



3970X nov

AMD Ryzen Threadripper 3970X 32-Core testing with a ASUS ROG ZENITH II EXTREME (1201 BIOS) and AMD Radeon RX 5600 OEM/5600 XT / 5700/5700 8GB on Ubuntu 20.10 via the Phoronix Test Suite.

Automated Executive Summary

A had the most wins, coming in first place for 62% of the tests.

Based on the geometric mean of all complete results, the fastest (A) was 1.047x the speed of the slowest (D). C was 0.966x the speed of A, B was 0.997x the speed of C, D was 0.993x the speed of B.

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

PyHPC Benchmarks (Device: CPU - Backend: TensorFlow - Project Size: 262144 - Benchmark: Equation of State) at 2x
Redis Memtier / Redis Benchmark (Test: GET) at 1.814x
Redis Memtier / Redis Benchmark (Test: MIX) at 1.361x
PyHPC Benchmarks (Device: CPU - Backend: PyTorch - Project Size: 16384 - Benchmark: Isonutral Mixing) at 1.25x
PyHPC Benchmarks (Device: CPU - Backend: PyTorch - Project Size: 1048576 - Benchmark: Equation of State) at 1.143x
Stargate Digital Audio Workstation (Sample Rate: 96000 - Buffer Size: 512) at 1.136x
Stargate Digital Audio Workstation (Sample Rate: 192000 - Buffer Size: 512) at 1.092x
PyHPC Benchmarks (Device: CPU - Backend: JAX - Project Size: 262144 - Benchmark: Isonutral Mixing) at 1.089x

PyHPC Benchmarks (Device: CPU - Backend: Numpy - Project Size: 65536 - Benchmark: Equation of State) at 1.083x
Stargate Digital Audio Workstation (Sample Rate: 44100 - Buffer Size: 512) at 1.065x.

Test Systems:

A

B

C

D

Processor: AMD Ryzen Threadripper 3970X 32-Core @ 4.55GHz (32 Cores / 64 Threads), Motherboard: ASUS ROG ZENITH II EXTREME (1201 BIOS), Chipset: AMD Starship/Matisse, Memory: 64GB, Disk: Samsung SSD 980 PRO 500GB, Graphics: AMD Radeon RX 5600 OEM/5600 XT / 5700/5700 8GB (1750/875MHz), Audio: AMD Navi 10 HDMI Audio, Monitor: ASUS VP28U, Network: Aquantia AQC107 NBase-T/IEEE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.10, Kernel: 5.11.0-rc6-phx (x86_64) 20210203, Desktop: GNOME Shell 3.38.1, Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 20.2.1 (LLVM 11.0.0), Vulkan: 1.2.131, Compiler: GCC 10.3.0, 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-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-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-poYruo/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgc-n-amdhsa=/build/gcc-10-poYruo/gcc-10-10.3.0/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-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: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8301039

Python Notes: Python 3.8.10

Security Notes: itlb_multihit: Not affected + 11tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	A	B	C	D
CP2K Molecular Dynamics - 479.296		480.969	477.581	480.144
Fayalite-FIST (sec)				
Normalized	99.64%	99.3%	100%	99.47%
BLAKE2 (Cycles/Byte) 5.23		5.26	5.29	5.26
Normalized	100%	99.43%	98.87%	99.43%
Standard Deviation	1%			
JPEG XL libjxl - PNG - 5 (MP/s) 82.57		81.09	80.45	80.05
Normalized	100%	98.21%	97.43%	96.95%
Standard Deviation	0.8%			

JPEG XL libjxl - PNG - 7 (MP/s)	10.22	10.04	9.89	10.01
Normalized	100%	98.24%	96.77%	97.95%
Standard Deviation	0.3%			
JPEG XL libjxl - PNG - 8 (MP/s)	0.88	0.9	0.9	0.89
Normalized	97.78%	100%	100%	98.89%
Standard Deviation	0.7%			
JPEG XL libjxl - JPEG - 5 (MP/s)	92.71	89.38	88.52	87.63
Normalized	100%	96.41%	95.48%	94.52%
Standard Deviation	0.3%			
JPEG XL libjxl - JPEG - 7 (MP/s)	92.52	89.44	88.95	87.23
Normalized	100%	96.67%	96.14%	94.28%
Standard Deviation	0.2%			
JPEG XL libjxl - JPEG - 8 (MP/s)	30.93	30.64	30.68	30.31
Normalized	100%	99.06%	99.19%	98%
Standard Deviation	0.3%			
JPEG XL Decoding libjxl - 1 (MP/s)	57.10	55.85	55.17	55.19
Normalized	100%	97.81%	96.62%	96.65%
Standard Deviation	0.1%			
JPEG XL Decoding libjxl - All (MP/s)	280.03	273.03	265.98	264.14
Normalized	100%	97.5%	94.98%	94.33%
Standard Deviation	1.1%			
dav1d - Chimera 1080p (FPS)	753.32	751.01	749.72	753.09
Normalized	100%	99.69%	99.52%	99.97%
Standard Deviation	0.1%			
dav1d - Summer Nature 4K (FPS)	361.20	368.29	369.85	361.77
Normalized	97.66%	99.58%	100%	97.82%
Standard Deviation	1.3%			
dav1d - S.N.1 (FPS)	709.09	704.77	703.45	704.56
Normalized	100%	99.39%	99.2%	99.36%
Standard Deviation	0.5%			
dav1d - C.1.1.b (FPS)	584.23	580.36	582.3	580.44
Normalized	100%	99.34%	99.67%	99.35%
Standard Deviation	0.2%			
Stargate Digital Audio Workstation - 44100 - 512 (Render Ratio)	5.347697	5.44432	5.69361	5.529913
Normalized	93.92%	95.62%	100%	97.12%
Standard Deviation	5.4%			
Stargate Digital Audio Workstation - 96000 - 512 (Render Ratio)	3.972197	4.058212	3.626281	4.117754
Normalized	96.47%	98.55%	88.06%	100%
Standard Deviation	4.9%			
Stargate Digital Audio Workstation - 192000 - 512 (Render Ratio)	2.740116	2.516886	2.749481	2.549382
Normalized	99.66%	91.54%	100%	92.72%
Standard Deviation	0.2%			
Stargate Digital Audio Workstation - 44100 - 1024 (Render Ratio)	5.867582	5.958793	5.904912	5.606738
Normalized	98.47%	100%	99.1%	94.09%
Standard Deviation	2%			
Stargate Digital Audio Workstation - 480000 - 512 (Render Ratio)	5.241602	5.298634	5.477304	5.239098
Normalized	95.7%	96.74%	100%	95.65%
Standard Deviation	4.6%			

Stargate Digital Audio Workstation - 96000 - 1024 (Render Ratio)	4.349925	4.200232	4.420731	4.353245
Normalized	98.4%	95.01%	100%	98.47%
Standard Deviation	1.6%			
Stargate Digital Audio Workstation - 192000 - 1024 (Render Ratio)	2.998383	2.885121	2.962791	2.926717
Normalized	100%	96.22%	98.81%	97.61%
Standard Deviation	0.4%			
Stargate Digital Audio Workstation - 480000 - 1024 (Render Ratio)	5.402926	5.720991	5.490929	5.107798
Normalized	94.44%	100%	95.98%	89.28%
Standard Deviation	7.7%			
GIMP - resize (sec)	7.409	7.484	7.482	7.32
Normalized	98.8%	97.81%	97.83%	100%
Standard Deviation	0.6%			
GIMP - rotate (sec)	11.017	11.124	11.101	11.232
Normalized	100%	99.04%	99.24%	98.09%
Standard Deviation	0.1%			
GIMP - auto-levels (sec)	13.130	13.362	13.227	13.451
Normalized	100%	98.26%	99.27%	97.61%
Standard Deviation	1.3%			
GIMP - unsharp-mask (sec)	17.134	17.383	17.062	17.35
Normalized	99.58%	98.15%	100%	98.34%
Standard Deviation	0.6%			
Redis Memtier / Redis Benchmark - L.a.L.I (Reqs/sec)	1274703	1245795	1274214	1284862
Normalized	99.21%	96.96%	99.17%	100%
Standard Deviation	1.8%			
Redis Memtier / Redis Benchmark - L.a.L.I (Reqs/sec)	1263299	1242082	1296187	1231088
Normalized	97.46%	95.83%	100%	94.98%
Standard Deviation	2.9%			
Redis Memtier / Redis Benchmark - GET (Operations/sec)	799815	454154	446762	440793
Normalized	100%	56.78%	55.86%	55.11%
Standard Deviation	1.6%			
Redis Memtier / Redis Benchmark - MIX (Operations/sec)	571593	419898	423298	423877
Normalized	100%	73.46%	74.06%	74.16%
Standard Deviation	3.7%			
Redis Memtier / Redis Benchmark - SET (Operations/sec)	420795	413612	407951	
Normalized	100%	98.29%	96.95%	
Standard Deviation	2.1%			
Blender - BMW27 - CPU-Only (sec)	43.95	43.54	43.49	
Normalized	98.95%	99.89%	100%	
Standard Deviation	0.6%			
Blender - Classroom - CPU-Only (sec)	119.15	118.66	118.65	
Normalized	99.58%	99.99%	100%	
Standard Deviation	0.2%			
Blender - Fishy Cat - CPU-Only (sec)	58.93	59.36	59.11	
Normalized	100%	99.28%	99.7%	
Standard Deviation	0.2%			
Blender - Barbershop - CPU-Only (sec)	177.25	176.8	176.7	

	Normalized	99.69%	99.94%	100%
	Standard Deviation	0.3%		
Blender - Pabellon Barcelona - CPU-Only (sec)		136.11	136	135.87
	Normalized	99.82%	99.9%	100%
	Standard Deviation	0.1%		
RAR Compression - L.S.T.A.T.R (sec)		73.694	74.493	74.872
	Normalized	100%	98.93%	98.43%
	Standard Deviation	1.3%		
GnuPG - 2.7.S.F.E (sec)		64.926	65.042	64.359
	Normalized	99.13%	98.95%	100%
	Standard Deviation	0.9%		
PyHPC Benchmarks - CPU - JAX - 16384 - Isonutral Mixing (sec)		0.003	0.003	0.003
	Standard Deviation	0%		
PyHPC Benchmarks - CPU - JAX - 65536 - Equation of State (sec)		0.001	0.001	0.001
	Standard Deviation	0%		
PyHPC Benchmarks - CPU - JAX - 65536 - Isonutral Mixing (sec)		0.019	0.019	0.019
	Standard Deviation	2.9%		
PyHPC Benchmarks - CPU - JAX - 262144 - Equation of State (sec)		0.001	0.001	0.001
	Standard Deviation	0%		
PyHPC Benchmarks - CPU - JAX - 262144 - Isonutral Mixing (sec)		0.083	0.079	0.086
	Normalized	95.18%	100%	91.86%
	Standard Deviation	3.7%		
PyHPC Benchmarks - CPU - JAX - 1048576 - Equation of State (sec)		0.009	0.009	0.009
	Standard Deviation	0%		
PyHPC Benchmarks - CPU - JAX - 1048576 - Isonutral Mixing (sec)		0.157	0.158	0.159
	Normalized	100%	99.37%	98.74%
	Standard Deviation	0.7%		
PyHPC Benchmarks - CPU - JAX - 4194304 - Equation of State (sec)		0.028	0.028	0.028
	Standard Deviation	0%		
PyHPC Benchmarks - CPU - JAX - 4194304 - Isonutral Mixing (sec)		0.625	0.642	0.655
	Normalized	100%	97.35%	95.42%
	Standard Deviation	0.2%		
PyHPC Benchmarks - CPU - Numba - 16384 - Equation of State (sec)		0.001	0.001	0.001
	Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numba - 16384 - Isonutral Mixing (sec)		0.004	0.004	0.004
	Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numba - 65536 - Equation of State (sec)		0.004	0.004	0.004
	Standard Deviation	0%		

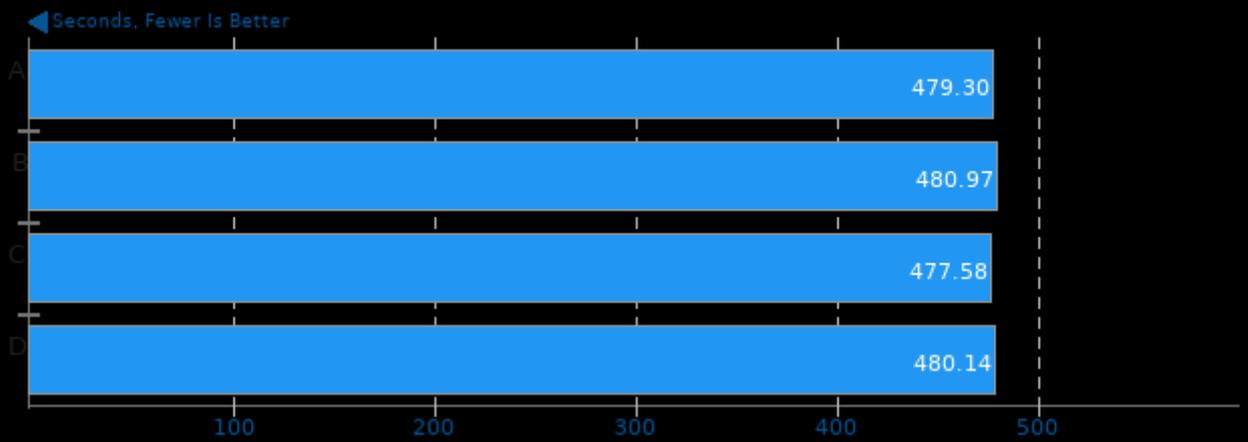
PyHPC Benchmarks - CPU - Numba - 65536 - Isonutral Mixing (sec)	0.016	0.016	0.016
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numpy - 16384 - Equation of State (sec)	0.002	0.002	0.002
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numpy - 16384 - Isonutral Mixing (sec)	0.007	0.007	0.007
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numpy - 65536 - Equation of State (sec)	0.013	0.013	0.012
Normalized	92.31%	92.31%	100%
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numpy - 65536 - Isonutral Mixing (sec)	0.028	0.028	0.028
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Aesara - 16384 - Equation of State (sec)	0.001	0.001	0.001
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Aesara - 16384 - Isonutral Mixing (sec)	0.005	0.005	0.005
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Aesara - 65536 - Equation of State (sec)	0.005	0.005	0.005
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Aesara - 65536 - Isonutral Mixing (sec)	0.019	0.019	0.019
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numba - 262144 - Equation of State (sec)	0.015	0.015	0.015
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numba - 262144 - Isonutral Mixing (sec)	0.061	0.059	0.061
Normalized	96.72%	100%	96.72%
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numpy - 262144 - Equation of State (sec)	0.052	0.05	0.05
Normalized	96.15%	100%	100%
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numpy - 262144 - Isonutral Mixing (sec)	0.118	0.117	0.117
Normalized	99.15%	100%	100%
Standard Deviation	0.5%		
PyHPC Benchmarks - CPU - Aesara - 262144 - Equation of State (sec)	0.019	0.019	0.019
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Aesara - 262144 - Isonutral Mixing (sec)	0.071	0.068	0.07
Normalized	95.77%	100%	97.14%
Standard Deviation	0.8%		

PyHPC Benchmarks - CPU - Numba - 1048576 - Equation of State (sec)	0.061	0.061	0.061
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numba - 1048576 - Isonutral Mixing (sec)	0.272	0.278	0.28
Normalized	100%	97.84%	97.14%
Standard Deviation	1.3%		
PyHPC Benchmarks - CPU - Numba - 4194304 - Equation of State (sec)	0.244	0.239	0.244
Normalized	97.95%	100%	97.95%
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Numba - 4194304 - Isonutral Mixing (sec)	1.162	1.174	1.182
Normalized	100%	98.98%	98.31%
Standard Deviation	0.2%		
PyHPC Benchmarks - CPU - Numpy - 1048576 - Equation of State (sec)	0.226	0.227	0.223
Normalized	98.67%	98.24%	100%
Standard Deviation	0.3%		
PyHPC Benchmarks - CPU - Numpy - 1048576 - Isonutral Mixing (sec)	0.542	0.538	0.54
Normalized	99.26%	100%	99.63%
Standard Deviation	0.3%		
PyHPC Benchmarks - CPU - Numpy - 4194304 - Equation of State (sec)	1.149	1.138	1.142
Normalized	99.04%	100%	99.65%
Standard Deviation	0.2%		
PyHPC Benchmarks - CPU - Numpy - 4194304 - Isonutral Mixing (sec)	2.213	2.246	2.239
Normalized	100%	98.53%	98.84%
Standard Deviation	0.9%		
PyHPC Benchmarks - CPU - PyTorch - 16384 - Isonutral Mixing (sec)	0.005	0.004	0.004
Normalized	80%	100%	100%
Standard Deviation	0%		
PyHPC Benchmarks - CPU - PyTorch - 65536 - Equation of State (sec)	0.002	0.002	0.002
Standard Deviation	0%		
PyHPC Benchmarks - CPU - PyTorch - 65536 - Isonutral Mixing (sec)	0.016	0.016	0.016
Standard Deviation	0%		
PyHPC Benchmarks - CPU - Aesara - 1048576 - Equation of State (sec)	0.076	0.075	0.078
Normalized	98.68%	100%	96.15%
Standard Deviation	0.8%		
PyHPC Benchmarks - CPU - Aesara - 1048576 - Isonutral Mixing (sec)	0.332	0.332	0.33
Normalized	99.4%	99.4%	100%
Standard Deviation	0.3%		
PyHPC Benchmarks - CPU - Aesara - 4194304 - Equation of State (sec)	0.306	0.309	0.31
Normalized	100%	99.03%	98.71%
Standard Deviation	1.5%		

PyHPC Benchmarks - CPU - Aesara - 4194304 - Isonutral Mixing (sec)	1.377	1.354	1.37
Normalized	98.33%	100%	98.83%
Standard Deviation	0.4%		
PyHPC Benchmarks - CPU - PyTorch - 262144 - Equation of State (sec)	0.005	0.005	0.005
Standard Deviation	0%		
PyHPC Benchmarks - CPU - PyTorch - 262144 - Isonutral Mixing (sec)	0.066	0.065	0.065
Normalized	98.48%	100%	100%
Standard Deviation	0%		
PyHPC Benchmarks - CPU - PyTorch - 1048576 - Equation of State (sec)	0.021	0.024	0.021
Normalized	100%	87.5%	100%
Standard Deviation	3%		
PyHPC Benchmarks - CPU - PyTorch - 1048576 - Isonutral Mixing (sec)	0.329	0.331	0.332
Normalized	100%	99.4%	99.1%
Standard Deviation	0.6%		
PyHPC Benchmarks - CPU - PyTorch - 4194304 - Equation of State (sec)	0.088	0.092	0.088
Normalized	100%	95.65%	100%
Standard Deviation	0.7%		
PyHPC Benchmarks - CPU - PyTorch - 4194304 - Isonutral Mixing (sec)	1.433	1.438	1.505
Normalized	100%	99.65%	95.22%
Standard Deviation	1.9%		
PyHPC Benchmarks - CPU - TensorFlow - 16384 - Equation of	0.001	0.001	0.001
Standard Deviation	0%		
PyHPC Benchmarks - CPU - TensorFlow - 65536 - Equation of	0.002	0.003	0.004
Normalized	100%	66.67%	50%
Standard Deviation	33.8%		
PyHPC Benchmarks - CPU - TensorFlow - 262144 - Equation of	0.006	0.012	0.011
Normalized	100%	50%	54.55%
Standard Deviation	0%		
PyHPC Benchmarks - CPU - TensorFlow - 1048576 - Equation of	0.028	0.028	0.028
Standard Deviation	0%		
PyHPC Benchmarks - CPU - TensorFlow - 4194304 - Equation of	0.127	0.129	0.13
Normalized	100%	98.45%	97.69%
Standard Deviation	1.4%		

