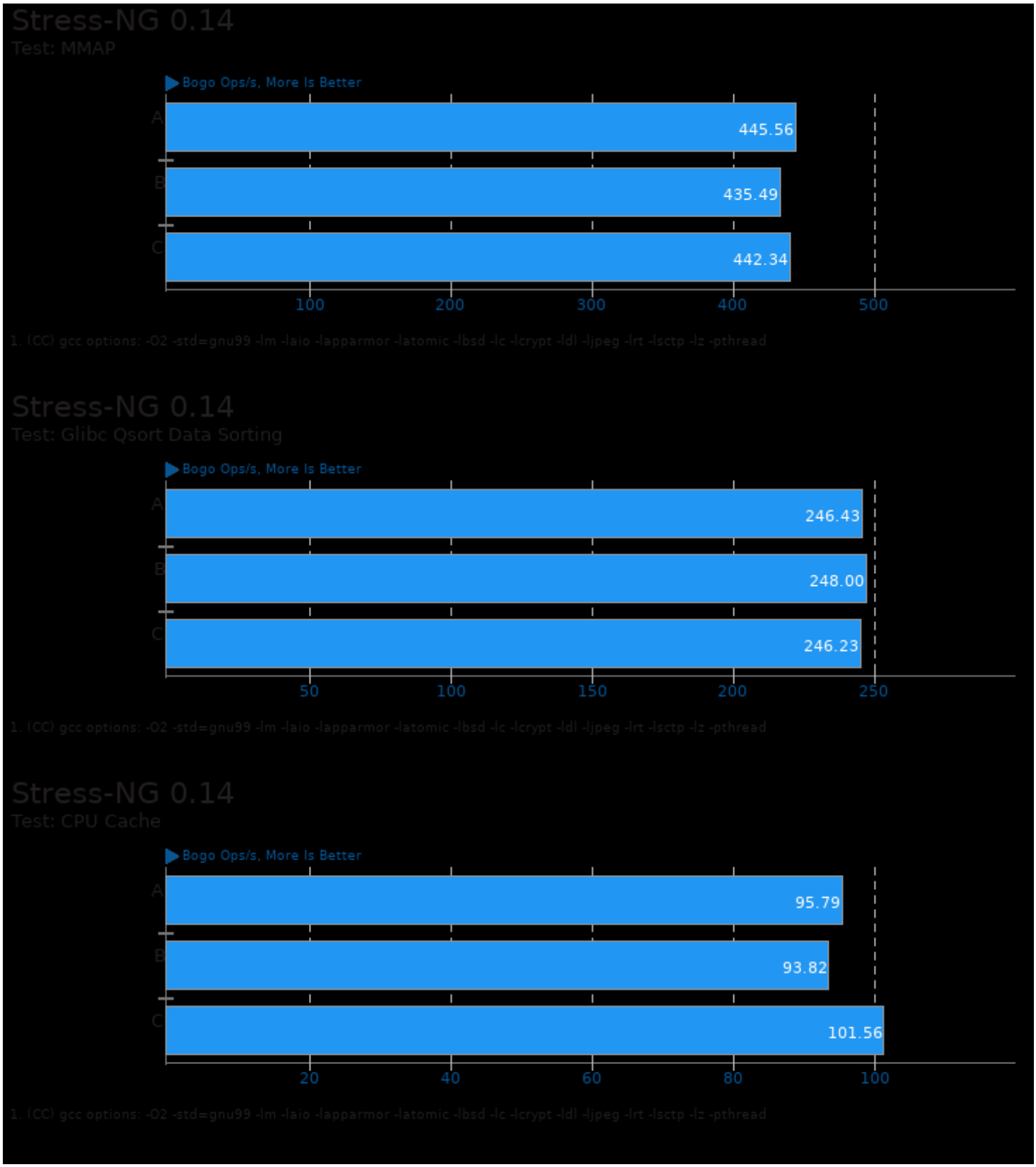
Test: Malloc




1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

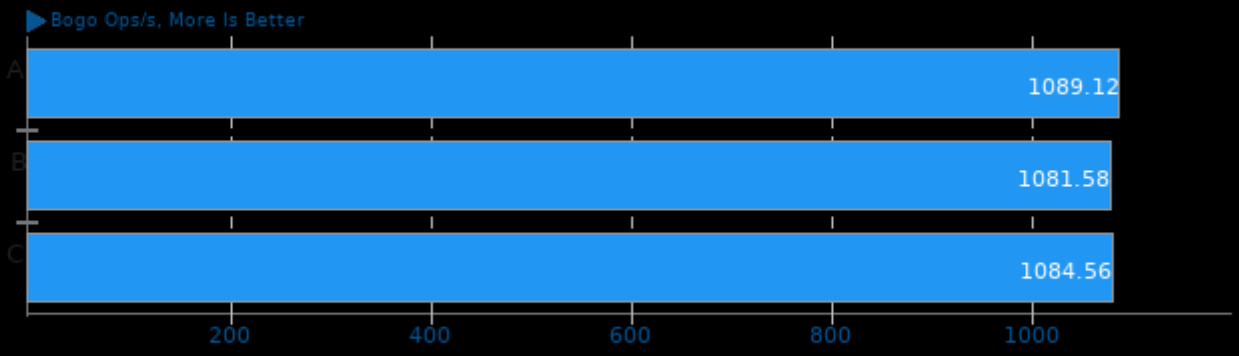

Stress-NG 0.14
Test: IO_uring
Bogo Ops/s, More Is Better
A
B
C
53828.88
51484.09
53016.54
12K
24K
36K
48K
60K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread
Stress-NG 0.14
Test: Futex
Bogo Ops/s, More Is Better
A
B
C
1575411.42
1282626.42
1238856.02
300K
600K
900K
1200K
1500K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread
Stress-NG 0.14
Test: Atomic
Bogo Ops/s, More Is Better
A
B
C
212776.12
223456.96
228262.79
50K
100K
150K
200K
250K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread


Stress-NG 0.14
Test: Crypto
Bogo Ops/s, More Is Better
A
B
C
22817.76
22788.72
22830.84
5K
10K
15K
20K
25K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread
Stress-NG 0.14
Test: Memory Copying
Bogo Ops/s, More Is Better
A
B
C
2115.19
2086.00
2143.21
500
1000
1500
2000
2500
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread
Stress-NG 0.14
Test: CPU Stress
Bogo Ops/s, More Is Better
A
B
C
40340.39
40366.98
39875.53
9K
18K
27K
36K
45K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread