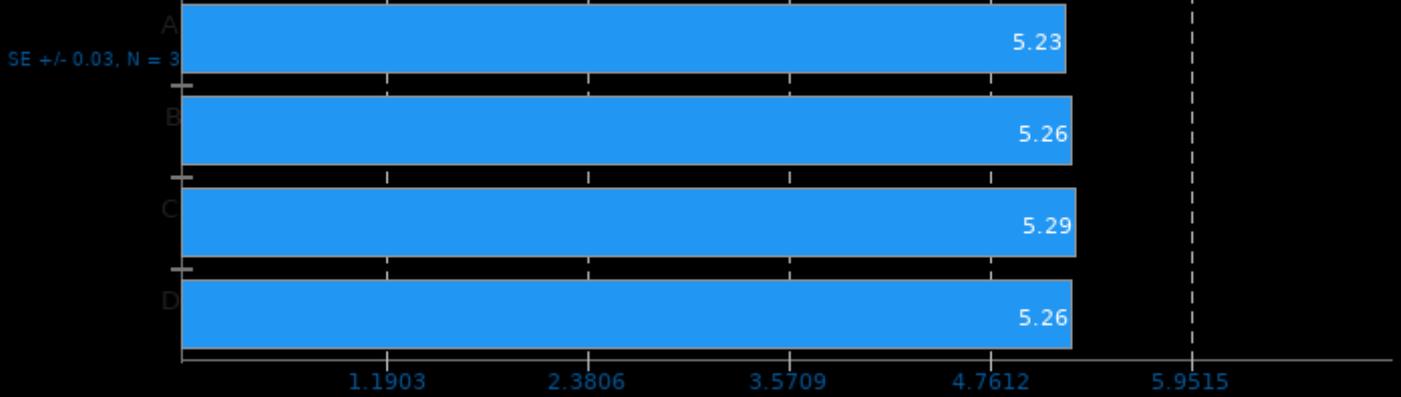
CP2K Molecular Dynamics 8.2

Input: Fayalite-FIST



BLAKE2 20170307

← Cycles Per Byte, Fewer Is Better

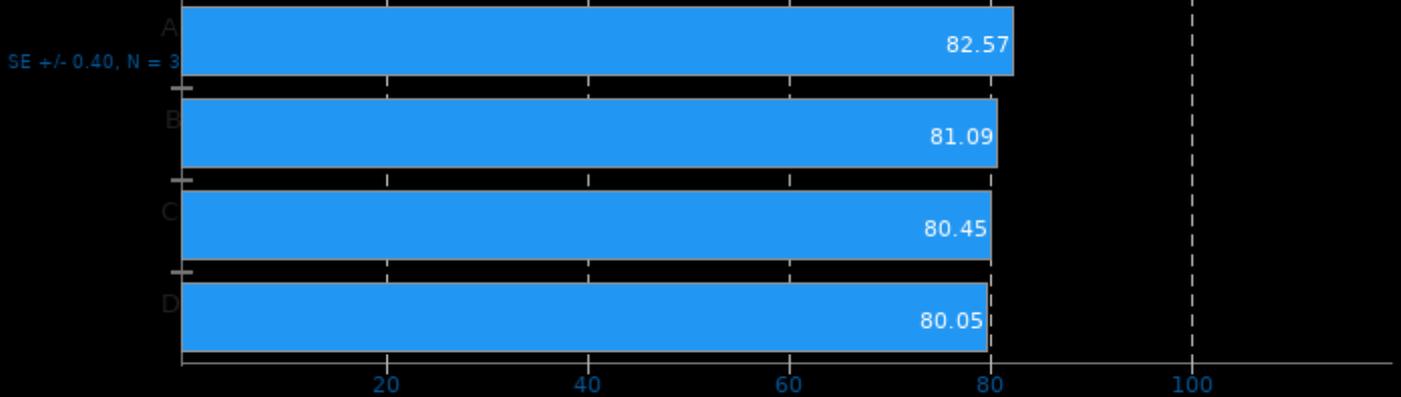


1. (CC) gcc options: -O3 -march=native -lcrypto -lz

JPEG XL libjxl 0.6.1

Input: PNG - Encode Speed: 5

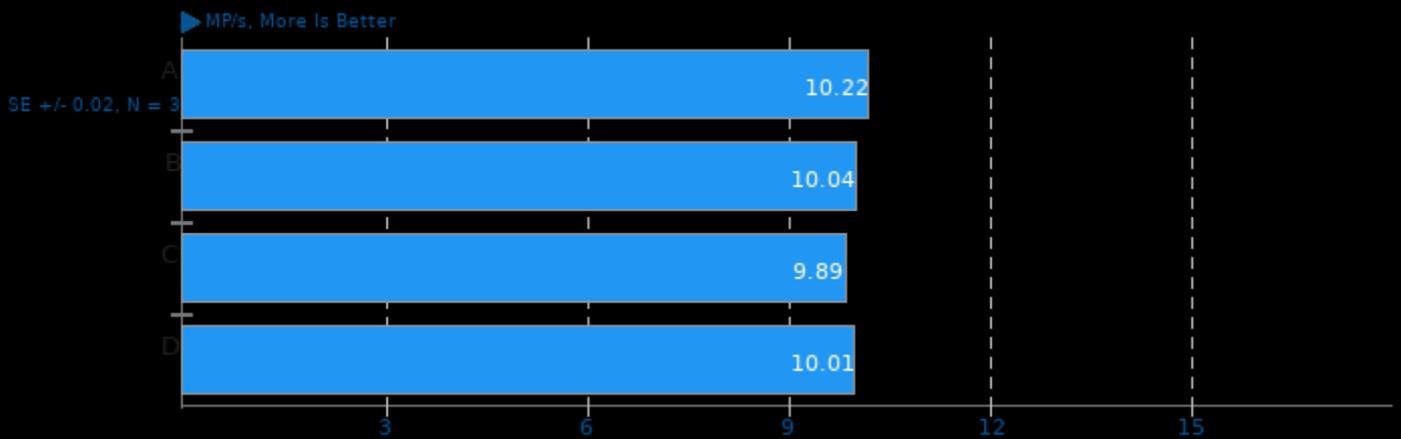
▶ MP/s, More Is Better



1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie

JPEG XL libjxl 0.6.1

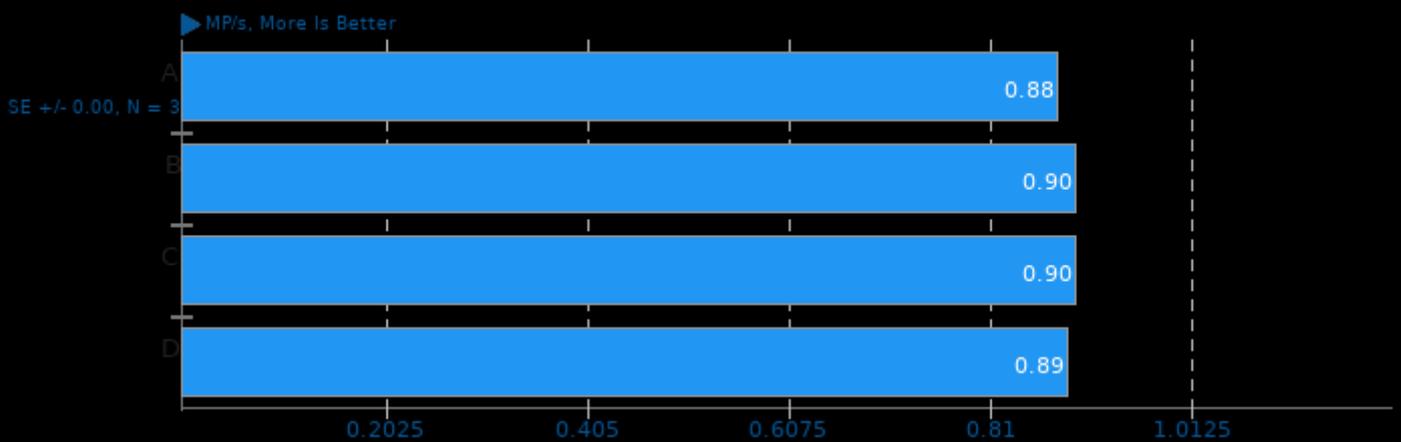
Input: PNG - Encode Speed: 7



1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie

JPEG XL libjxl 0.6.1

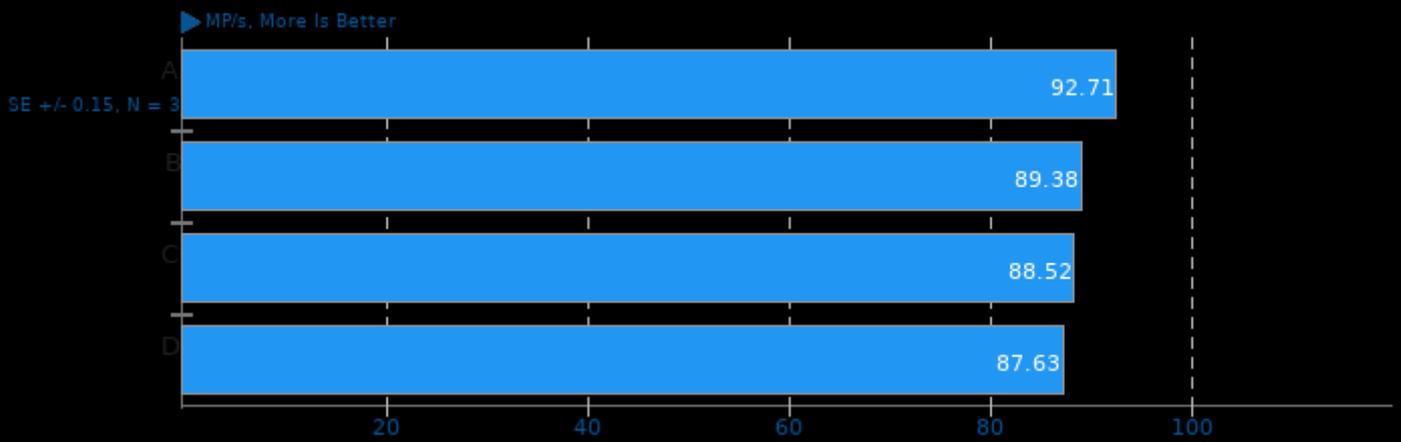
Input: PNG - Encode Speed: 8



1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie

JPEG XL libjxl 0.6.1

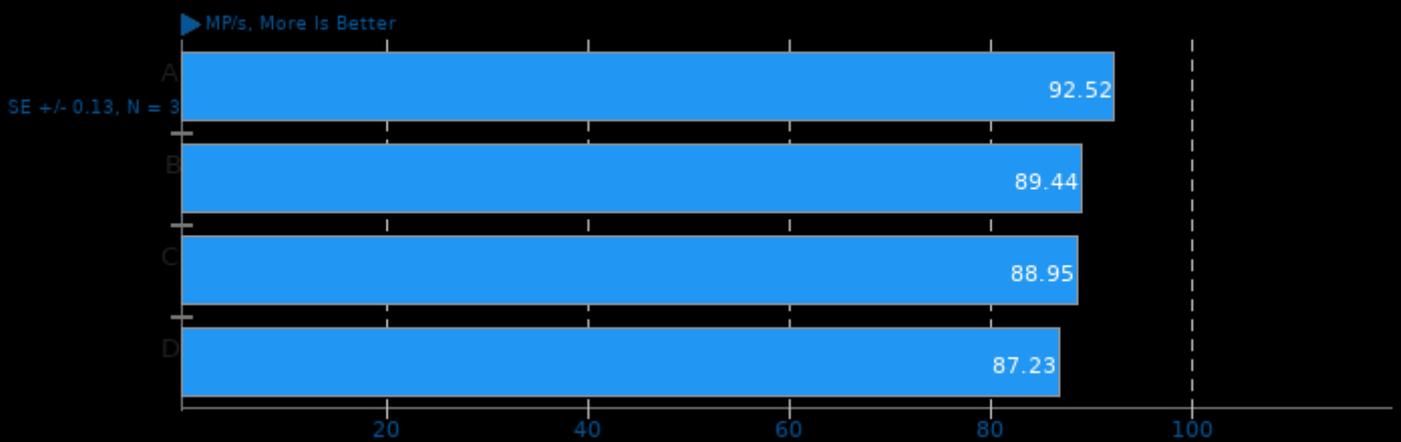
Input: JPEG - Encode Speed: 5



1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie

JPEG XL libjxl 0.6.1

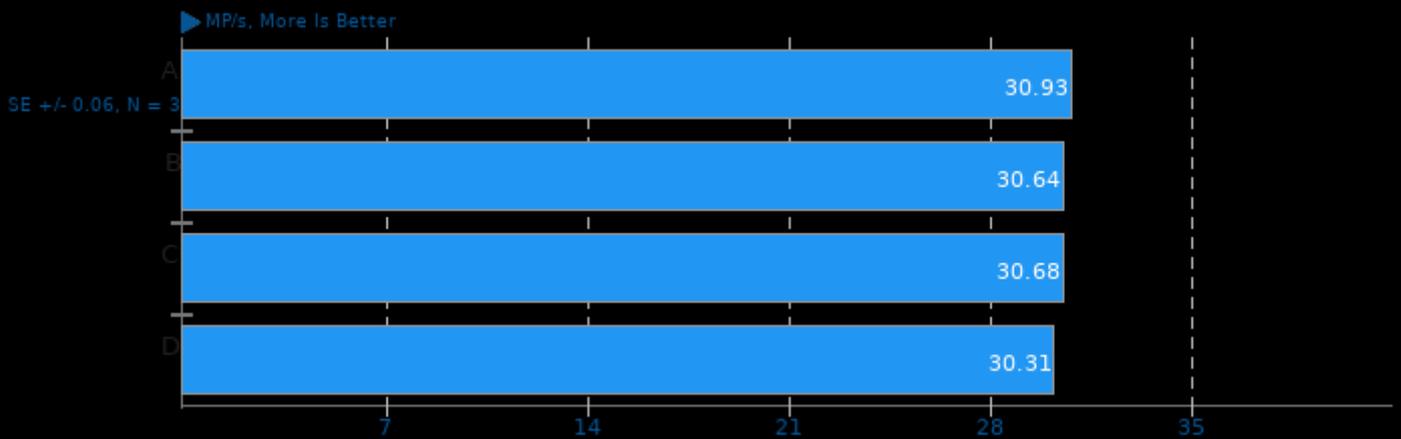
Input: JPEG - Encode Speed: 7



1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie

JPEG XL libjxl 0.6.1

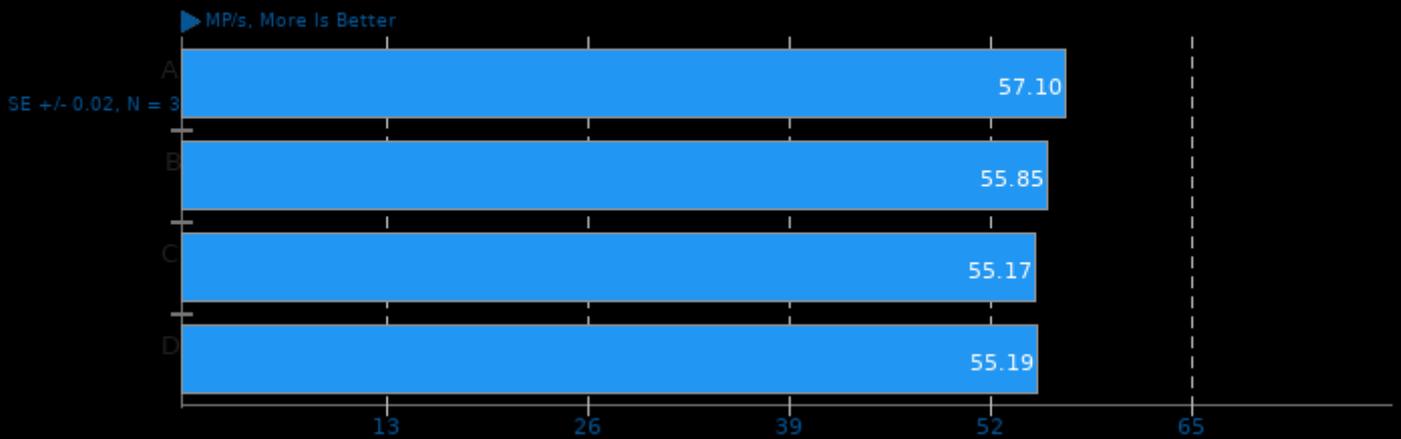
Input: JPEG - Encode Speed: 8



1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie

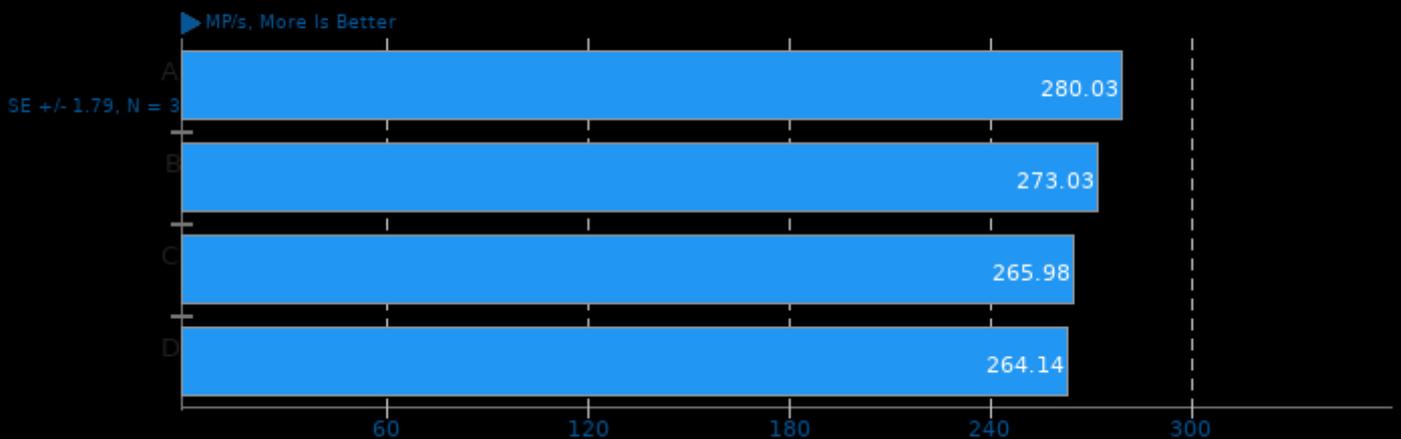
JPEG XL Decoding libjxl 0.6.1

CPU Threads: 1



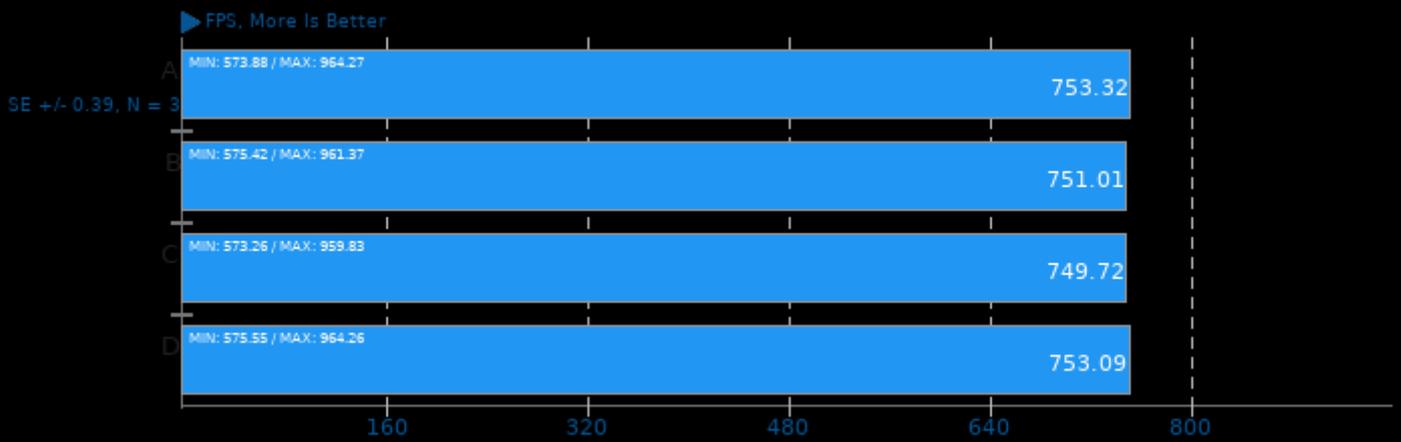
JPEG XL Decoding libjxl 0.6.1

CPU Threads: All



dav1d 0.9.2

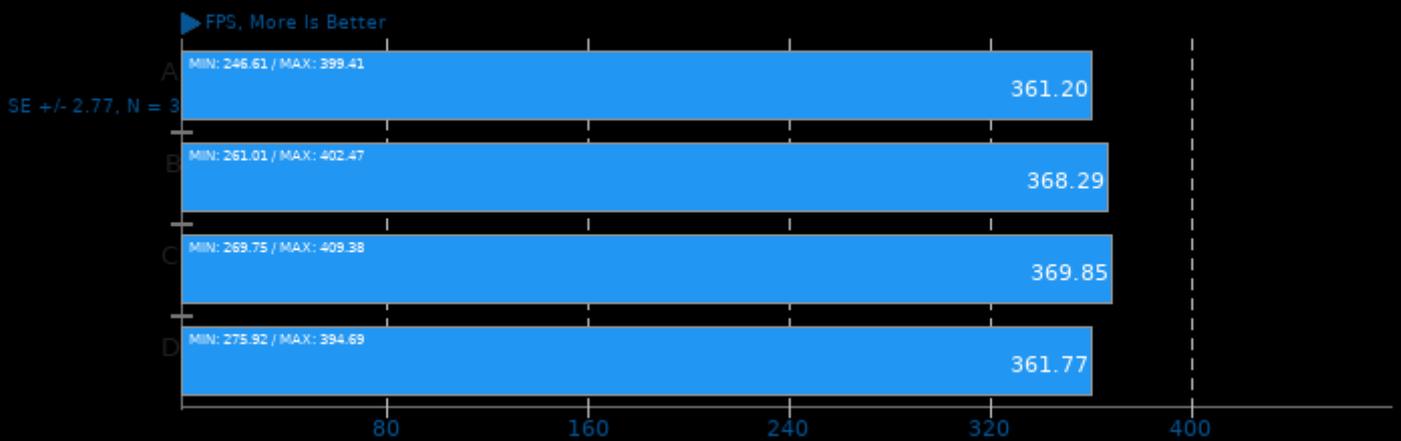
Video Input: Chimera 1080p



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

dav1d 0.9.2