Stress-NG 0.14
Test: MMAP
Bogo Ops/s, More Is Better
A
445.56
B
435.49
C
442.34
100
200
300
400
500
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread
Stress-NG 0.14
Test: Glibc Qsort Data Sorting
Bogo Ops/s, More Is Better
A
246.43
B
248.00
C
246.23
50
100
150
200
250
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread
Stress-NG 0.14
Test: CPU Cache
Bogo Ops/s, More Is Better
A
95.79
B
93.82
C
101.56
20
40
60
80
100
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

## Stress-NG 0.14

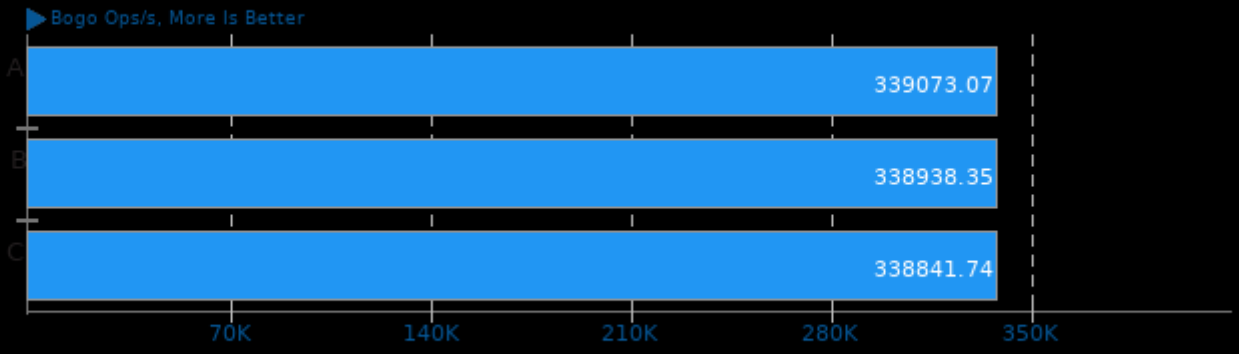
Test: MEMFD




1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

## Stress-NG 0.14

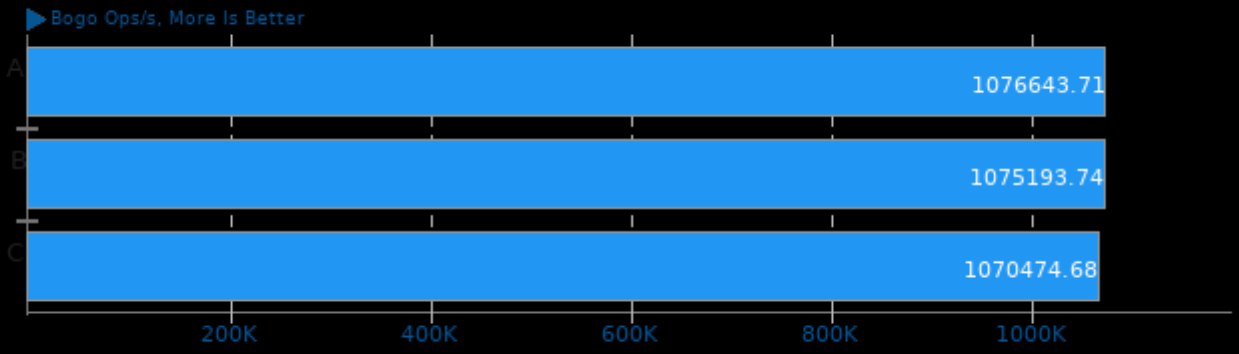
Test: SENDFILE




1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

## Stress-NG 0.14

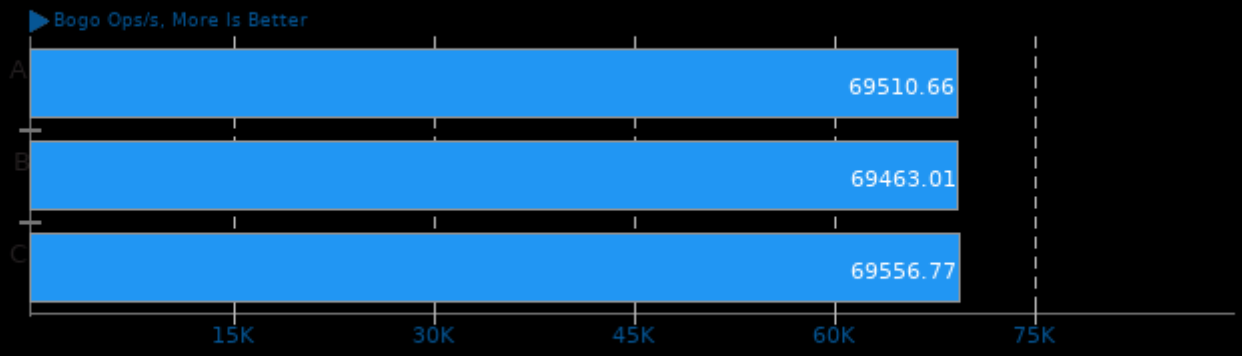
Test: Glibc C String Functions




1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

## Stress-NG 0.14

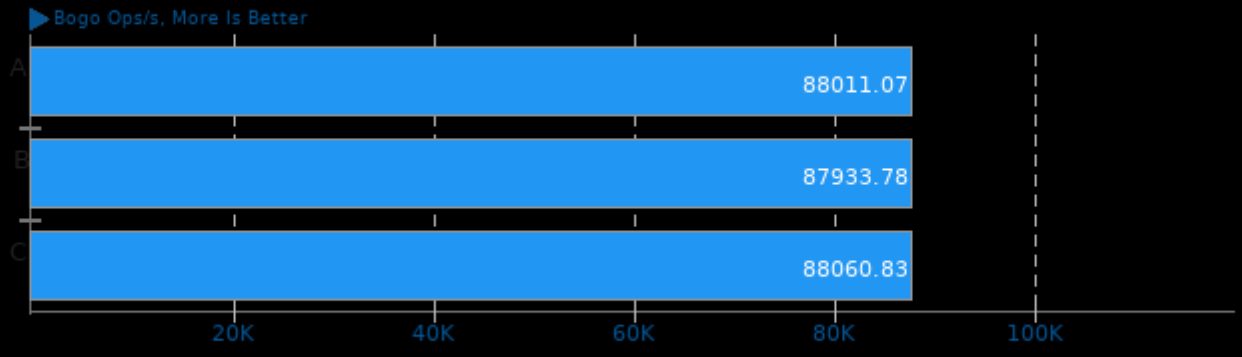
Test: Vector Math




1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

## Stress-NG 0.14

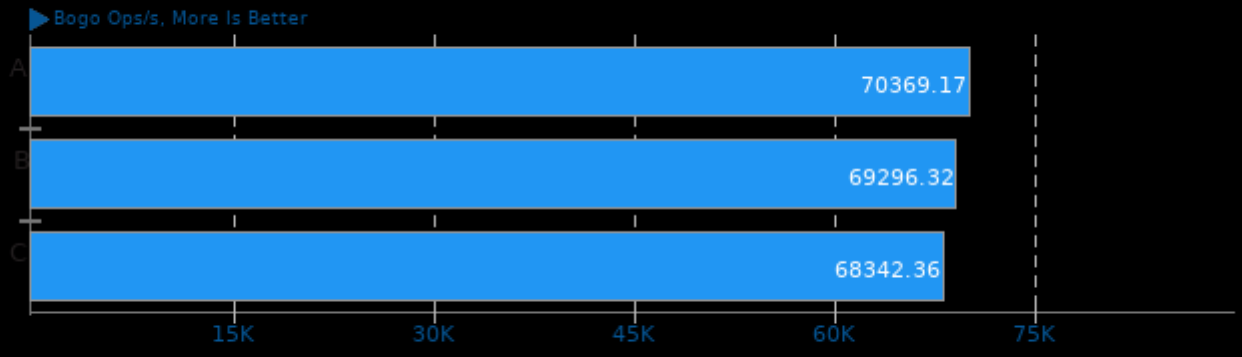
Test: Matrix Math



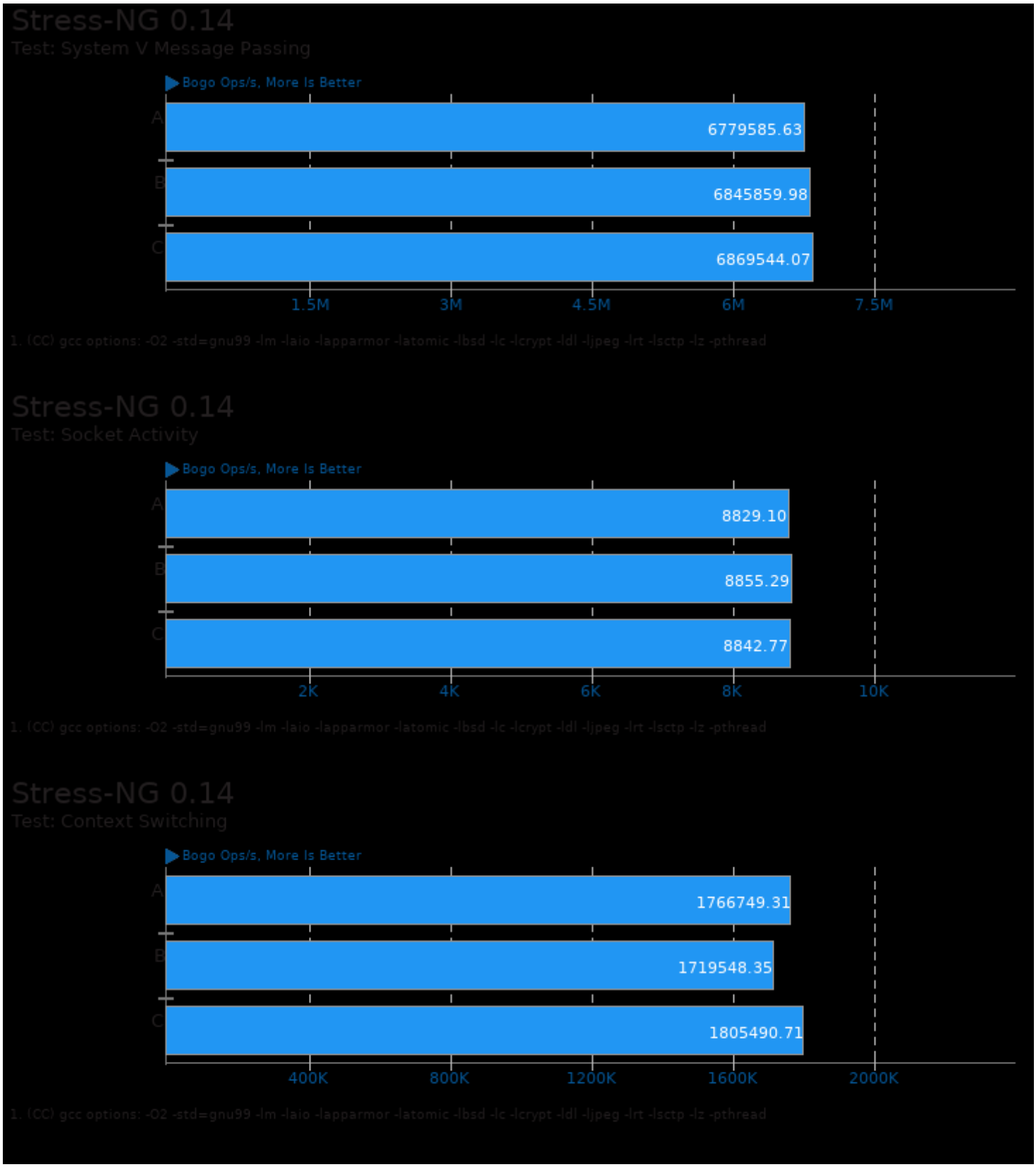

1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

## Stress-NG 0.14

Test: Forking

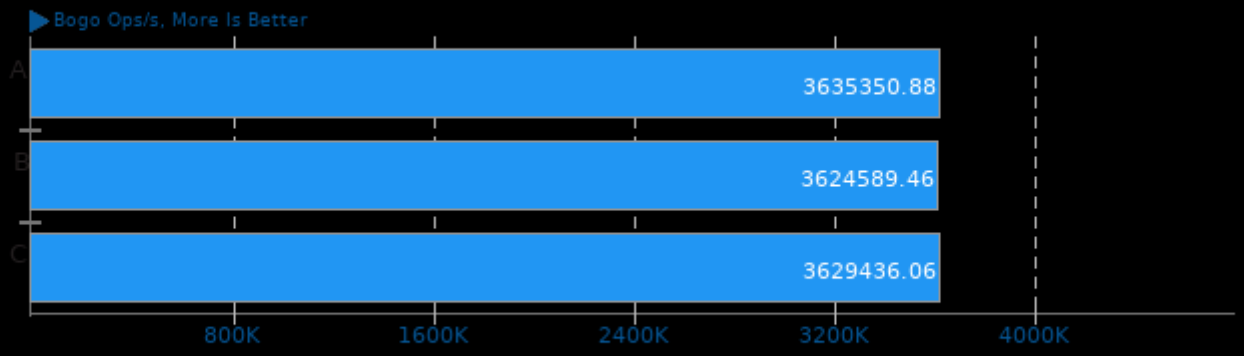



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread


Stress-NG 0.14
Test: System V Message Passing
Bogo Ops/s, More Is Better
A
6779585.63
B
6845859.98
C
6869544.07
1.5M
3M
4.5M
6M
7.5M
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread
Stress-NG 0.14
Test: Socket Activity
Bogo Ops/s, More Is Better
A
8829.10
B
8855.29
C
8842.77
2K
4K
6K
8K
10K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread
Stress-NG 0.14
Test: Context Switching
Bogo Ops/s, More Is Better
A
1766749.31
B
1719548.35
C
1805490.71
400K
800K
1200K
1600K
2000K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