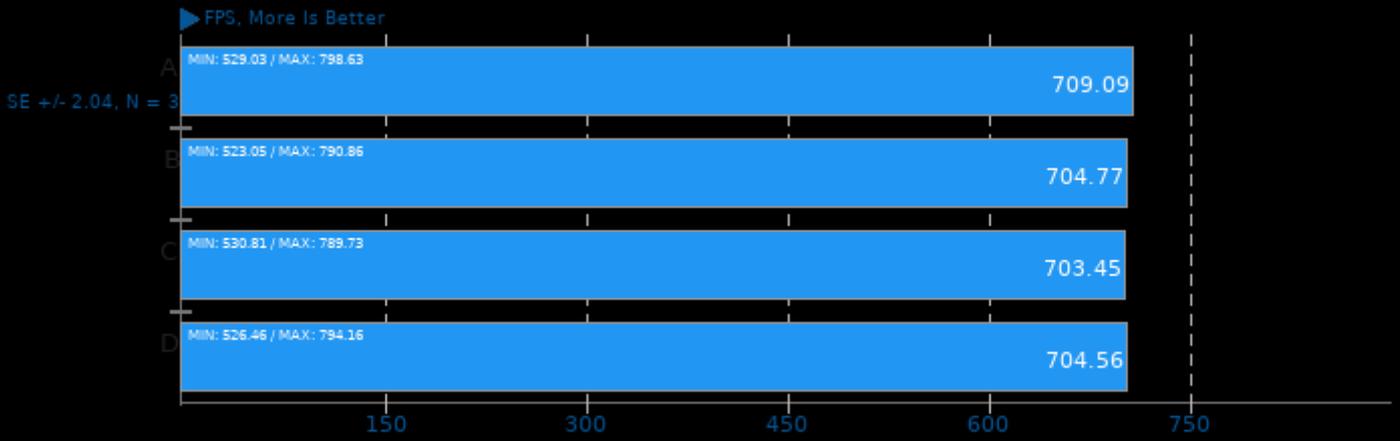
Video Input: Summer Nature 4K



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

dav1d 0.9.2

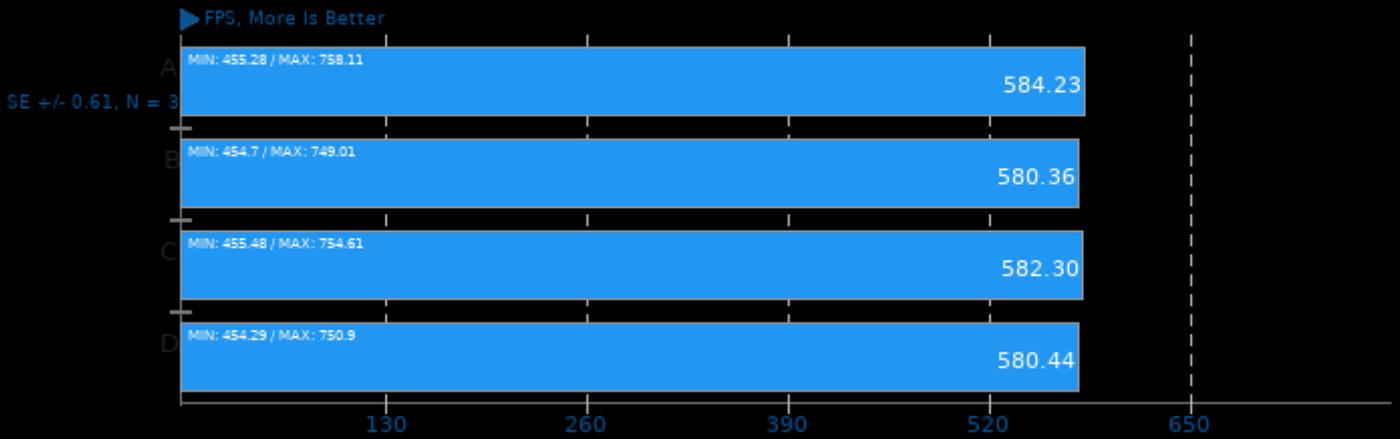
Video Input: Summer Nature 1080p



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

dav1d 0.9.2

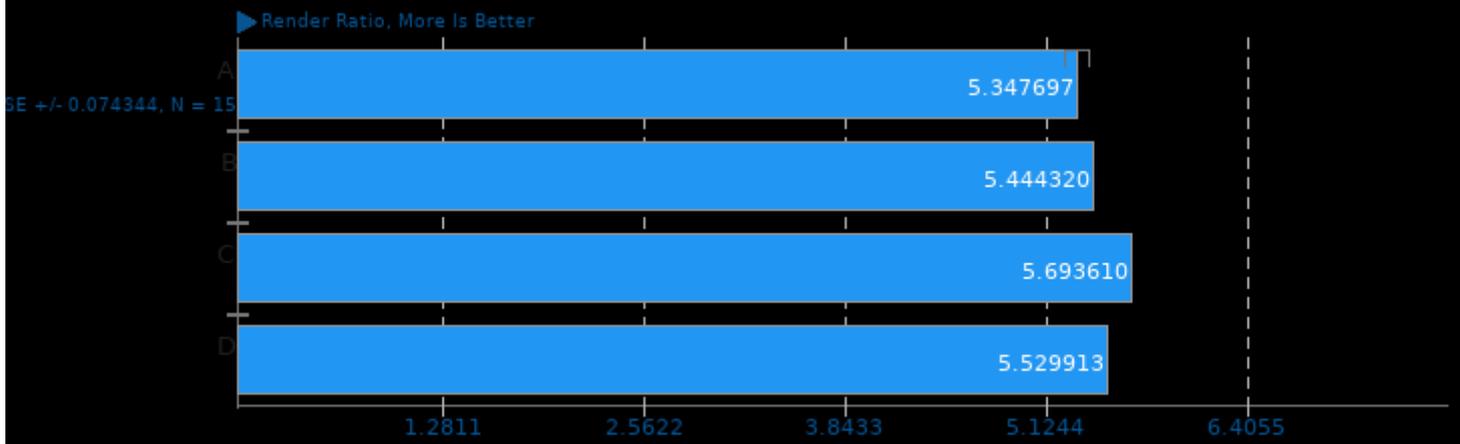
Video Input: Chimera 1080p 10-bit



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

Stargate Digital Audio Workstation 21.10.9

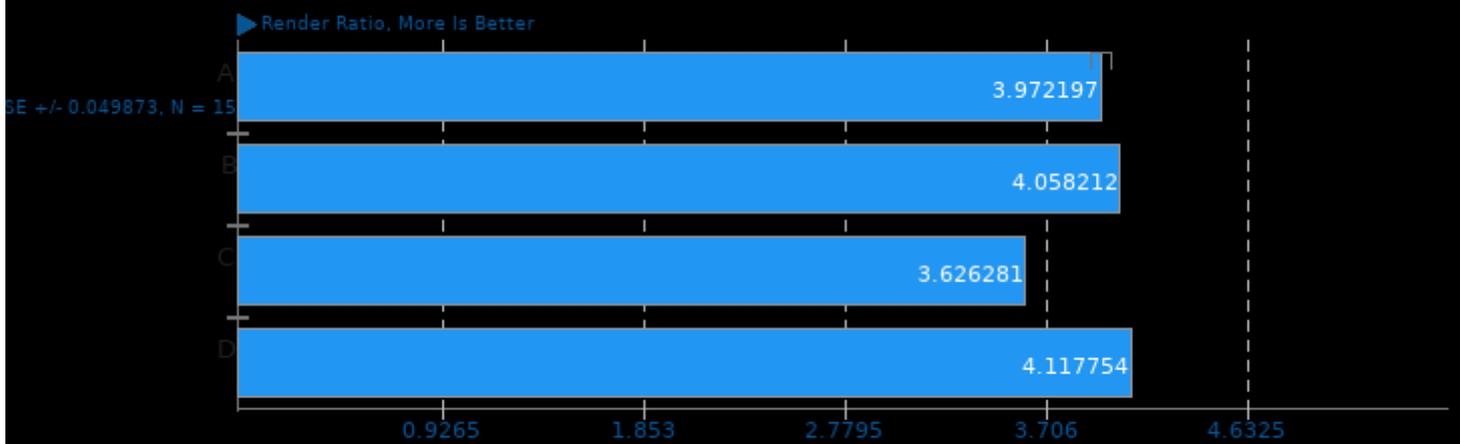
Sample Rate: 44100 - Buffer Size: 512



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

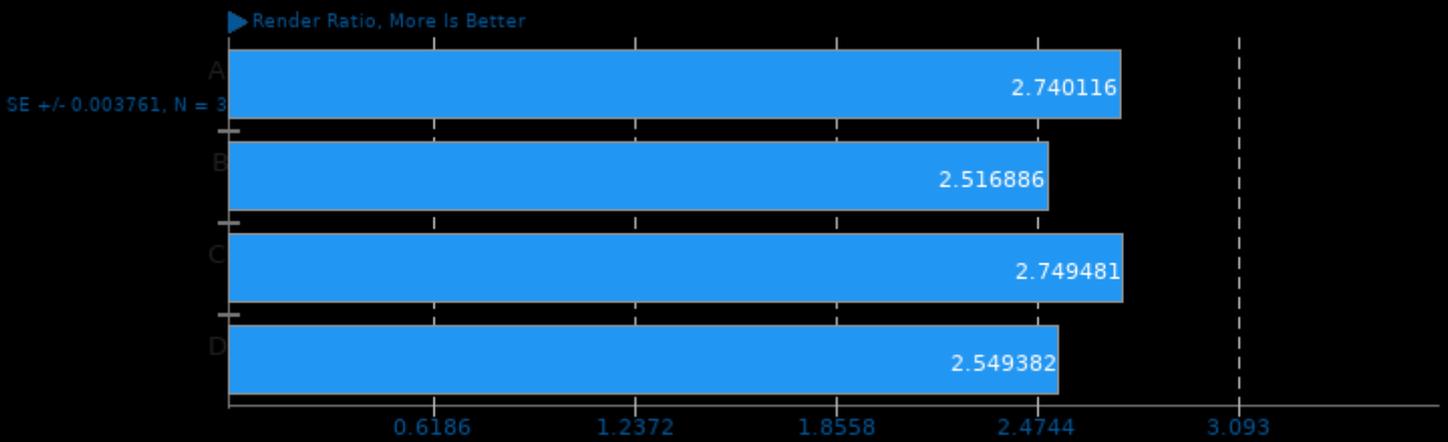
Sample Rate: 96000 - Buffer Size: 512



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

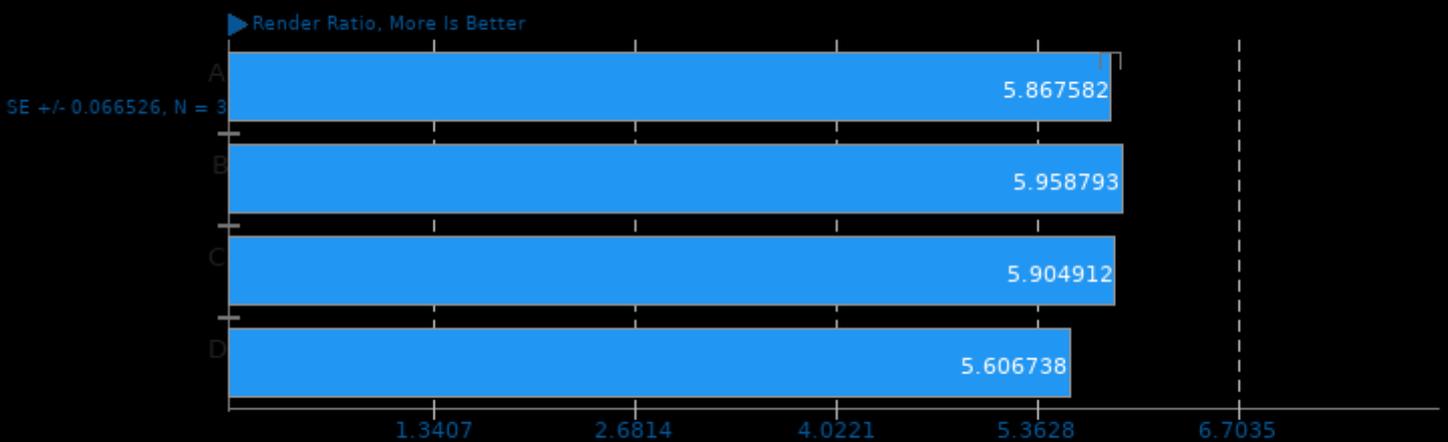
Sample Rate: 192000 - Buffer Size: 512



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

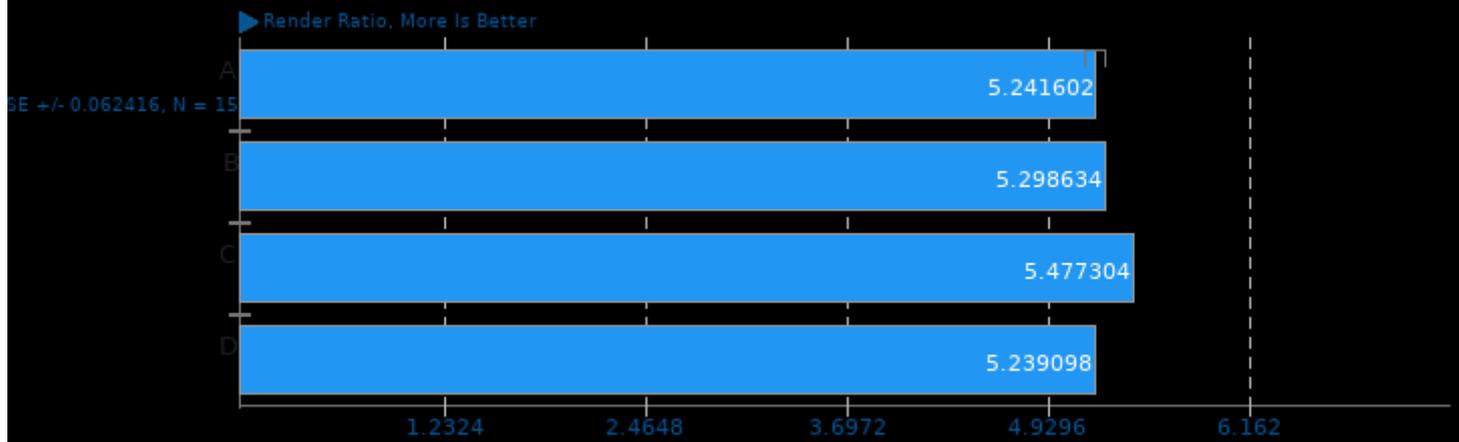
Sample Rate: 44100 - Buffer Size: 1024



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

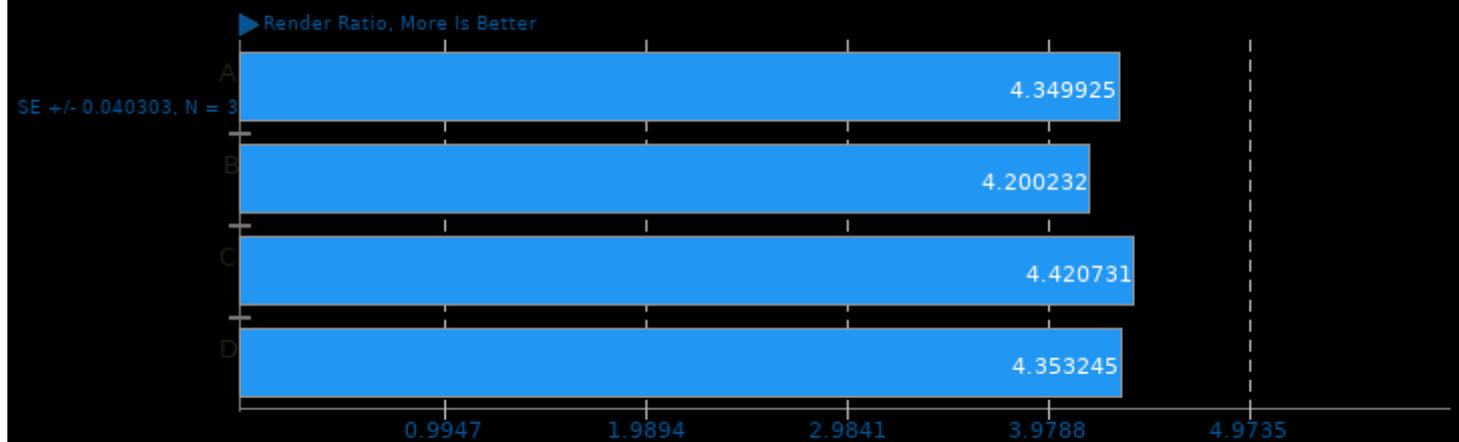
Sample Rate: 480000 - Buffer Size: 512



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

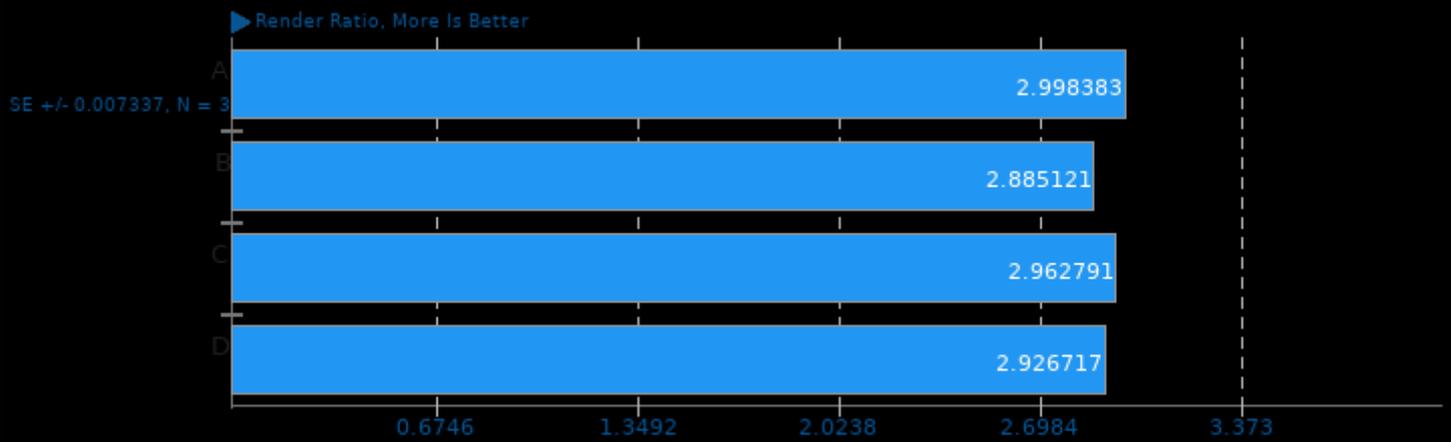
Sample Rate: 96000 - Buffer Size: 1024



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

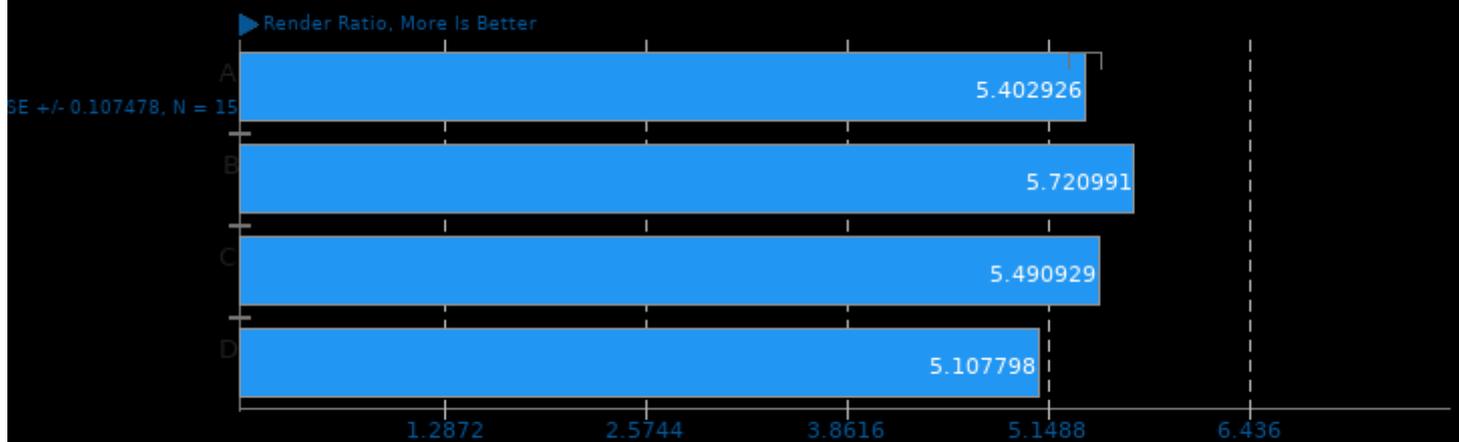
Sample Rate: 192000 - Buffer Size: 1024



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

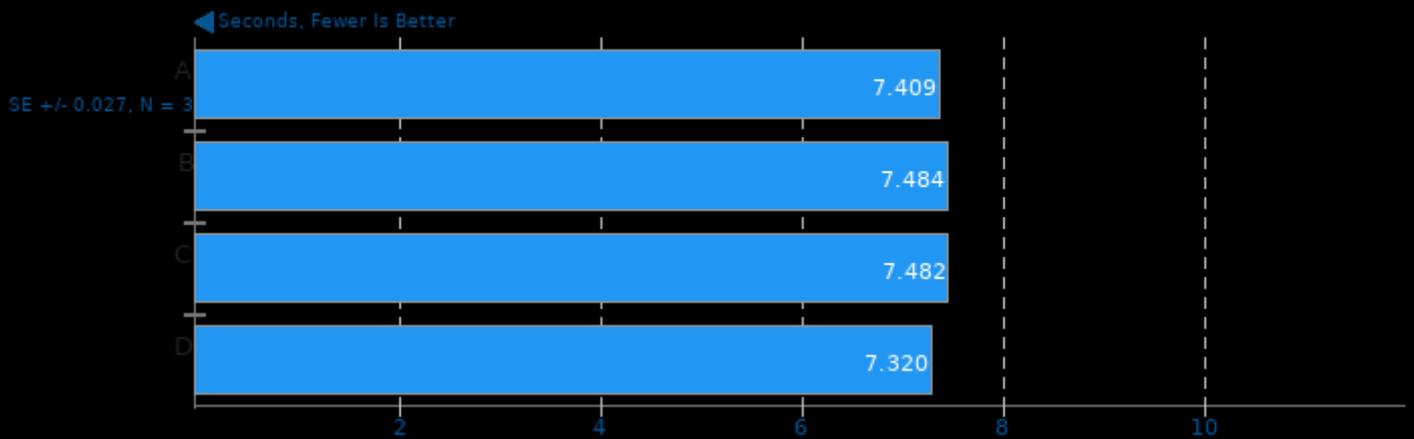
Sample Rate: 480000 - Buffer Size: 1024



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

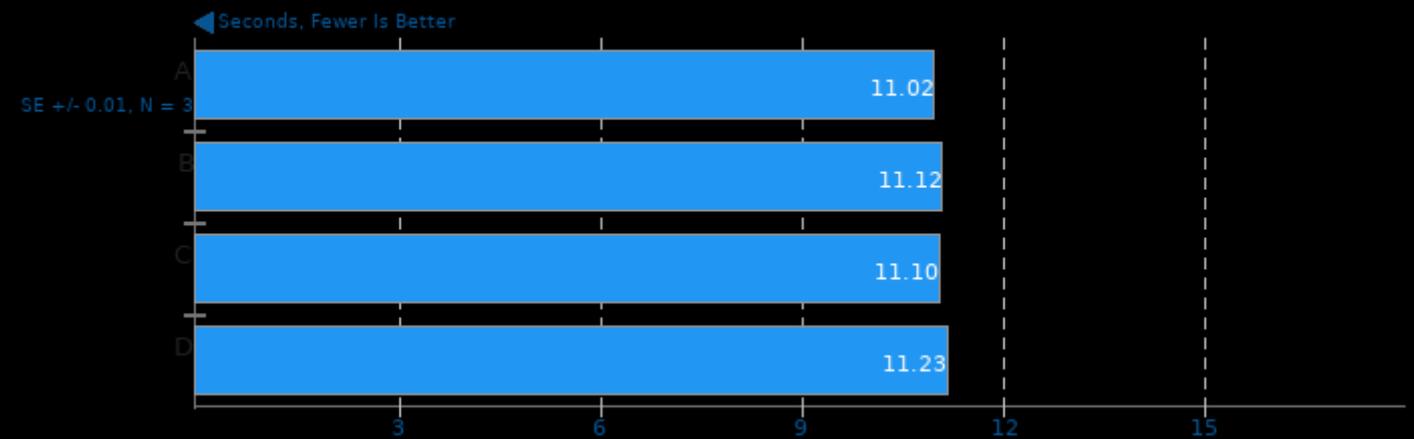
GIMP 2.10.18

Test: resize



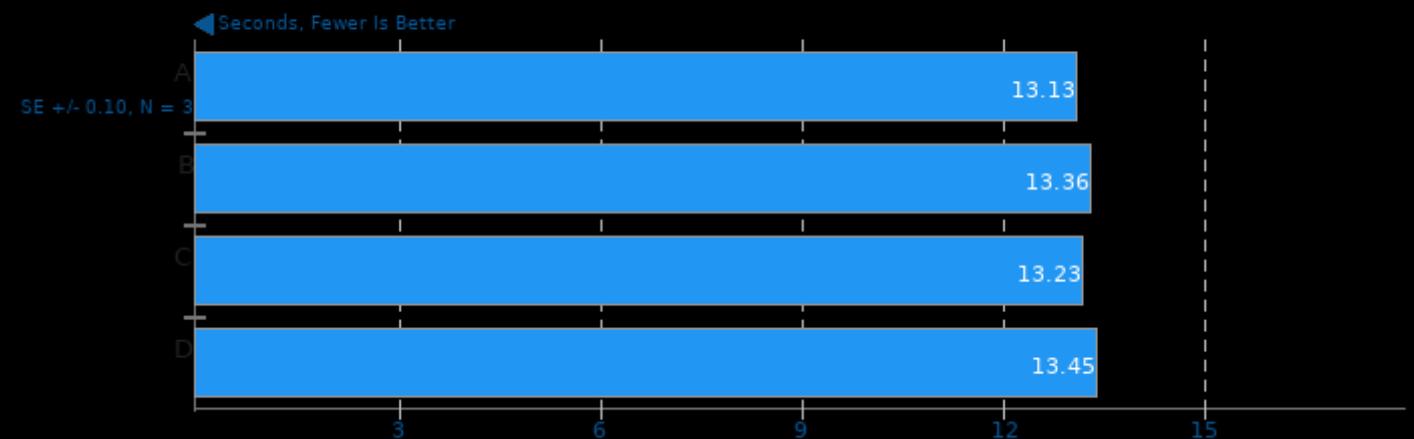
GIMP 2.10.18

Test: rotate



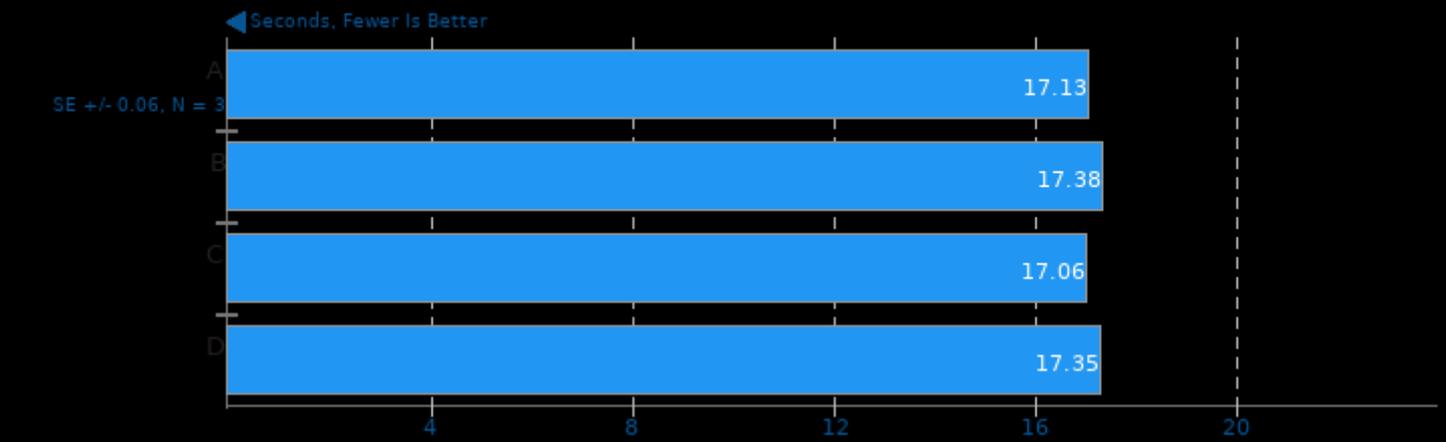
GIMP 2.10.18

Test: auto-levels



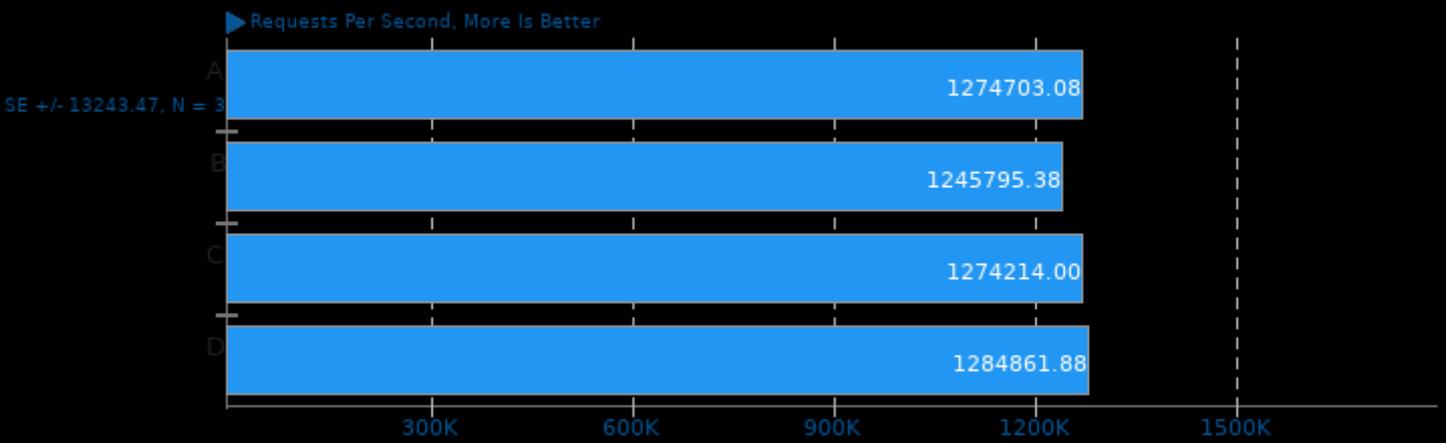
GIMP 2.10.18

Test: unsharp-mask



Redis Memtier / Redis Benchmark

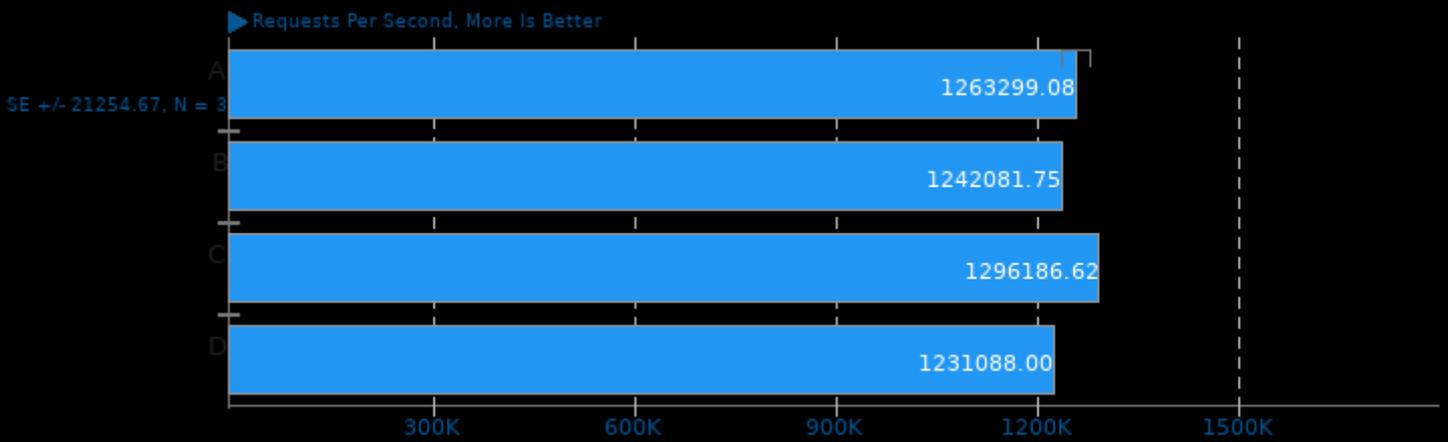
Test: LPUSH and LPOP: lpop



1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcrc
2. Redis server v=6.0.6 sha=00000000:0 malloc=jemalloc-5.2.1 bits=64 build=ca474e00afe358bb

Redis Memtier / Redis Benchmark

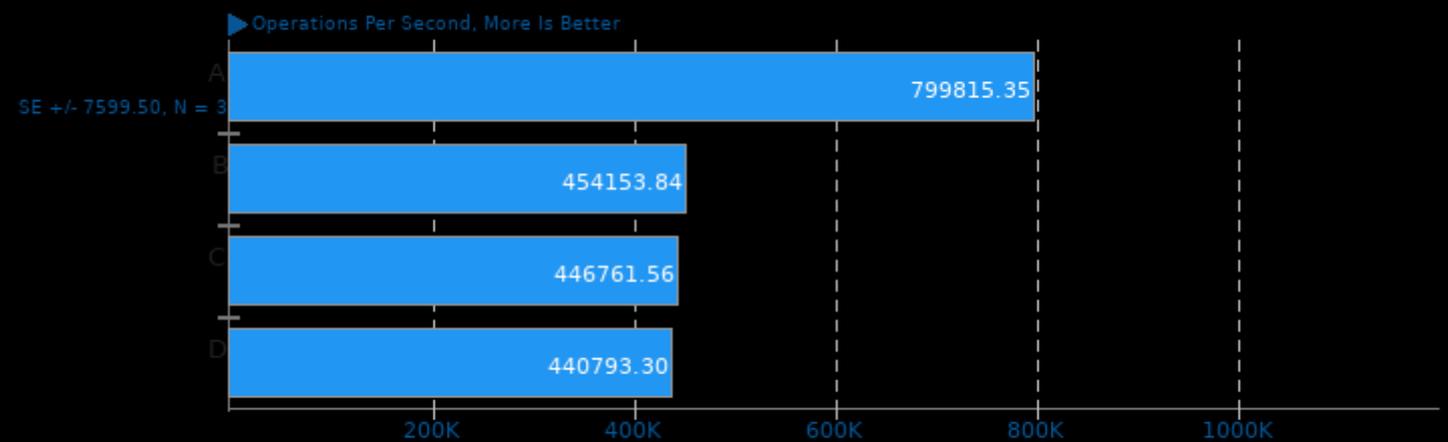
Test: LPUSH and LPOP: lpush



1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcrc
2. Redis server v=6.0.6 sha=00000000:0 malloc=jemalloc-5.2.1 bits=64 build=ca474e00afe358bb

Redis Memtier / Redis Benchmark

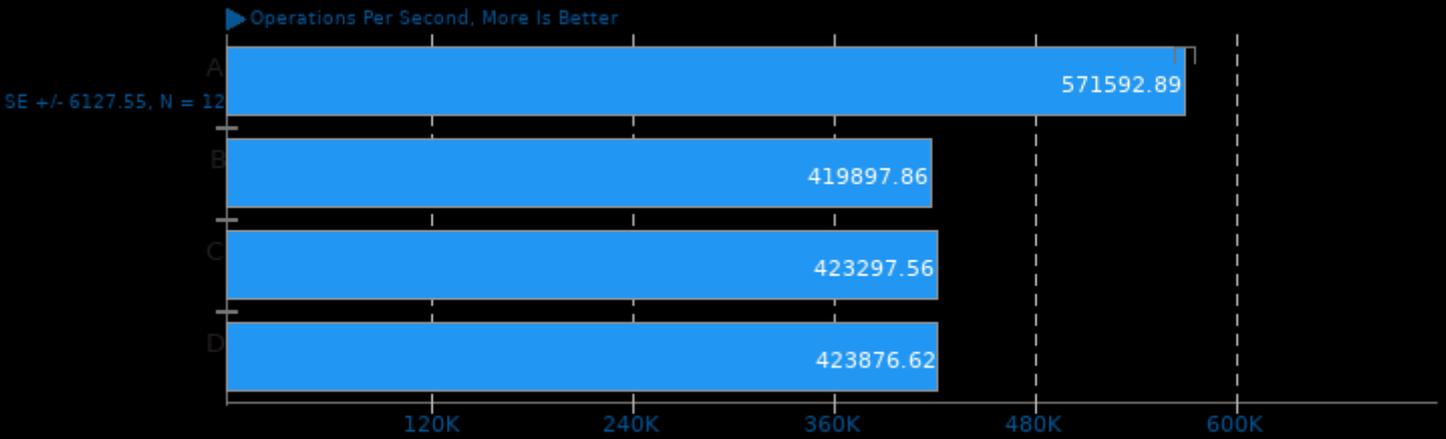
Test: GET



1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcrc
2. Redis server v=6.0.6 sha=00000000:0 malloc=jemalloc-5.2.1 bits=64 build=ca474e00afe358bb

Redis Memtier / Redis Benchmark

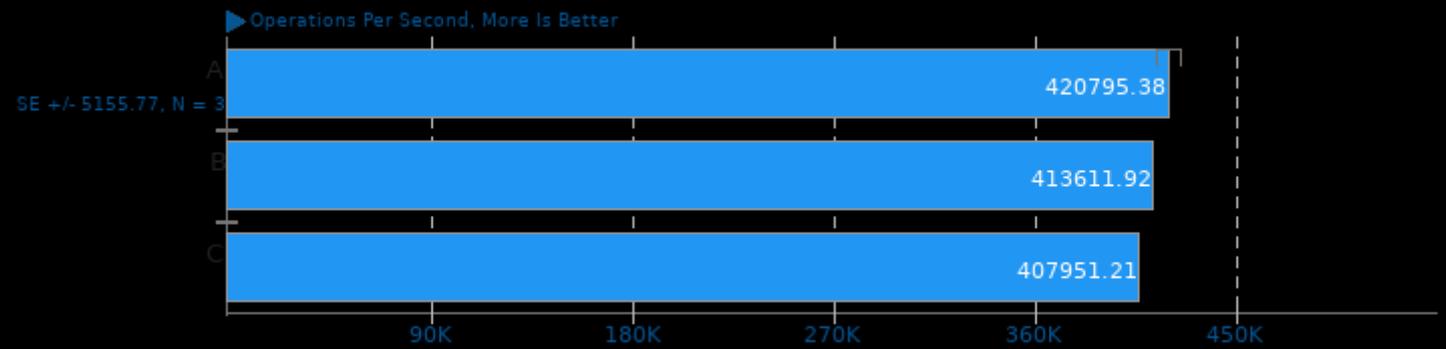
Test: MIX



1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcre
2. Redis server v=6.0.6 sha=00000000:0 malloc=jemalloc-5.2.1 bits=64 build=ca474e00afe358bb

Redis Memtier / Redis Benchmark

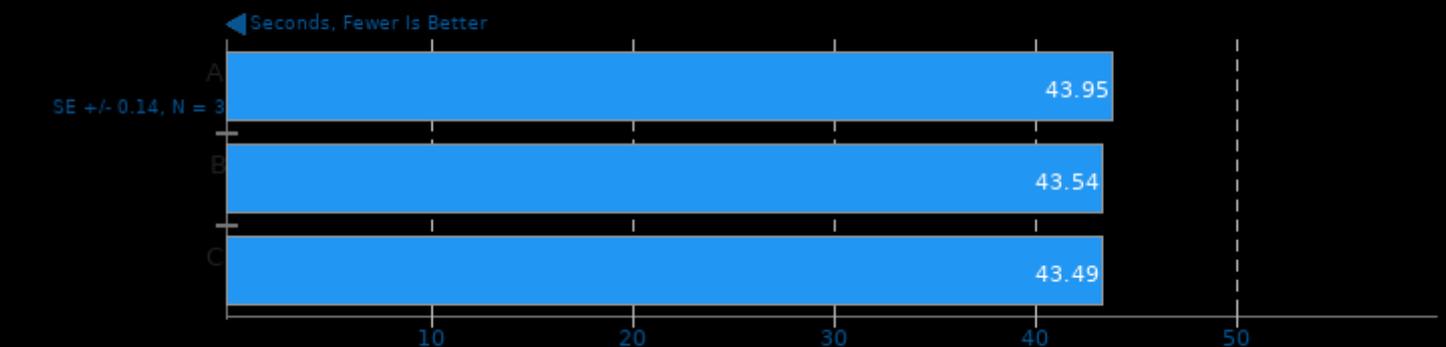
Test: SET



1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcre
2. Redis server v=6.0.6 sha=00000000:0 malloc=jemalloc-5.2.1 bits=64 build=ca474e00afe358bb