## Stress-NG 0.14

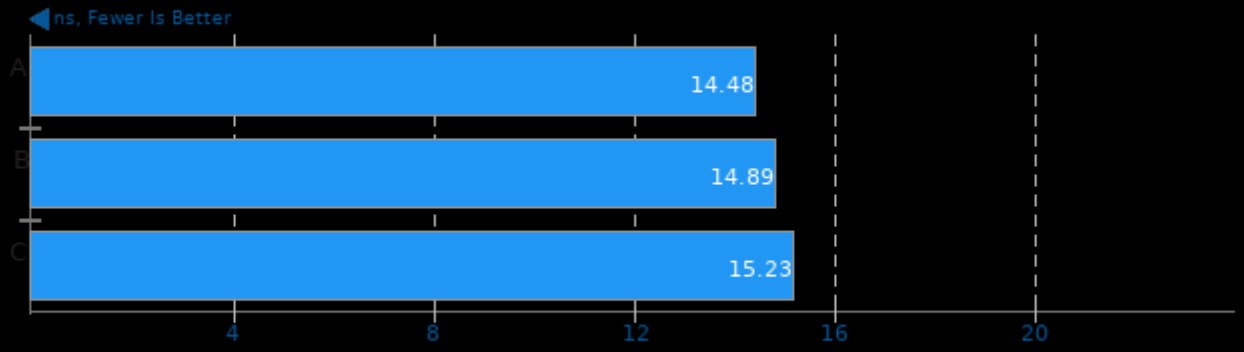
Test: Semaphores




1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

## Glibc Benchmarks

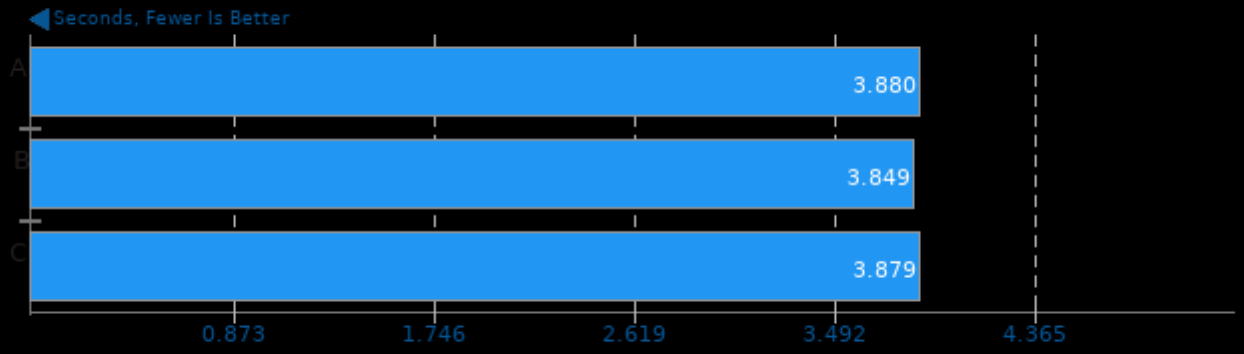
Benchmark: exp




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

## WebP2 Image Encode 20220422

Encode Settings: Quality 100, Compression Effort 5