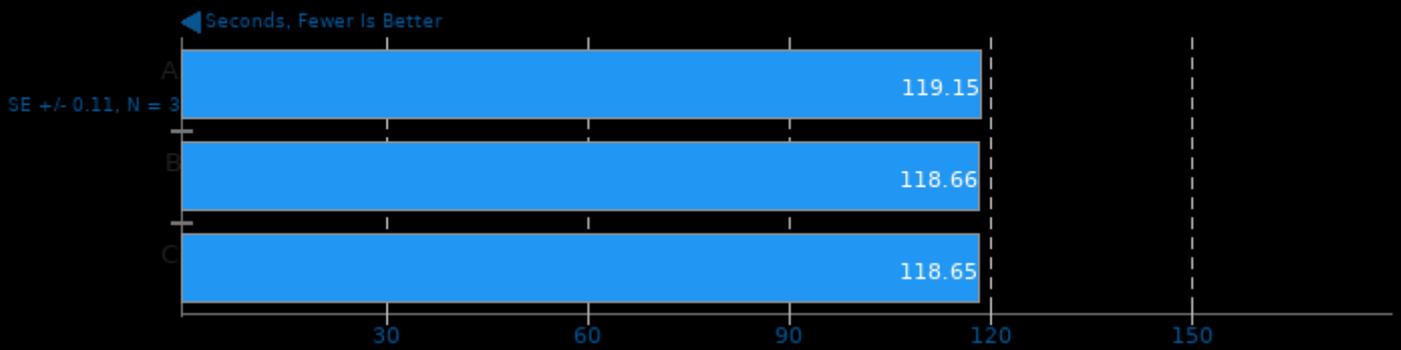
Blender 2.92

Blend File: BMW27 - Compute: CPU-Only



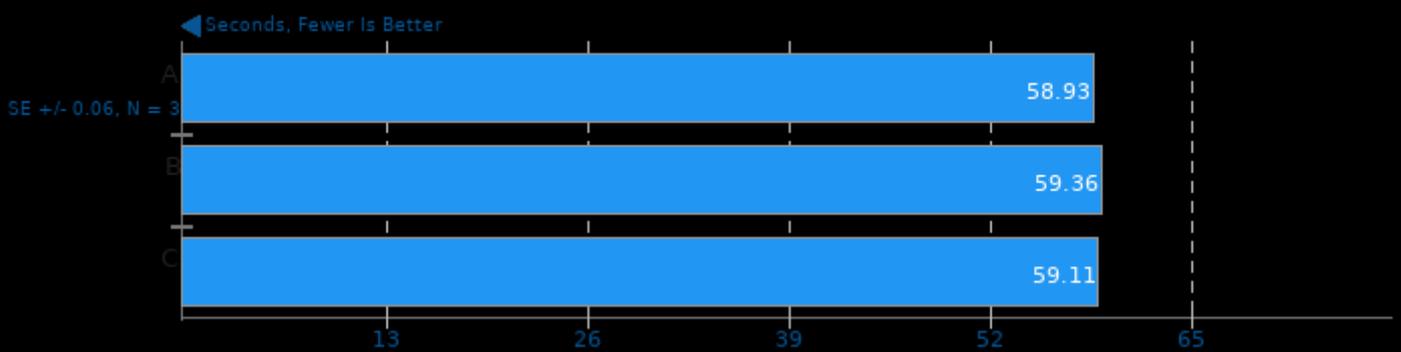
Blender 2.92

Blend File: Classroom - Compute: CPU-Only



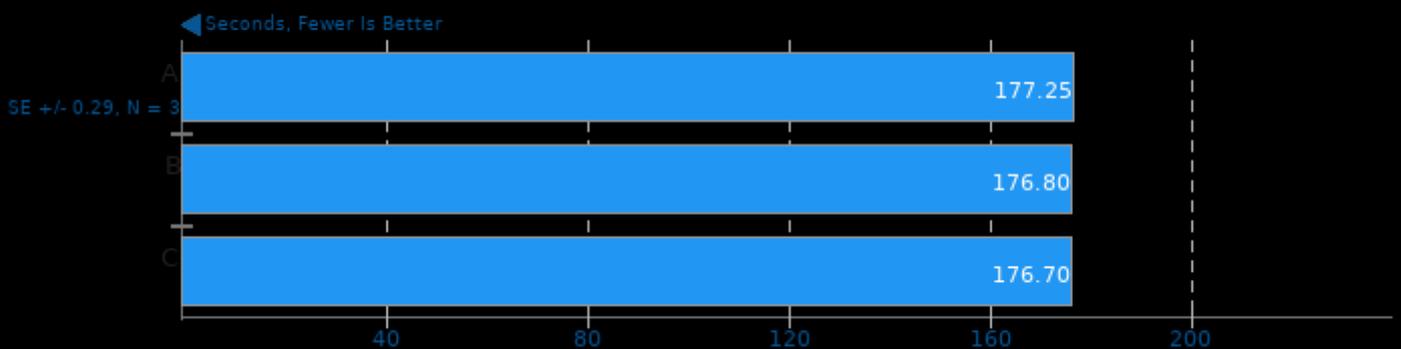
Blender 2.92

Blend File: Fishy Cat - Compute: CPU-Only



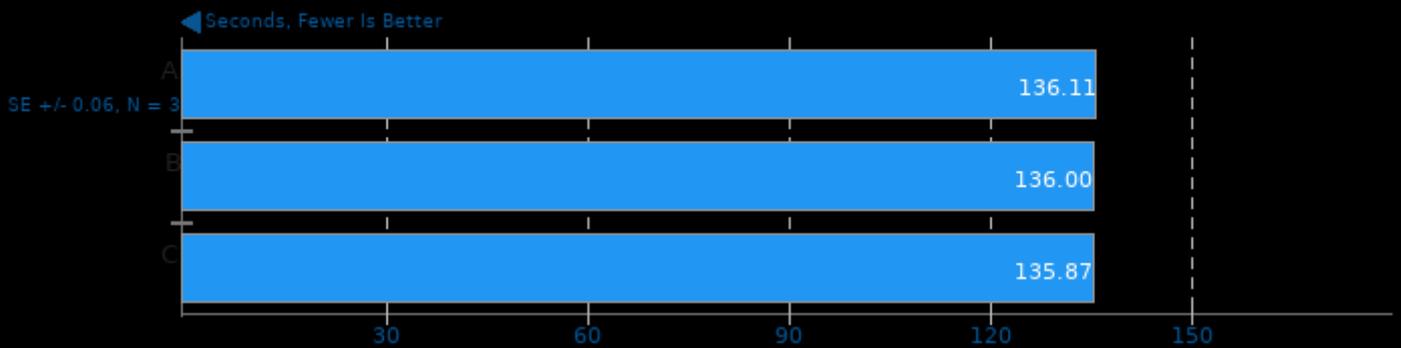
Blender 2.92

Blend File: Barbershop - Compute: CPU-Only



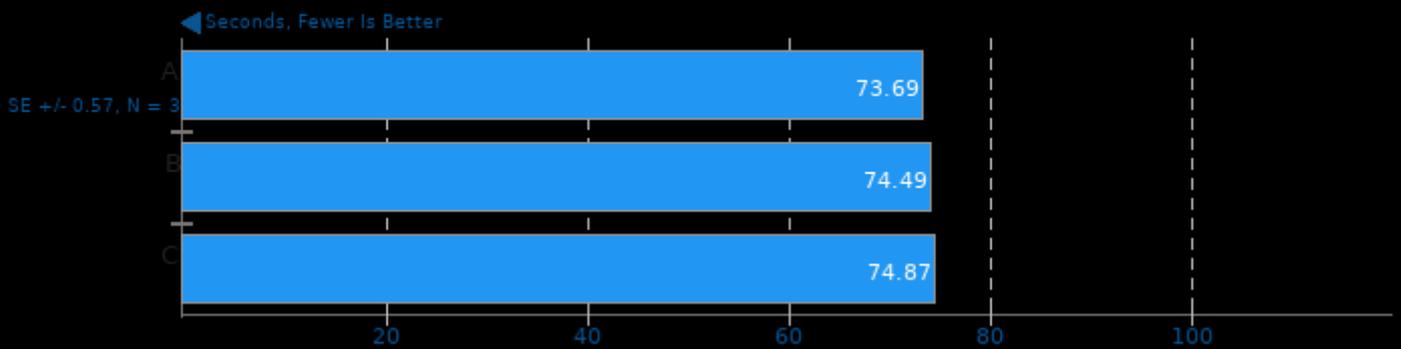
Blender 2.92

Blend File: Pabellon Barcelona - Compute: CPU-Only



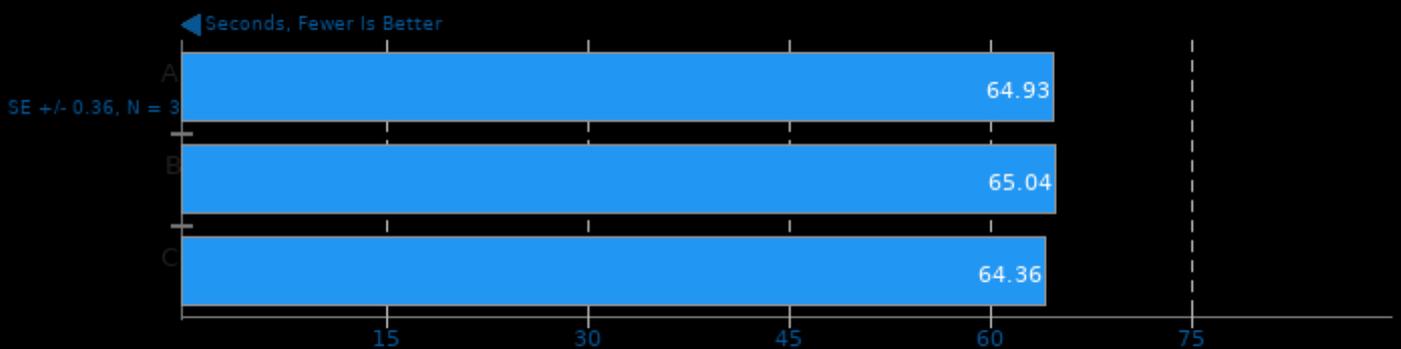
RAR Compression 6.0.2

Linux Source Tree Archiving To RAR



GnuPG 2.2.27

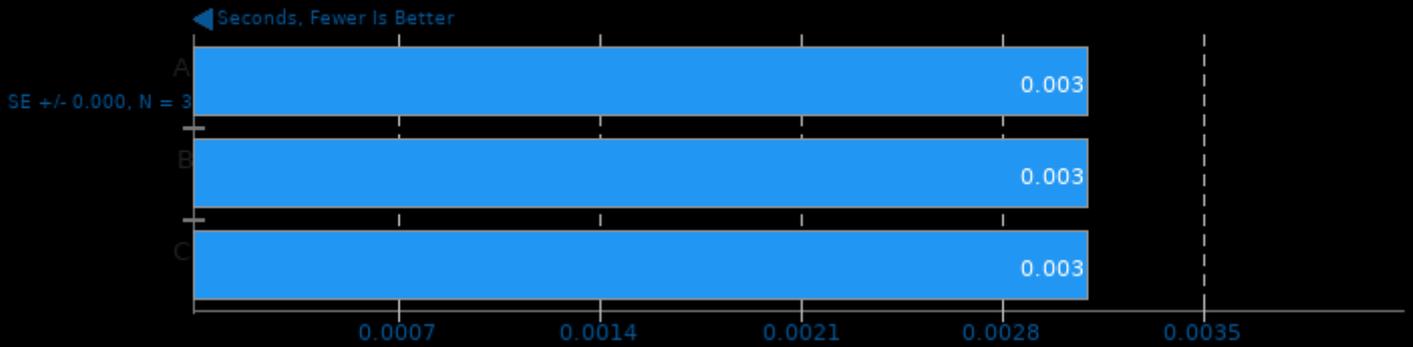
2.7GB Sample File Encryption



1. (CC) gcc options: -O2

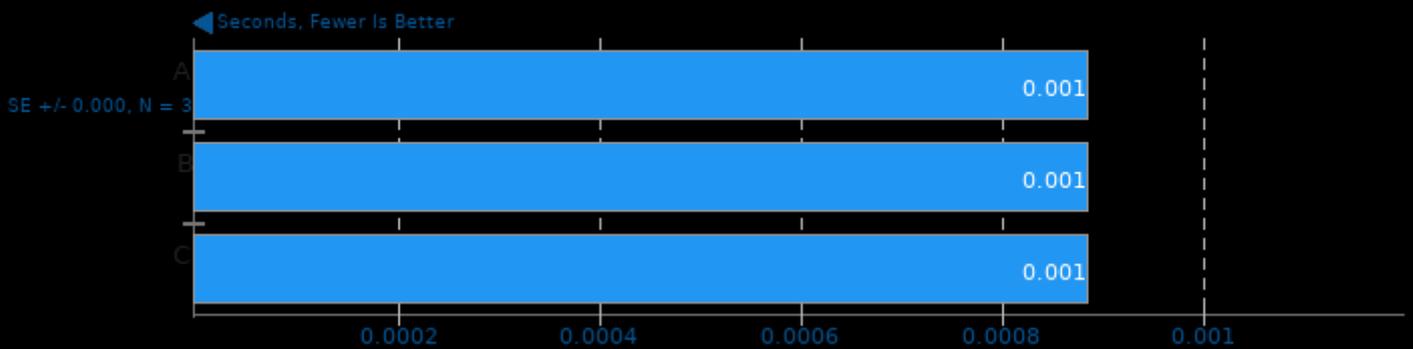
PyHPC Benchmarks 3.0

Device: CPU - Backend: JAX - Project Size: 16384 - Benchmark: Isonutral Mixing



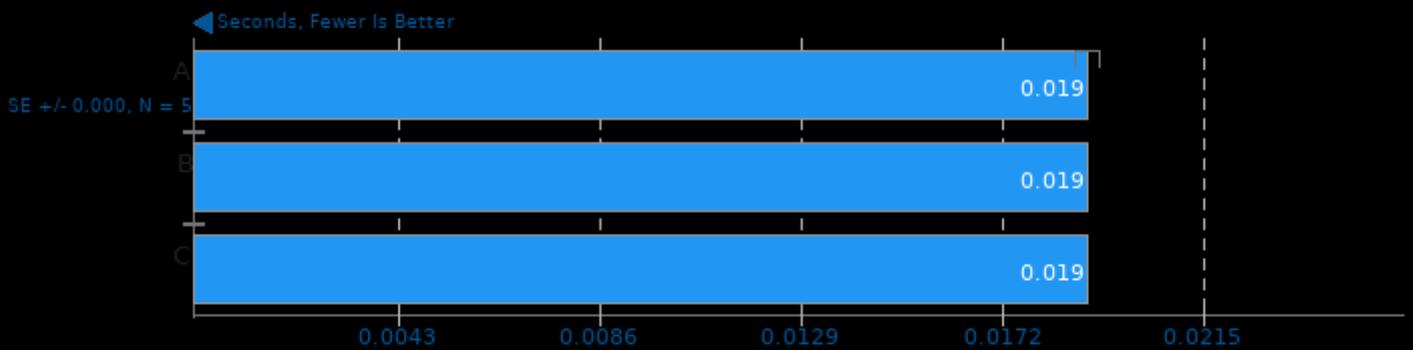
PyHPC Benchmarks 3.0

Device: CPU - Backend: JAX - Project Size: 65536 - Benchmark: Equation of State



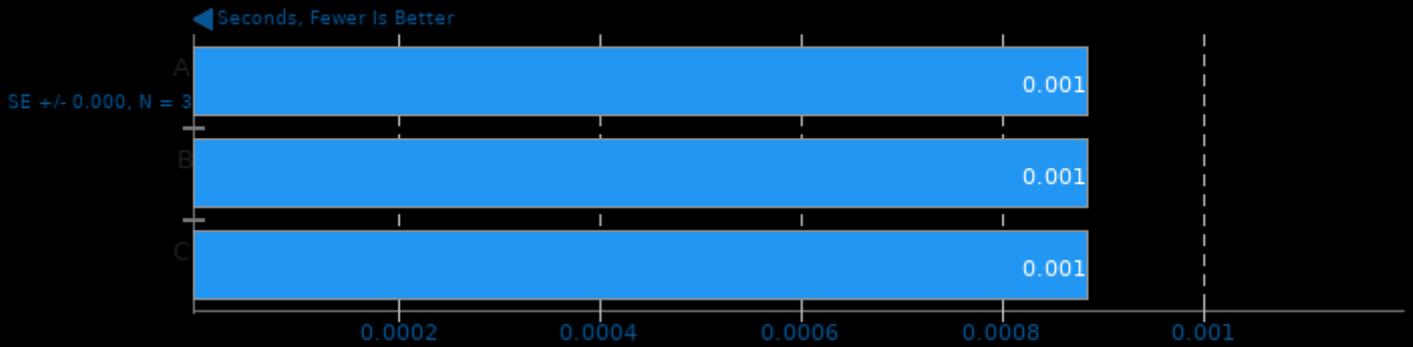
PyHPC Benchmarks 3.0

Device: CPU - Backend: JAX - Project Size: 65536 - Benchmark: Isonutral Mixing



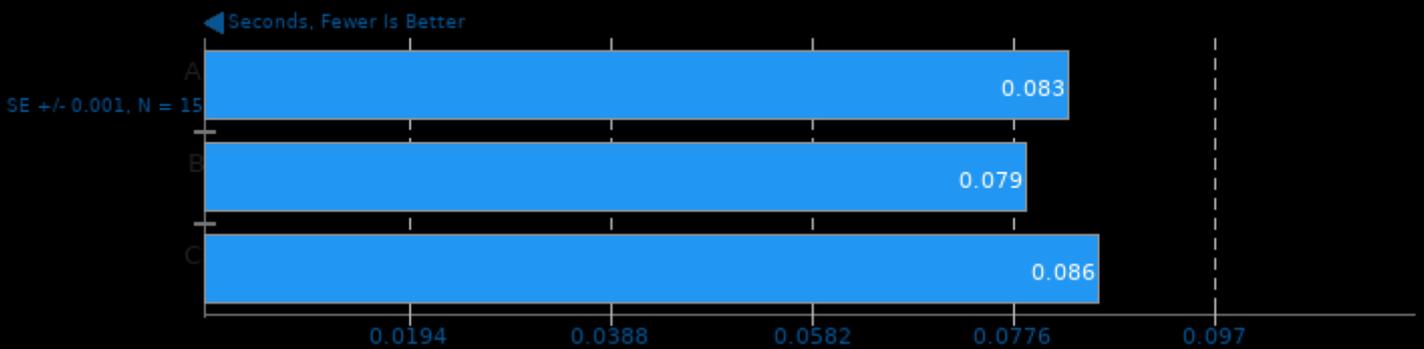
PyHPC Benchmarks 3.0

Device: CPU - Backend: JAX - Project Size: 262144 - Benchmark: Equation of State



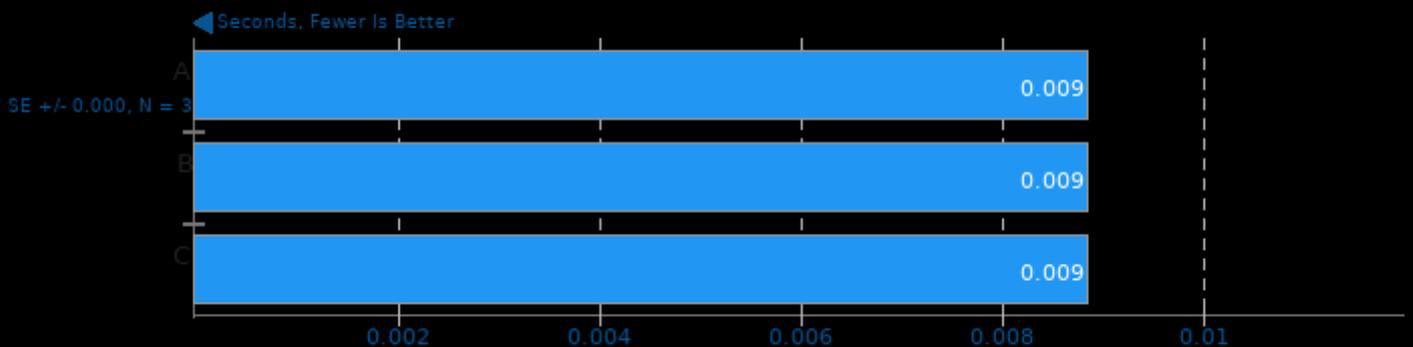
PyHPC Benchmarks 3.0

Device: CPU - Backend: JAX - Project Size: 262144 - Benchmark: Isonutral Mixing



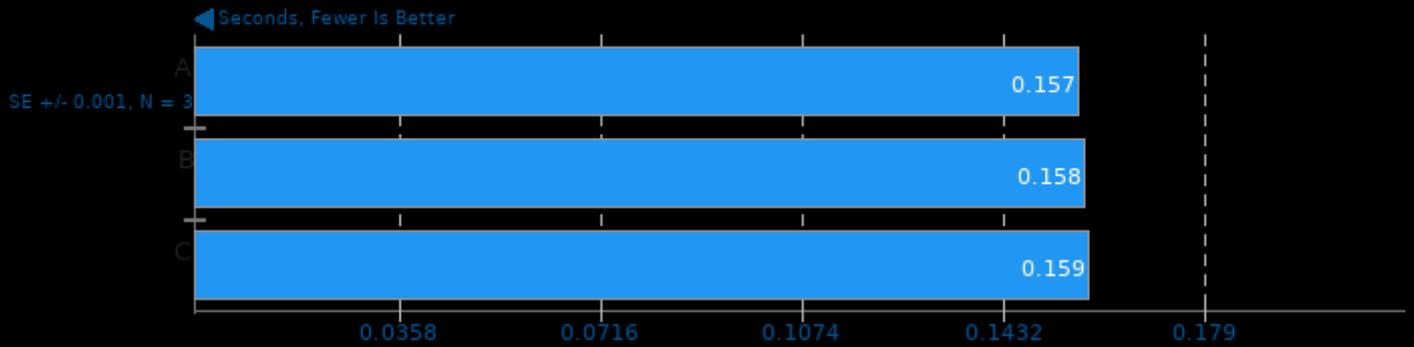
PyHPC Benchmarks 3.0

Device: CPU - Backend: JAX - Project Size: 1048576 - Benchmark: Equation of State



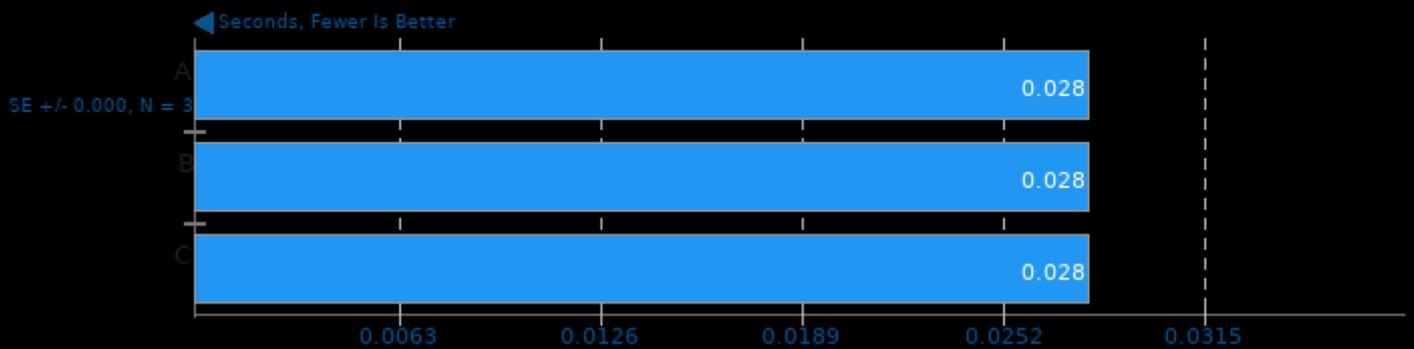
PyHPC Benchmarks 3.0

Device: CPU - Backend: JAX - Project Size: 1048576 - Benchmark: Isonneutral Mixing



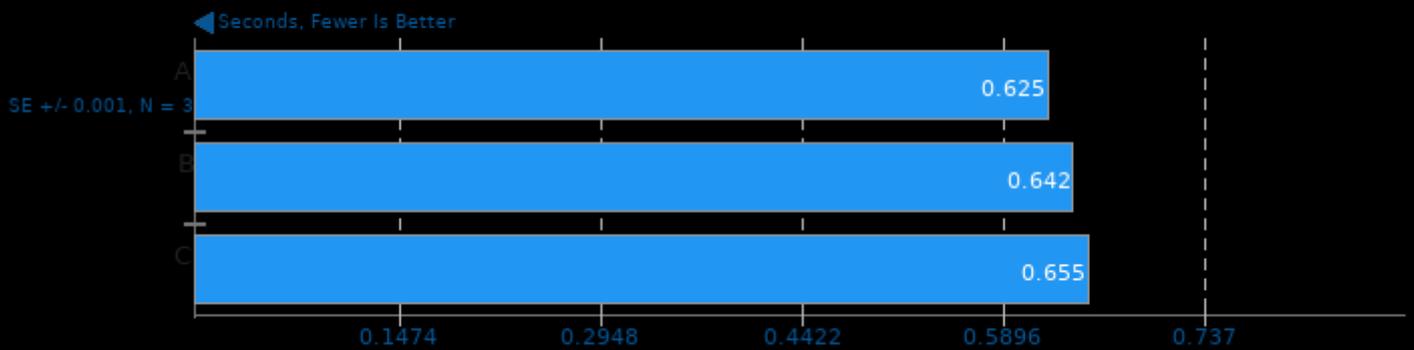
PyHPC Benchmarks 3.0

Device: CPU - Backend: JAX - Project Size: 4194304 - Benchmark: Equation of State