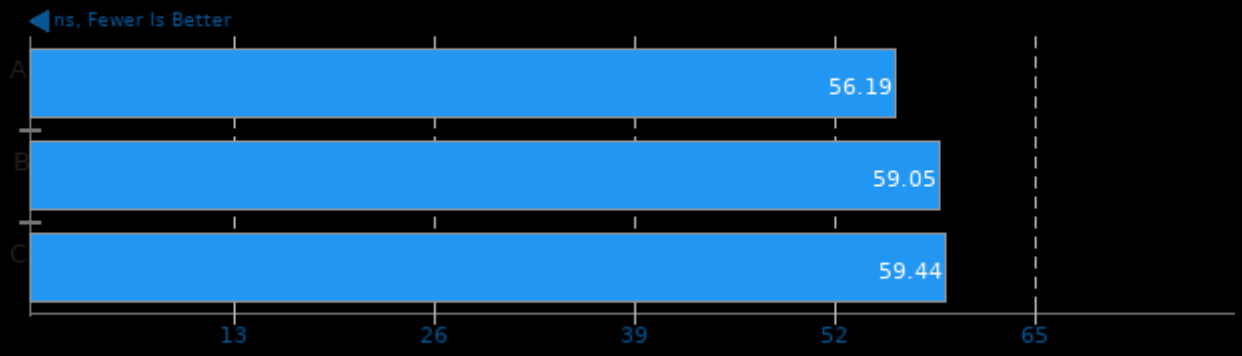



1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -ldl

# cascade may

## Glibc Benchmarks

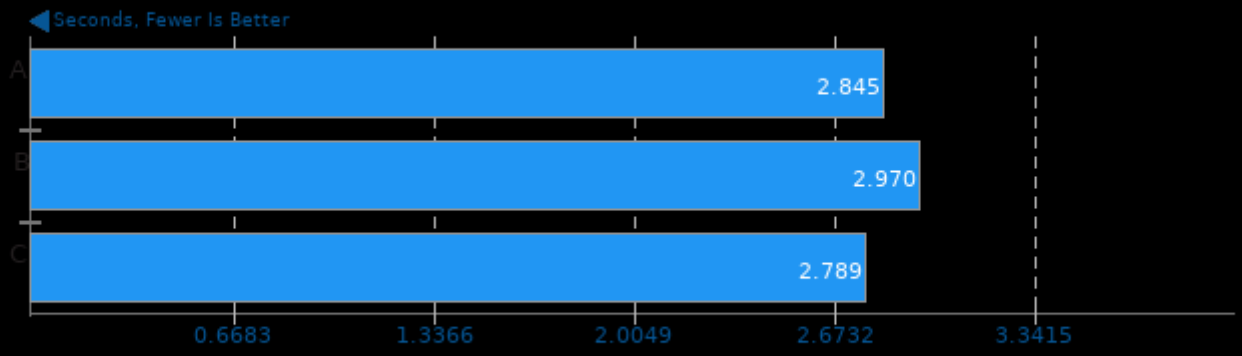
Benchmark: sin




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

## WebP2 Image Encode 20220422

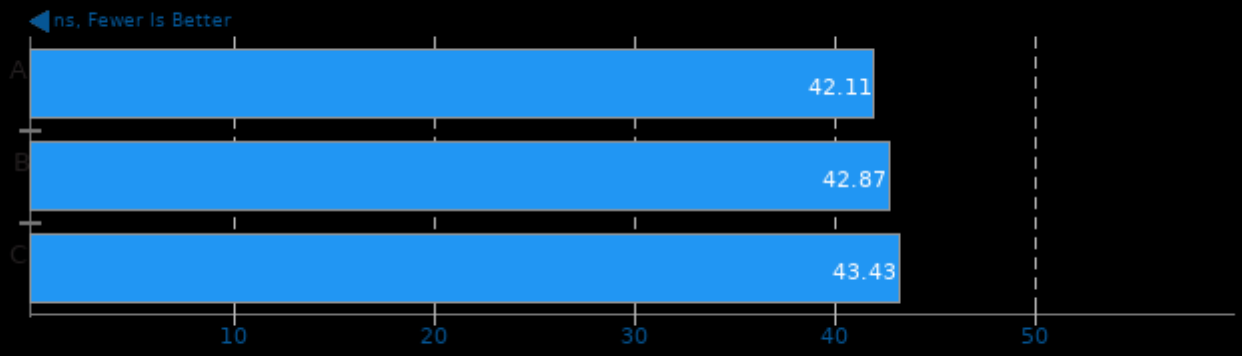
Encode Settings: Default