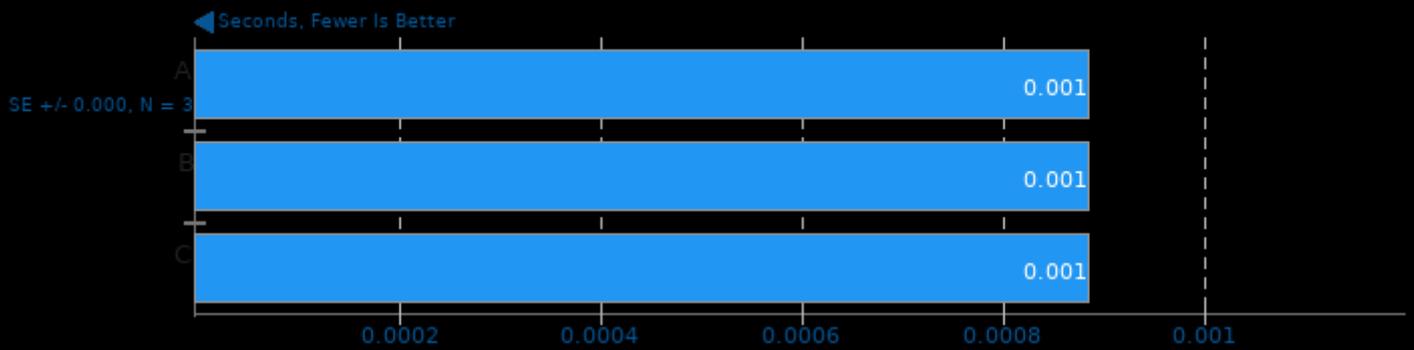
PyHPC Benchmarks 3.0

Device: CPU - Backend: JAX - Project Size: 4194304 - Benchmark: Isonneutral Mixing



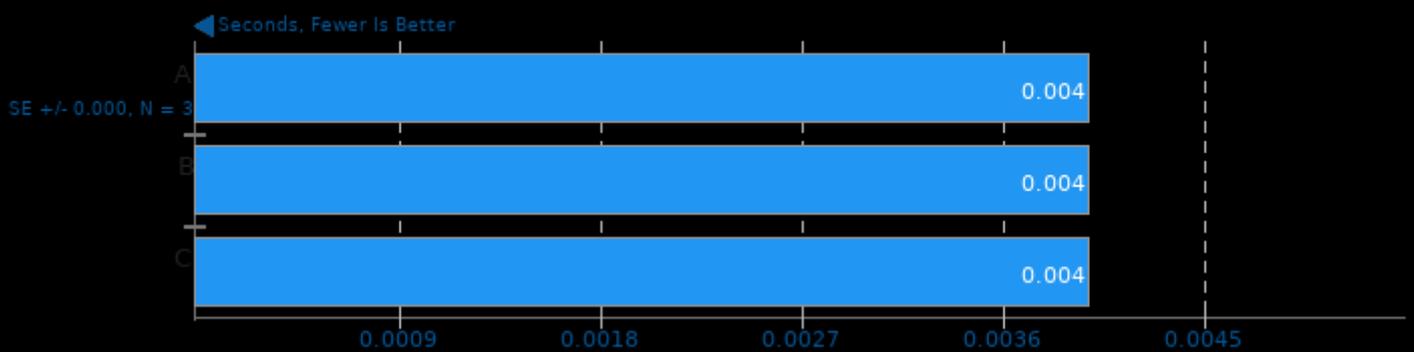
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numba - Project Size: 16384 - Benchmark: Equation of State



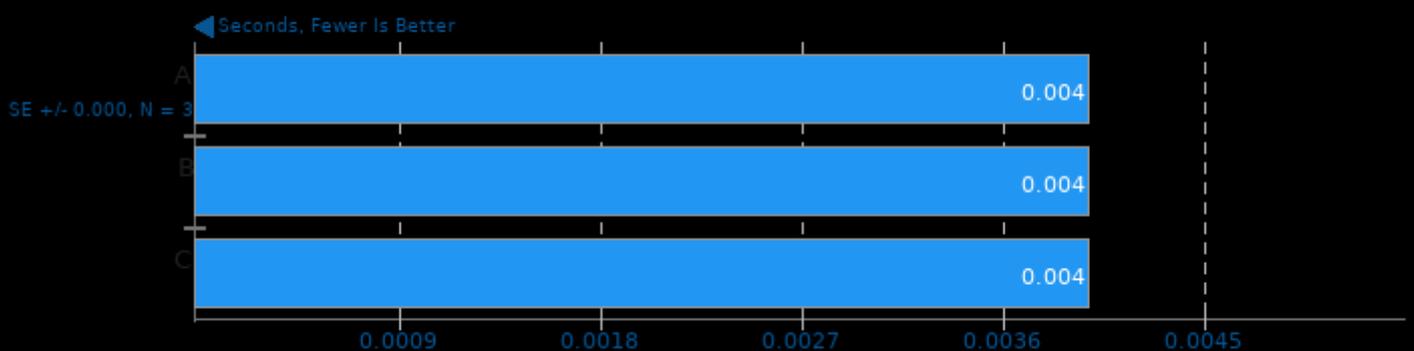
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numba - Project Size: 16384 - Benchmark: Isonneutral Mixing



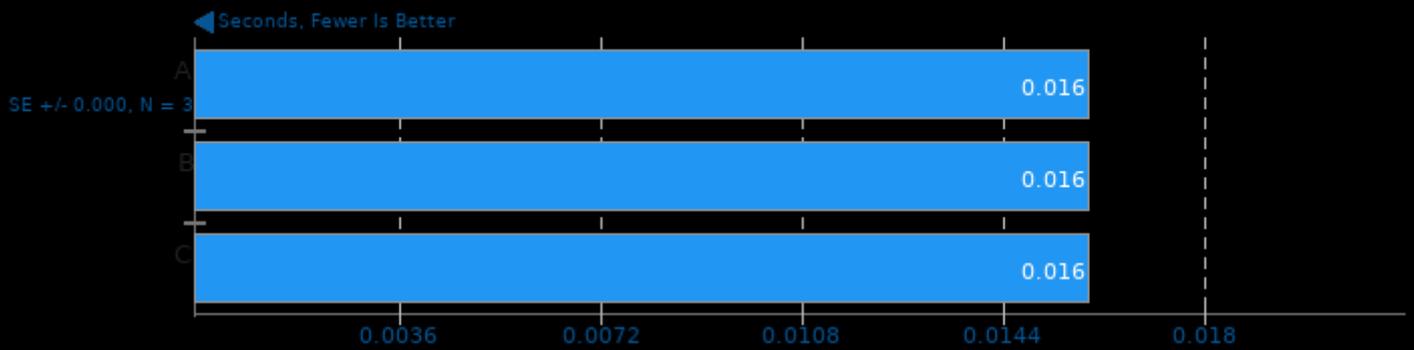
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numba - Project Size: 65536 - Benchmark: Equation of State



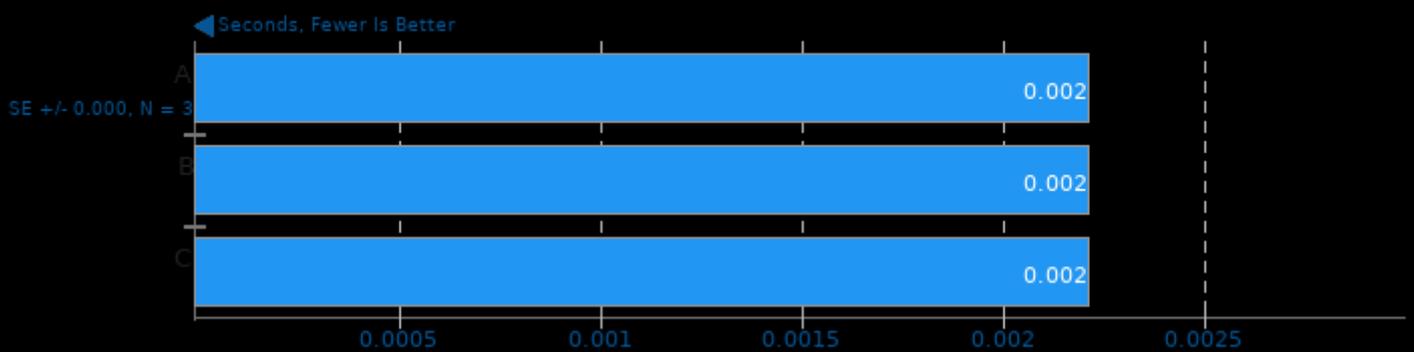
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numba - Project Size: 65536 - Benchmark: Isonneutral Mixing



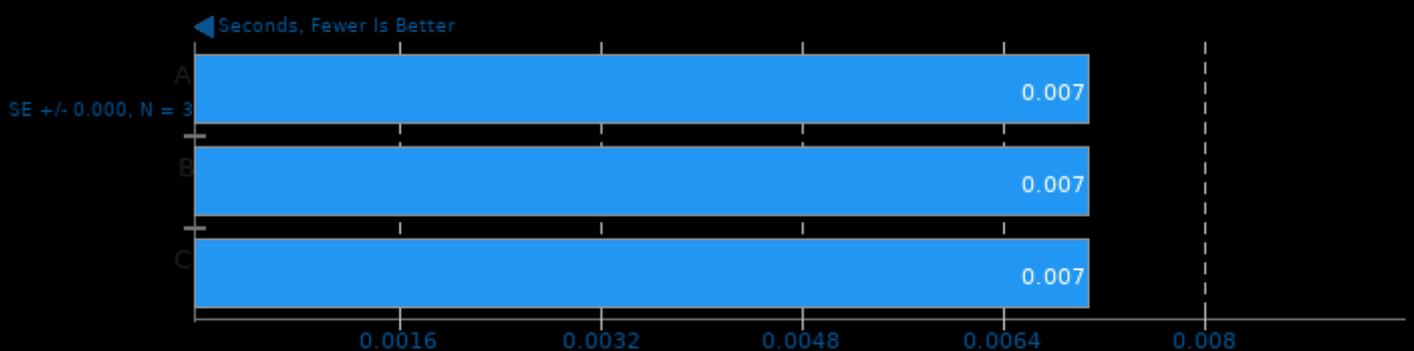
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 16384 - Benchmark: Equation of State



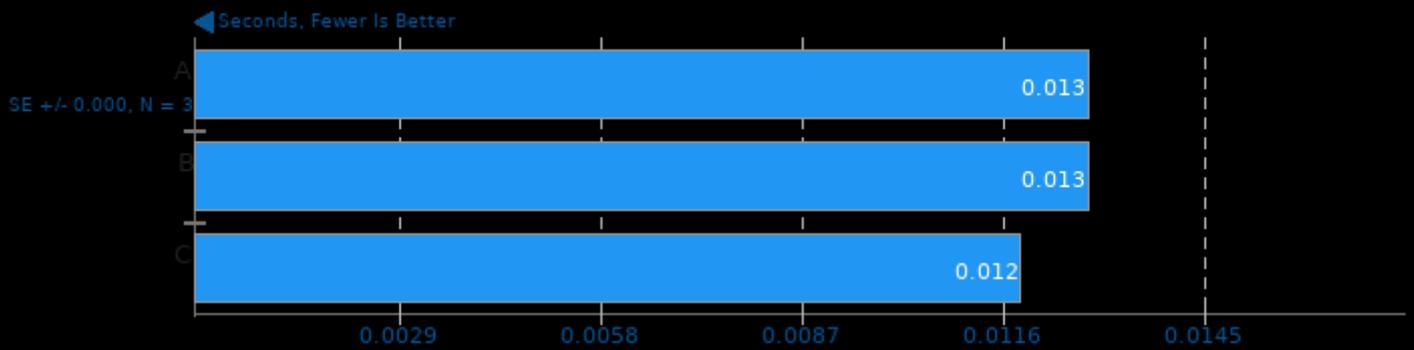
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 16384 - Benchmark: Isonneutral Mixing



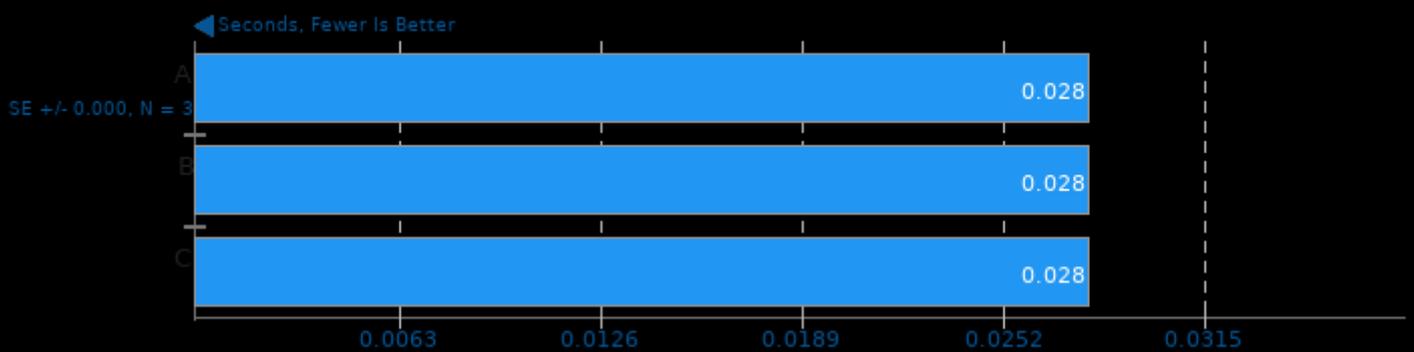
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 65536 - Benchmark: Equation of State



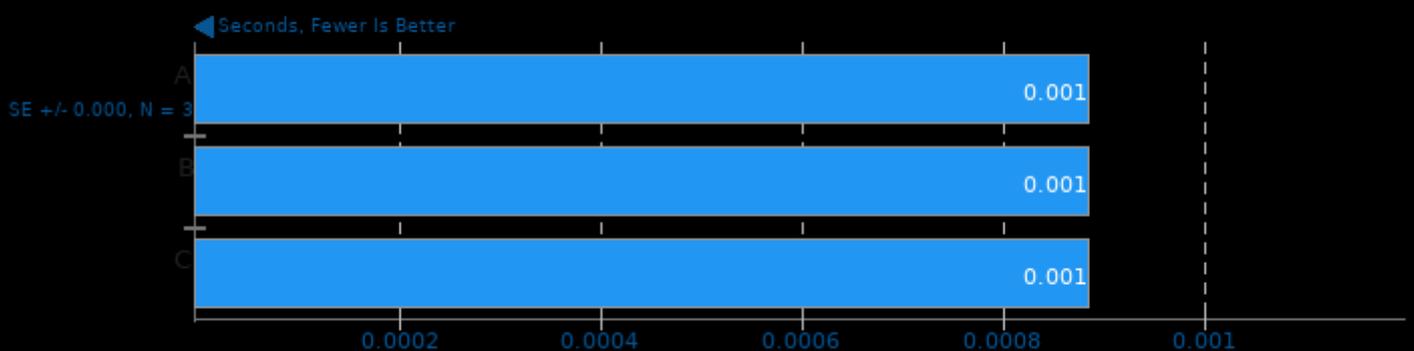
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 65536 - Benchmark: Isonutral Mixing



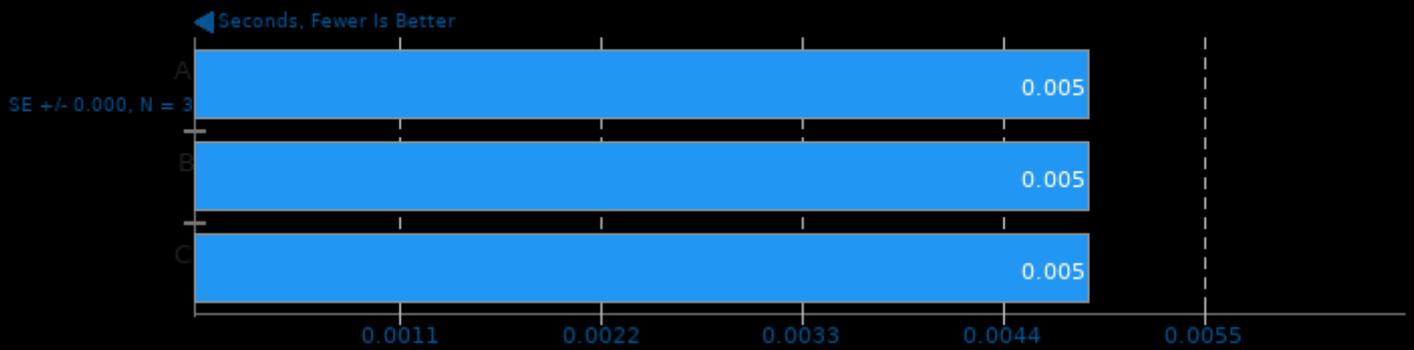
PyHPC Benchmarks 3.0

Device: CPU - Backend: Aesara - Project Size: 16384 - Benchmark: Equation of State



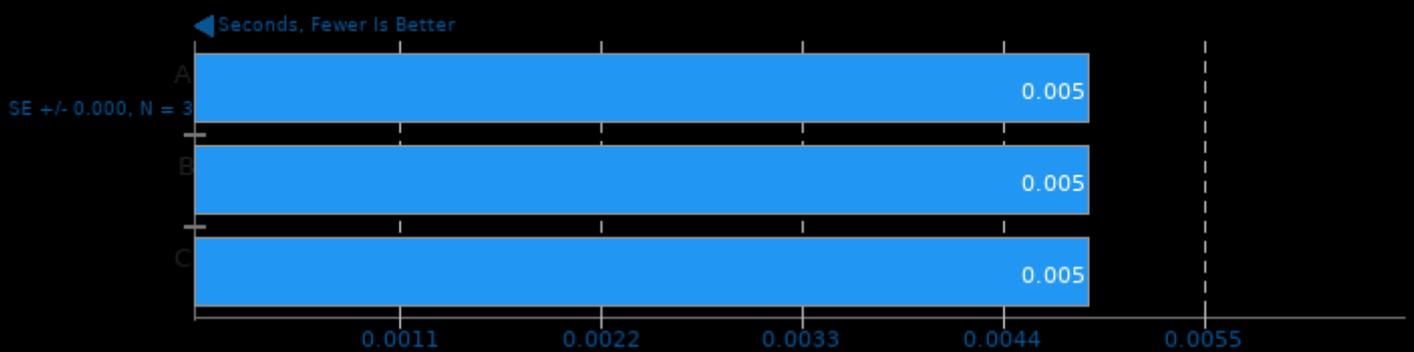
PyHPC Benchmarks 3.0

Device: CPU - Backend: Aesara - Project Size: 16384 - Benchmark: Isonutral Mixing



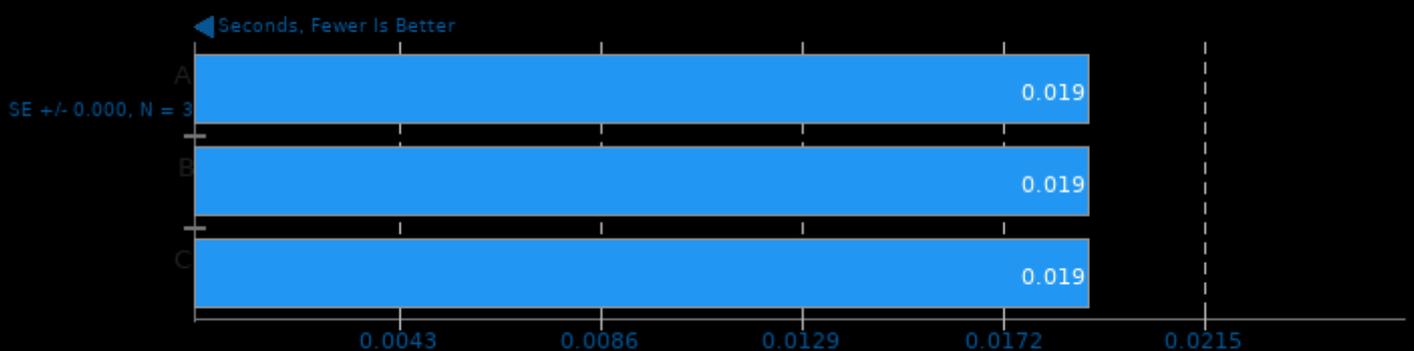
PyHPC Benchmarks 3.0

Device: CPU - Backend: Aesara - Project Size: 65536 - Benchmark: Equation of State



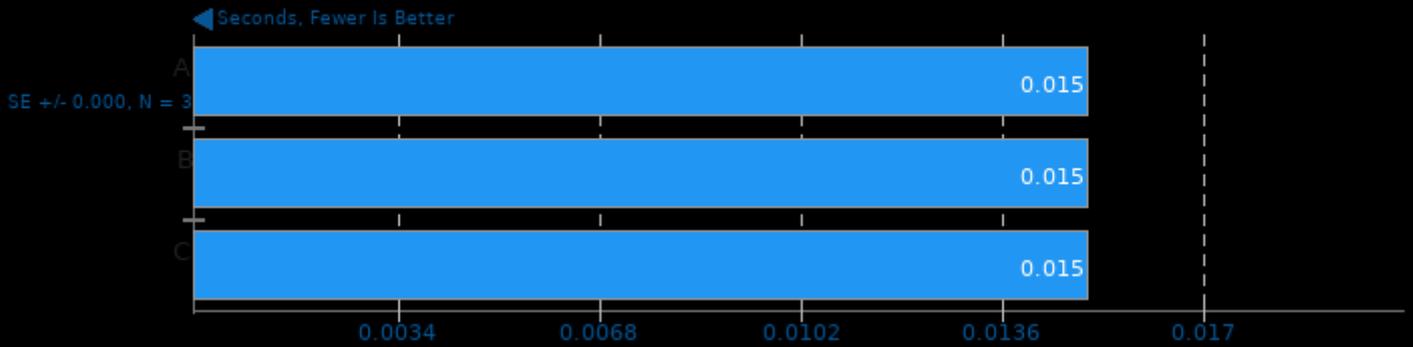
PyHPC Benchmarks 3.0

Device: CPU - Backend: Aesara - Project Size: 65536 - Benchmark: Isonutral Mixing