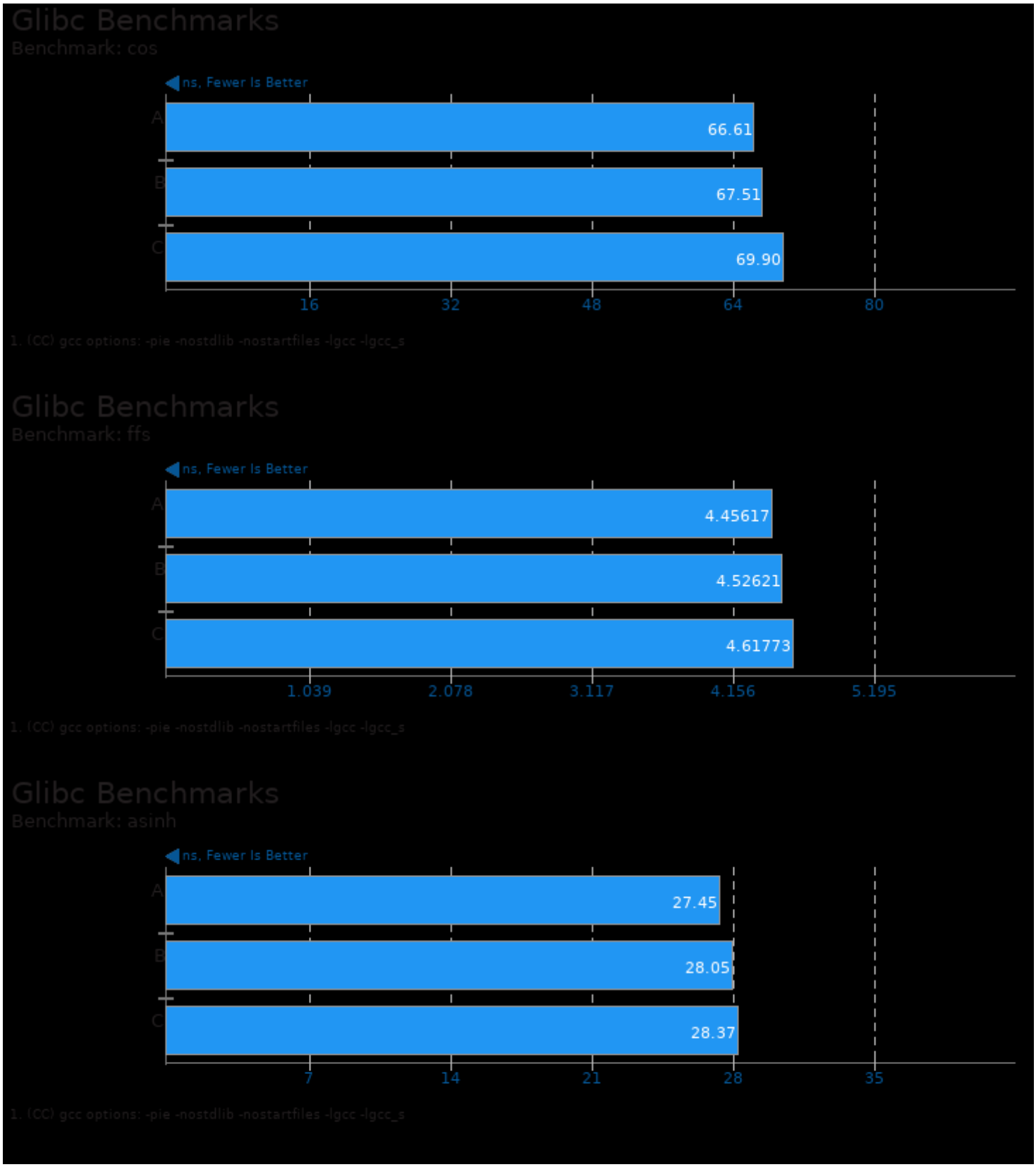

1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -ldl

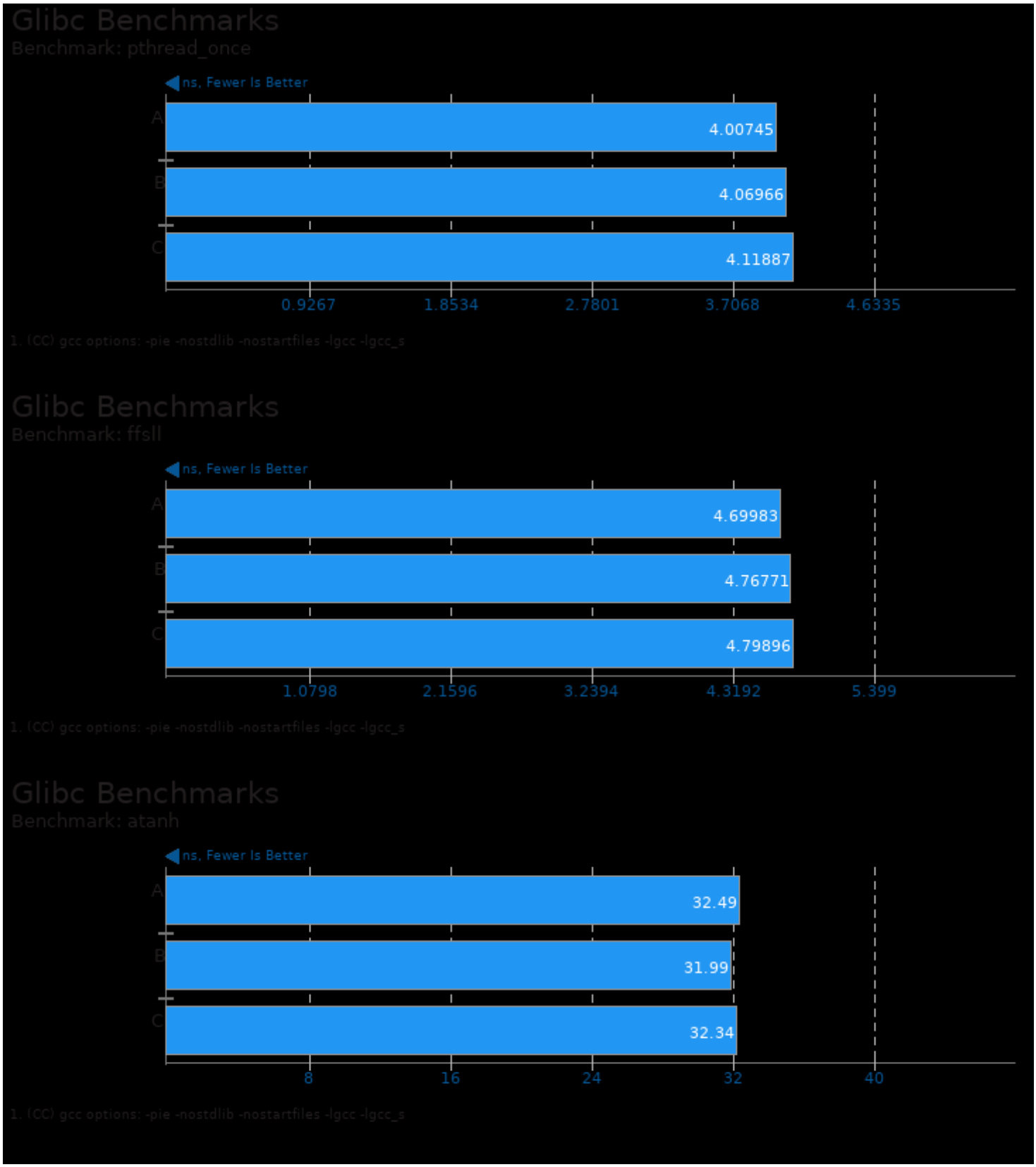
## Glibc Benchmarks

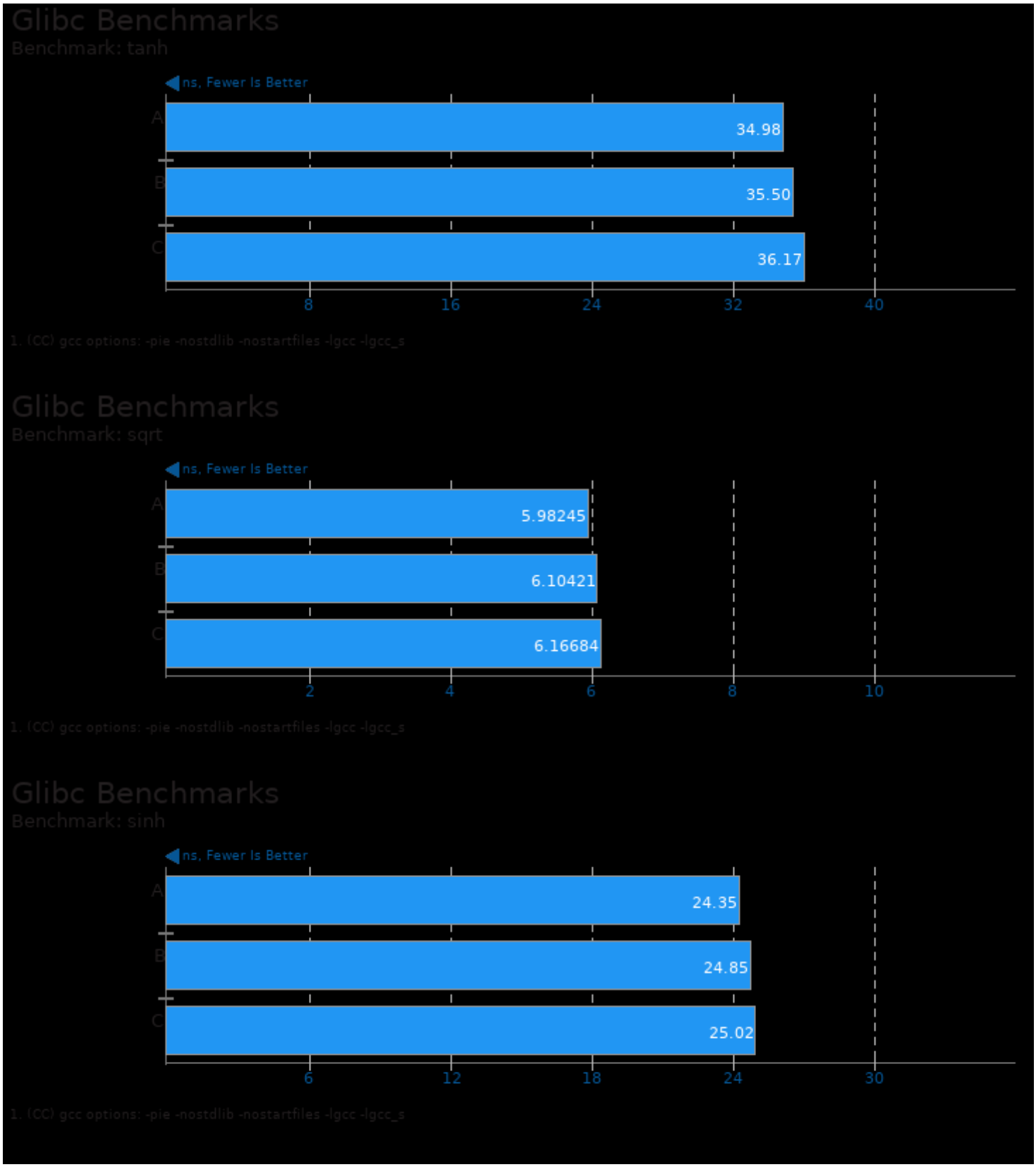
Benchmark: sincos

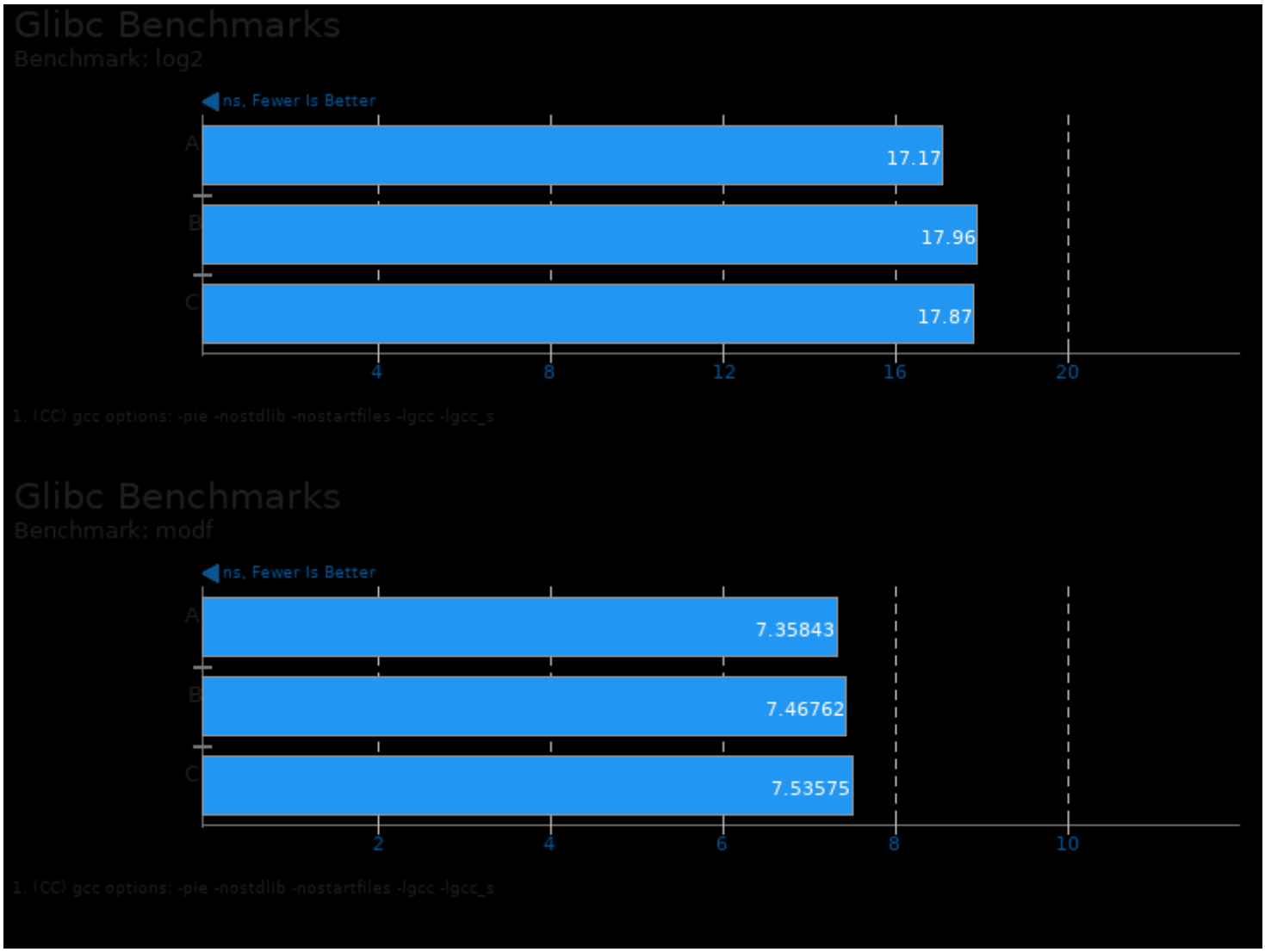



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s


Glibc Benchmarks
Benchmark: cos
ns, Fewer Is Better
A
B
C
66.61
67.51
69.90
16
32
48
64
80
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: ffs
ns, Fewer Is Better
A
B
C
4.45617
4.52621
4.61773
1.039
2.078
3.117
4.156
5.195
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: asinh
ns, Fewer Is Better
A
B
C
27.45
28.05
28.37
7
14
21
28
35
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s