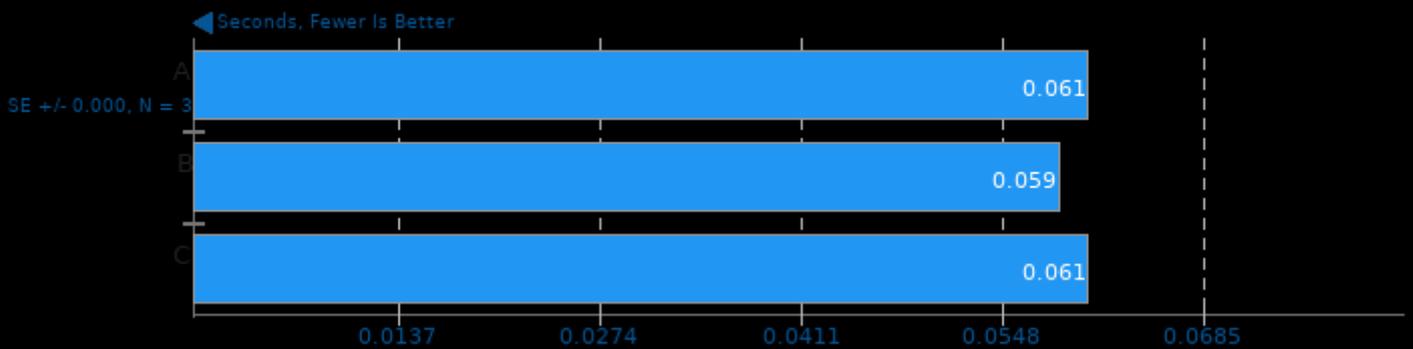
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numba - Project Size: 262144 - Benchmark: Equation of State



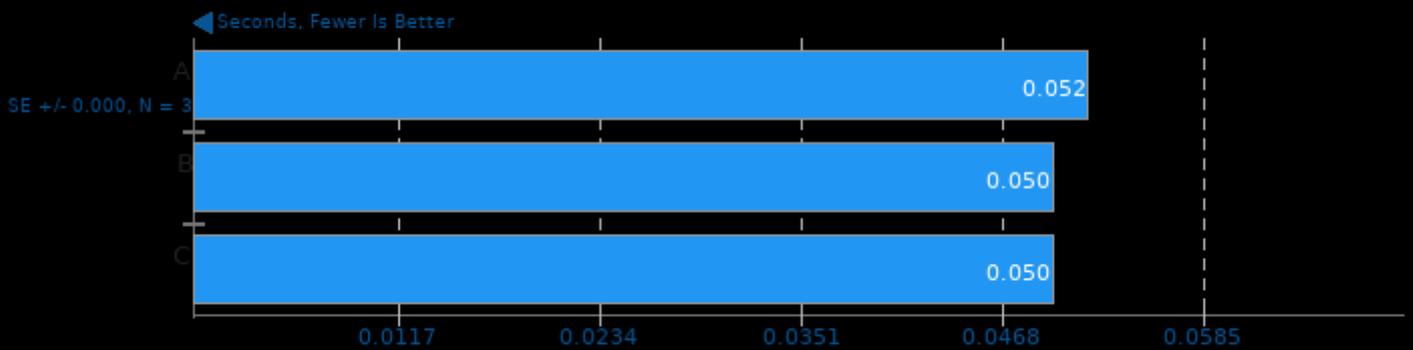
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numba - Project Size: 262144 - Benchmark: Isonutral Mixing



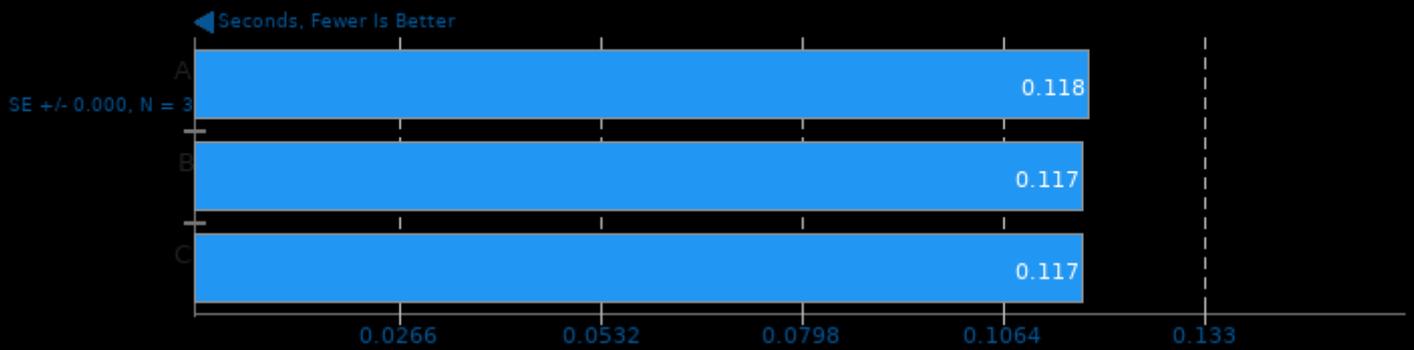
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 262144 - Benchmark: Equation of State



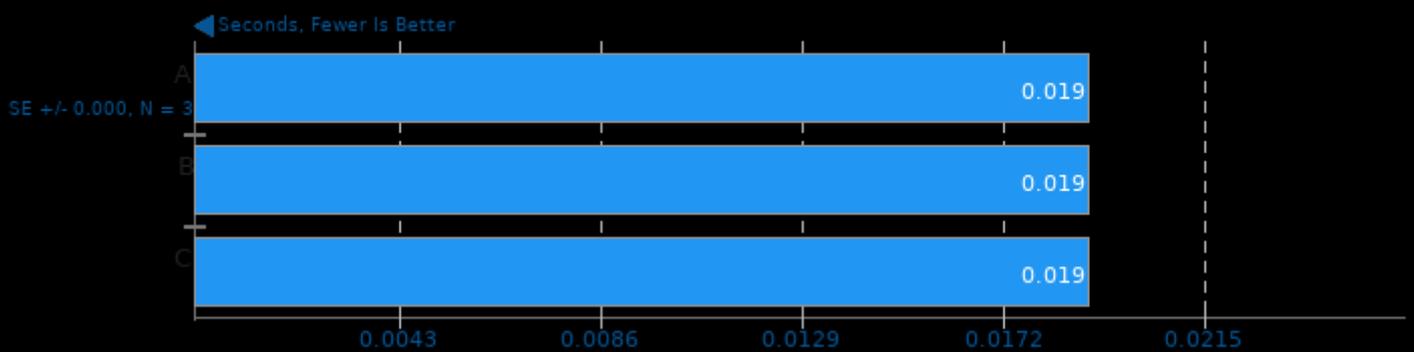
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 262144 - Benchmark: Isonneutral Mixing



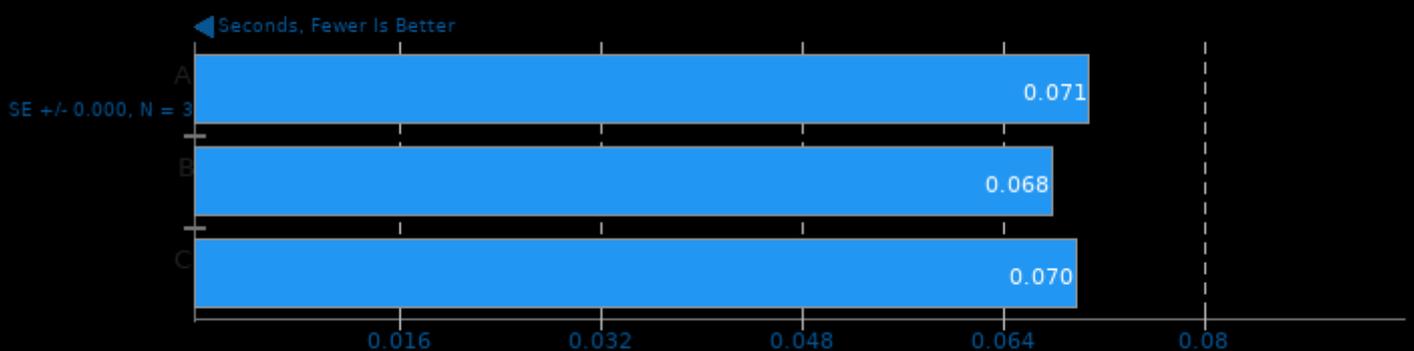
PyHPC Benchmarks 3.0

Device: CPU - Backend: Aesara - Project Size: 262144 - Benchmark: Equation of State



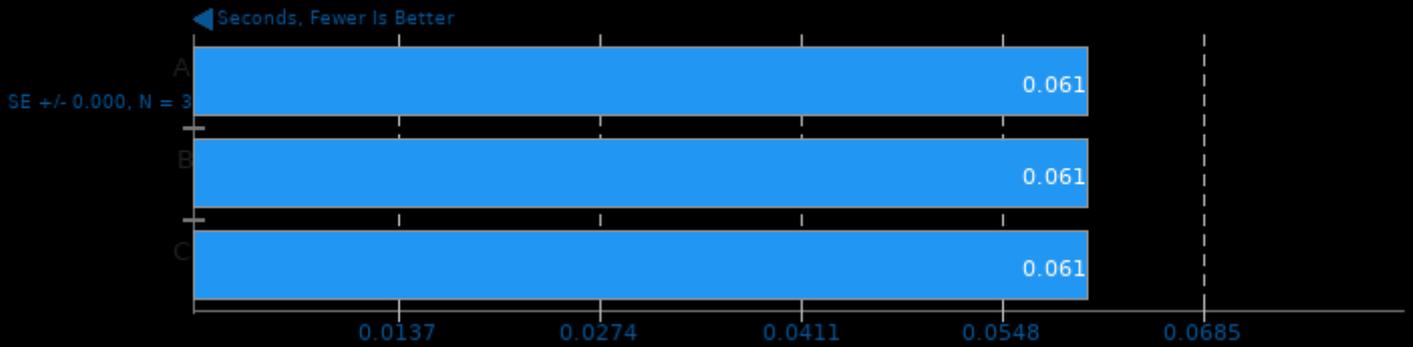
PyHPC Benchmarks 3.0

Device: CPU - Backend: Aesara - Project Size: 262144 - Benchmark: Isonneutral Mixing



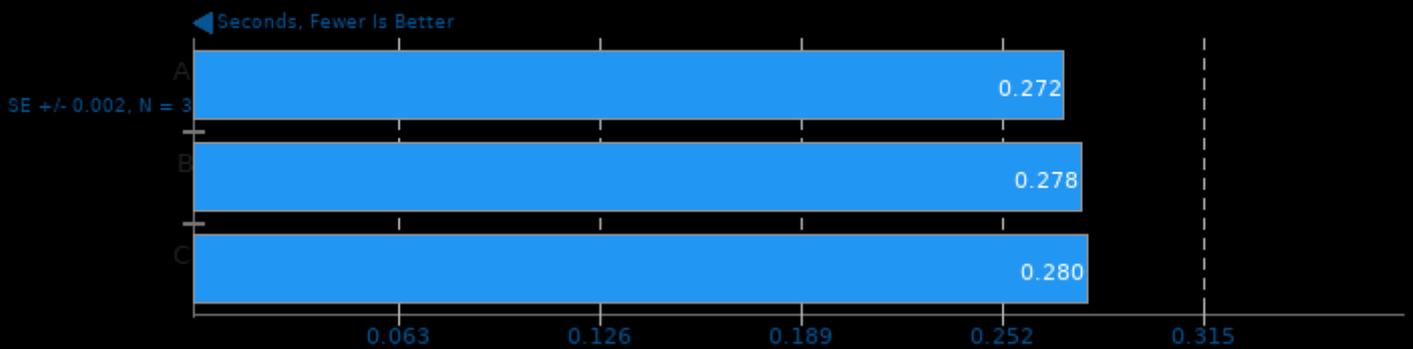
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numba - Project Size: 1048576 - Benchmark: Equation of State



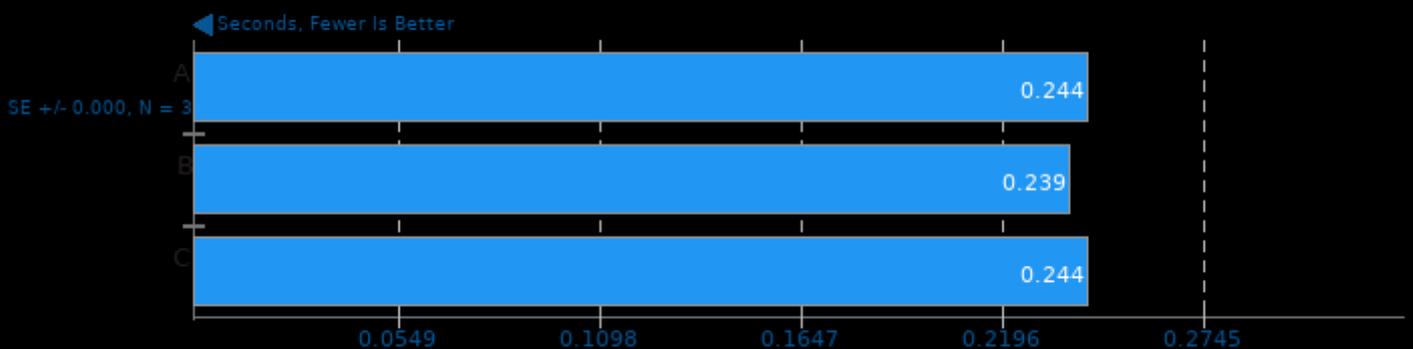
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numba - Project Size: 1048576 - Benchmark: Isonneutral Mixing



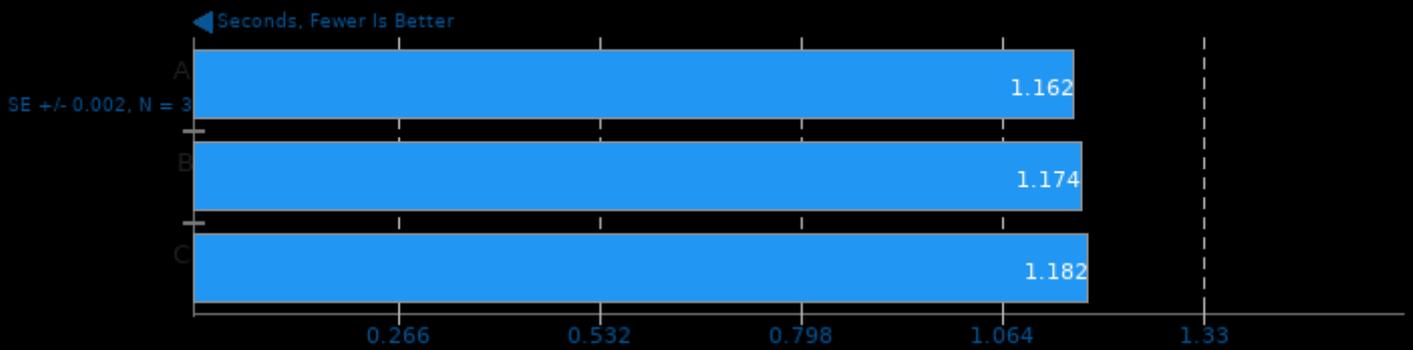
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numba - Project Size: 4194304 - Benchmark: Equation of State



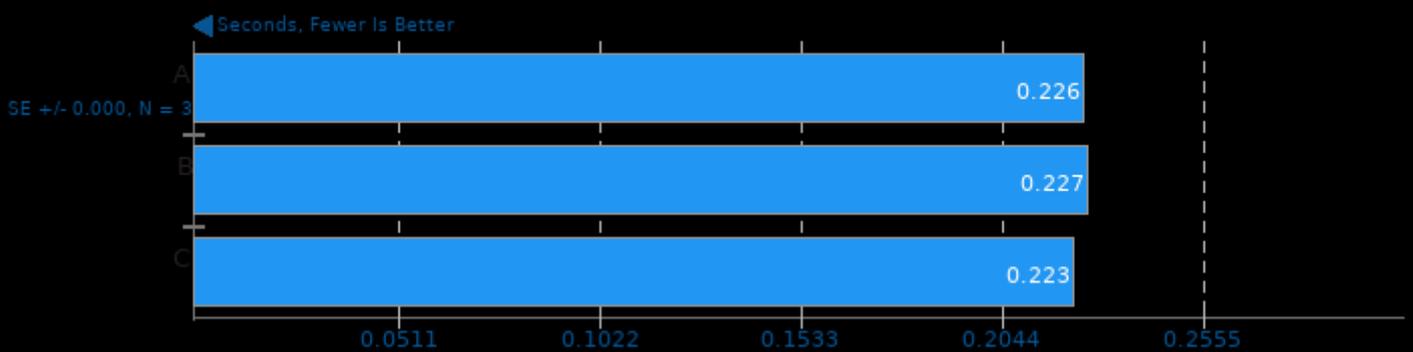
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numba - Project Size: 4194304 - Benchmark: Isonneutral Mixing



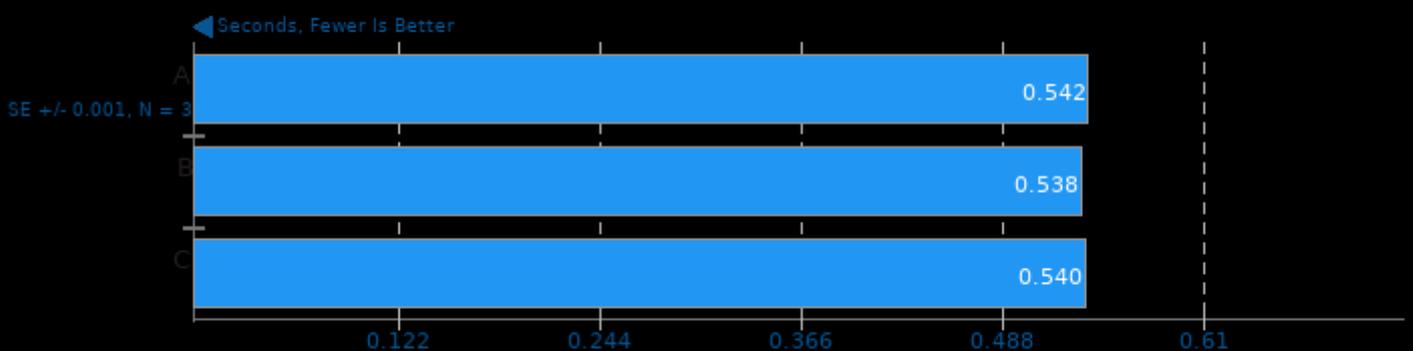
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 1048576 - Benchmark: Equation of State



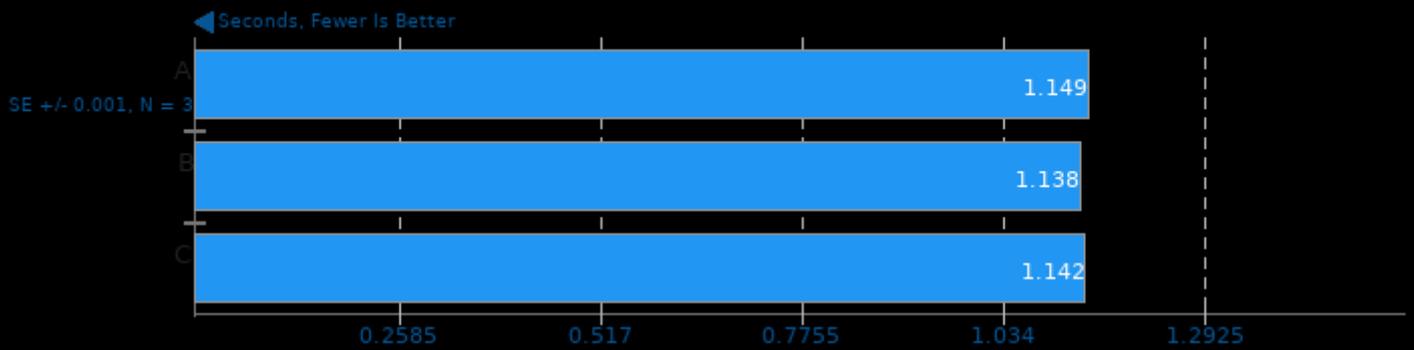
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 1048576 - Benchmark: Isonneutral Mixing



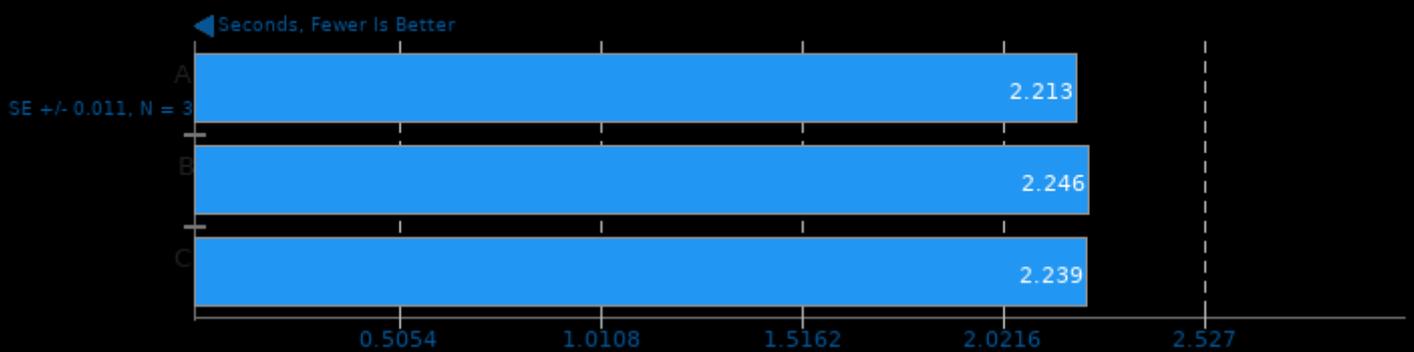
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 4194304 - Benchmark: Equation of State