Glibc Benchmarks
Benchmark: pthread_once
ns, Fewer Is Better
A
4.00745
B
4.06966
C
4.11887
0.9267
1.8534
2.7801
3.7068
4.6335
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: ffsll
ns, Fewer Is Better
A
4.69983
B
4.76771
C
4.79896
1.0798
2.1596
3.2394
4.3192
5.399
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: atanh
ns, Fewer Is Better
A
32.49
B
31.99
C
32.34
8
16
24
32
40
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s


Glibc Benchmarks
Benchmark: tanh
ns, Fewer Is Better
A
B
C
34.98
35.50
36.17
8
16
24
32
40
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: sqrt
ns, Fewer Is Better
A
B
C
5.98245
6.10421
6.16684
2
4
6
8
10
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: sinh
ns, Fewer Is Better
A
B
C
24.35
24.85
25.02
6
12
18
24
30
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s

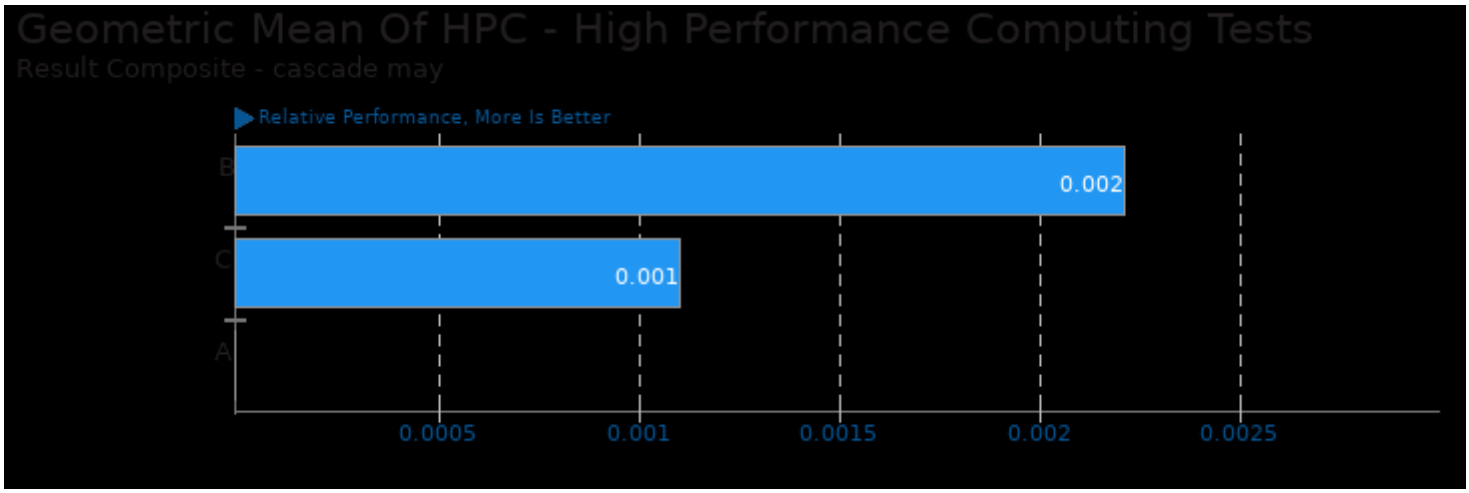

Glibc Benchmarks
Benchmark: log2
ns, Fewer Is Better
A
B
C
17.17
17.96
17.87
4
8
12
16
20
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: modf
ns, Fewer Is Better
A
B
C
7.35843
7.46762
7.53575
2
4
6
8
10
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s

# cascade may

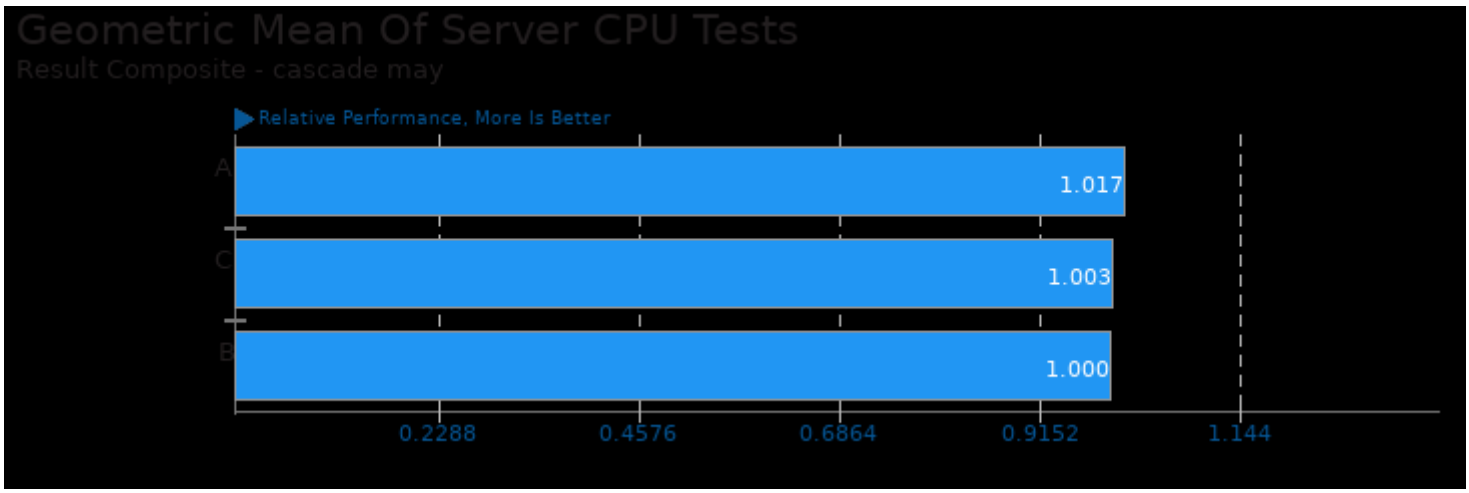
These geometric means are based upon test groupings / test suites for this result file.




Geometric mean based upon tests: pts/glibc-bench, pts/stress-ng and pts/renaissance




Geometric mean based upon tests: pts/gromacs and pts/tensorflow-lite




Geometric mean based upon tests: pts/renaissance, pts/glibc-bench and pts/stress-ng

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 05:25.*