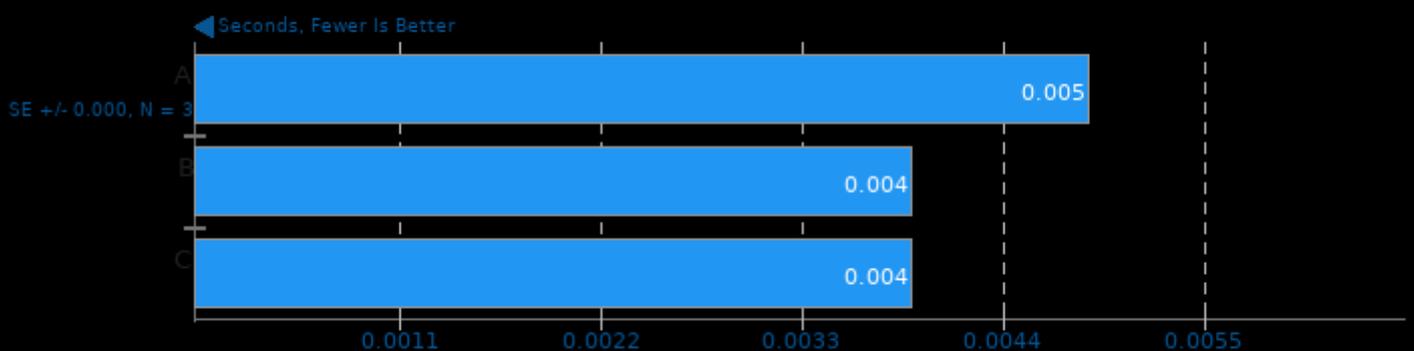
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 4194304 - Benchmark: Isonneutral Mixing



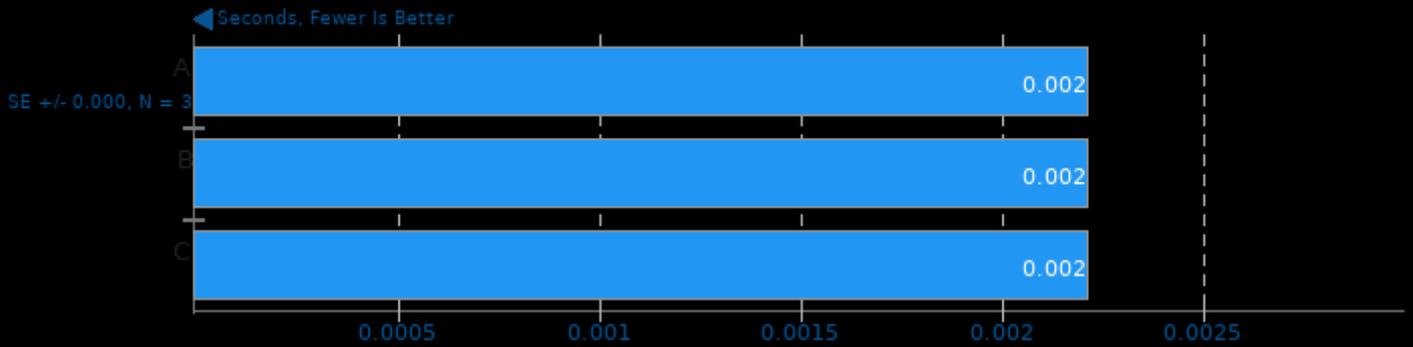
PyHPC Benchmarks 3.0

Device: CPU - Backend: PyTorch - Project Size: 16384 - Benchmark: Isonneutral Mixing



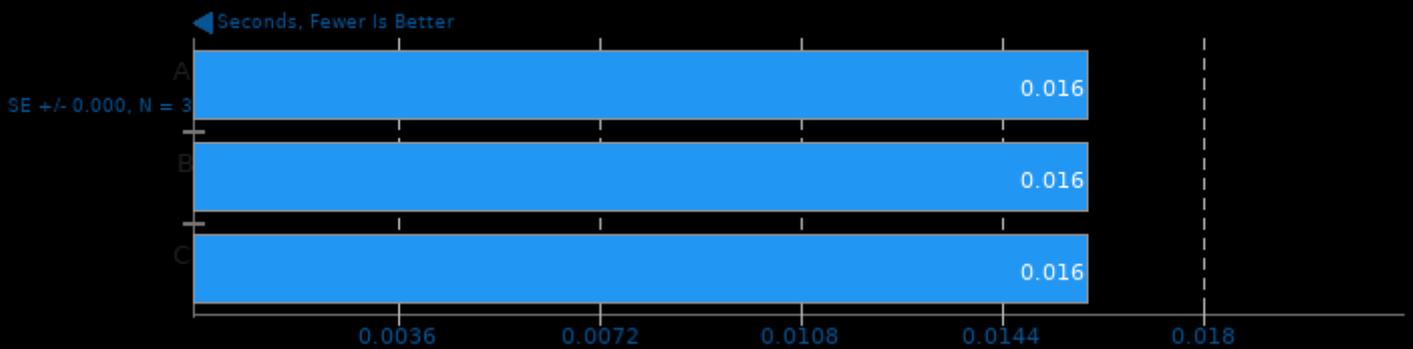
PyHPC Benchmarks 3.0

Device: CPU - Backend: PyTorch - Project Size: 65536 - Benchmark: Equation of State



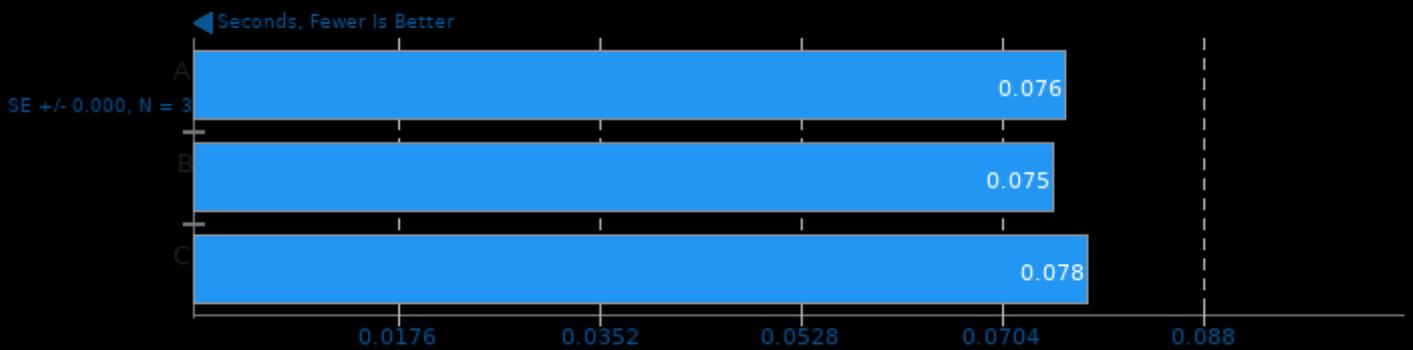
PyHPC Benchmarks 3.0

Device: CPU - Backend: PyTorch - Project Size: 65536 - Benchmark: Isonutral Mixing



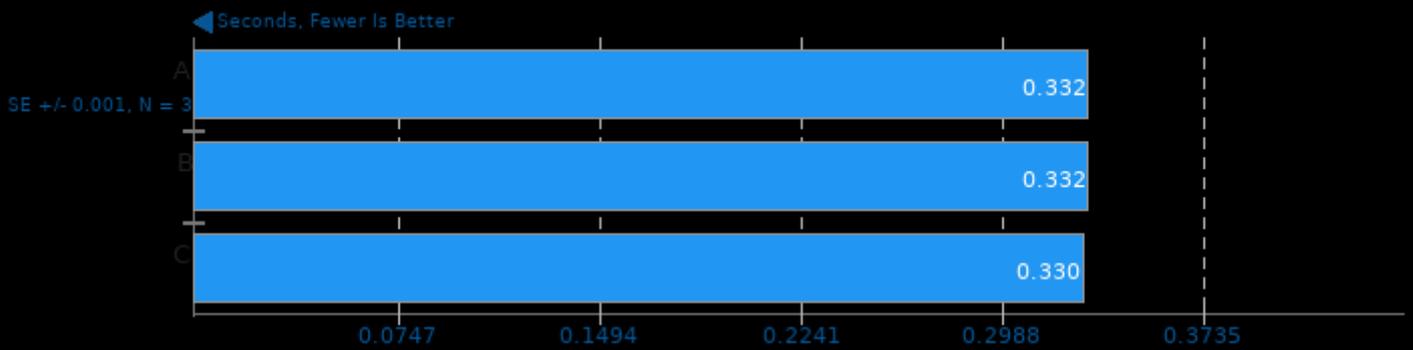
PyHPC Benchmarks 3.0

Device: CPU - Backend: Aesara - Project Size: 1048576 - Benchmark: Equation of State



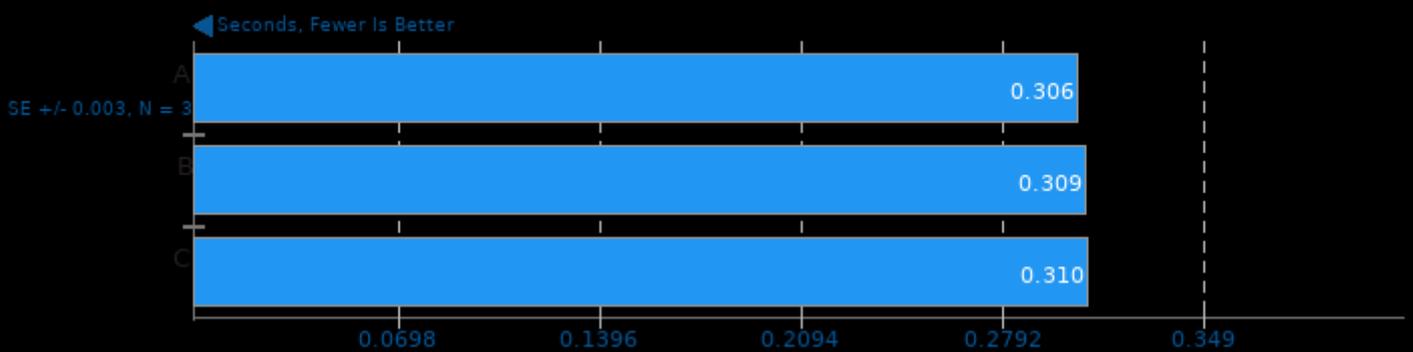
PyHPC Benchmarks 3.0

Device: CPU - Backend: Aesara - Project Size: 1048576 - Benchmark: Isonutral Mixing



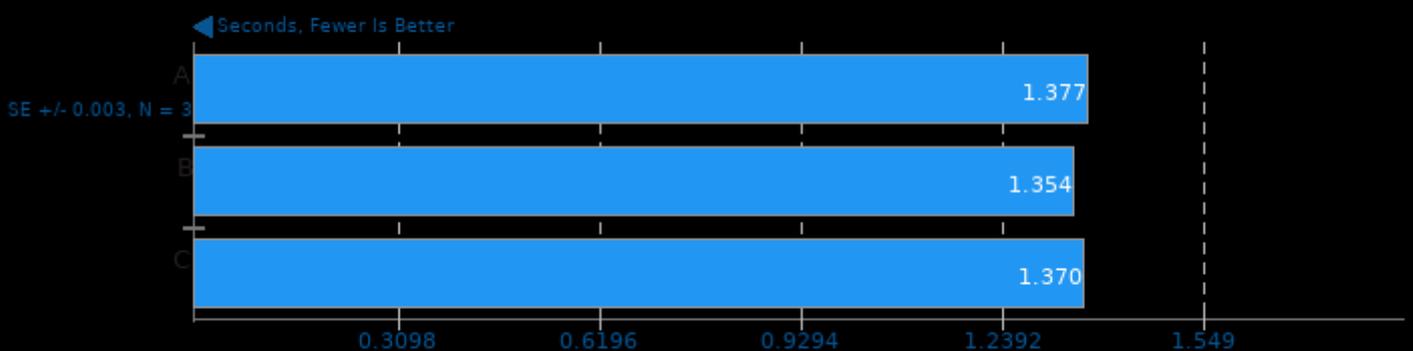
PyHPC Benchmarks 3.0

Device: CPU - Backend: Aesara - Project Size: 4194304 - Benchmark: Equation of State



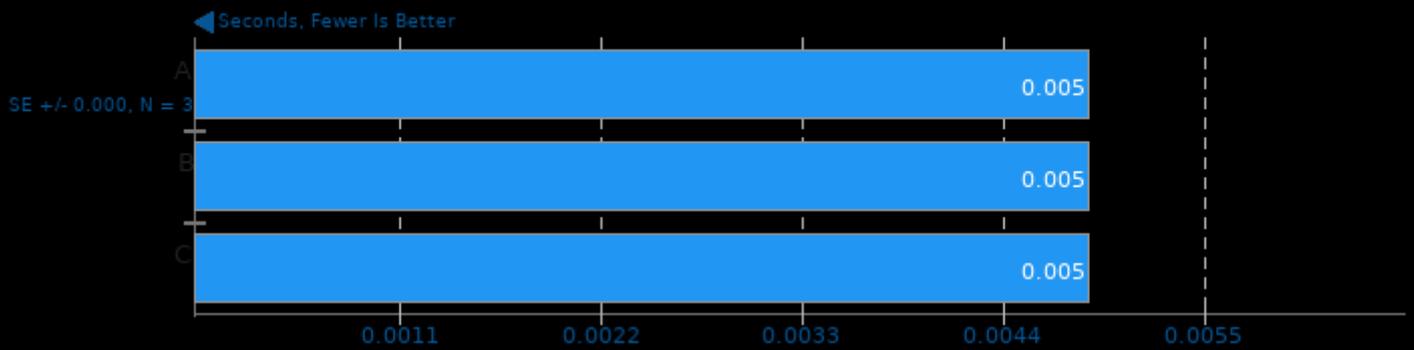
PyHPC Benchmarks 3.0

Device: CPU - Backend: Aesara - Project Size: 4194304 - Benchmark: Isonutral Mixing



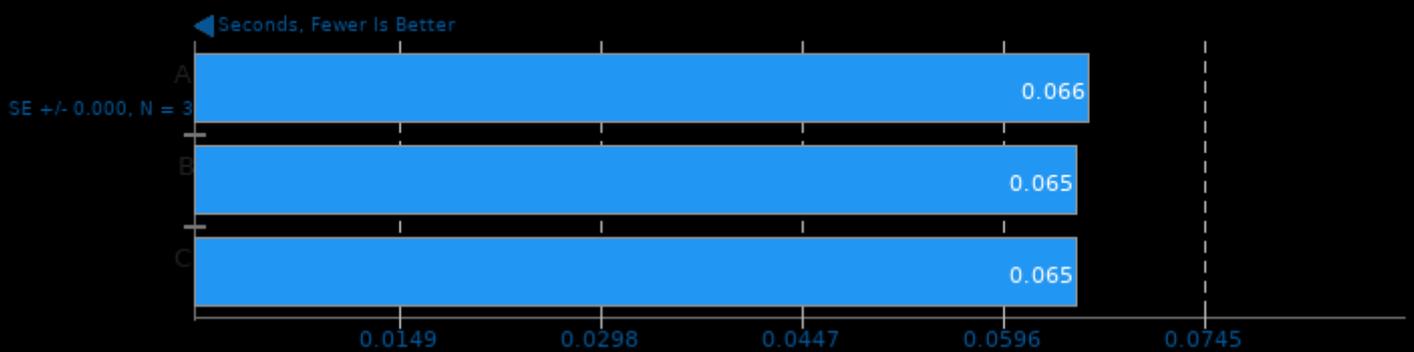
PyHPC Benchmarks 3.0

Device: CPU - Backend: PyTorch - Project Size: 262144 - Benchmark: Equation of State



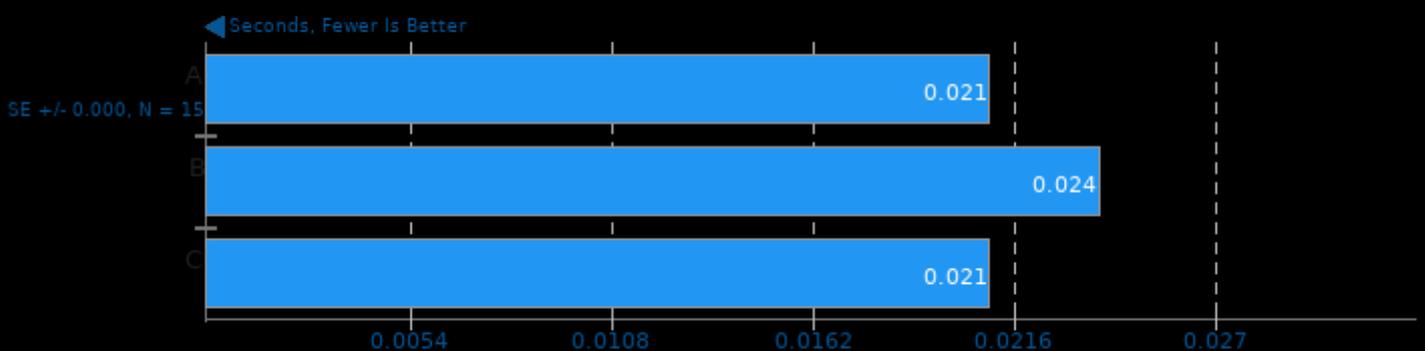
PyHPC Benchmarks 3.0

Device: CPU - Backend: PyTorch - Project Size: 262144 - Benchmark: Isonutral Mixing



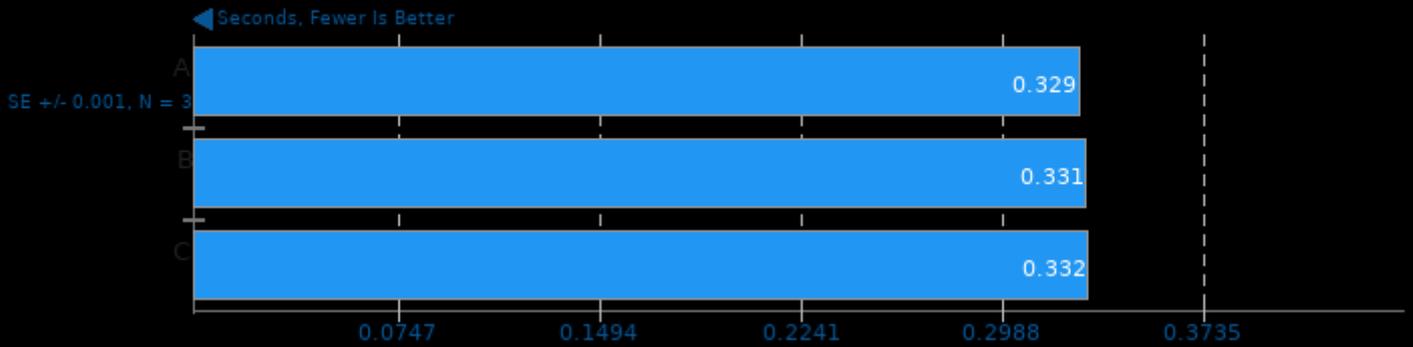
PyHPC Benchmarks 3.0

Device: CPU - Backend: PyTorch - Project Size: 1048576 - Benchmark: Equation of State



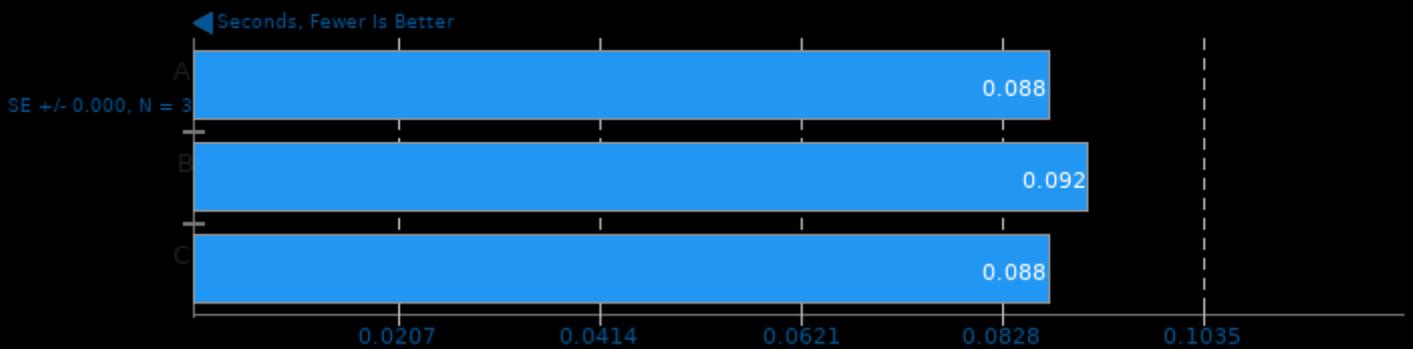
PyHPC Benchmarks 3.0

Device: CPU - Backend: PyTorch - Project Size: 1048576 - Benchmark: Isonutral Mixing



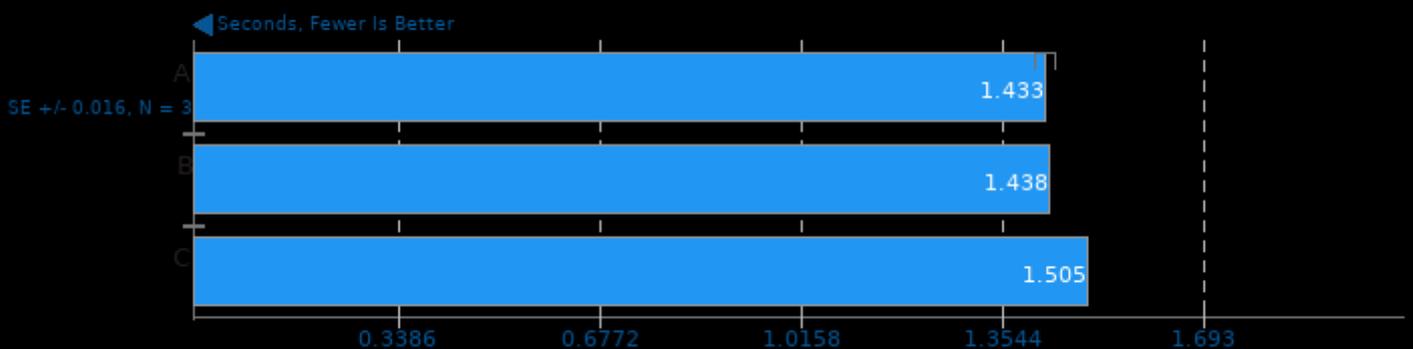
PyHPC Benchmarks 3.0

Device: CPU - Backend: PyTorch - Project Size: 4194304 - Benchmark: Equation of State



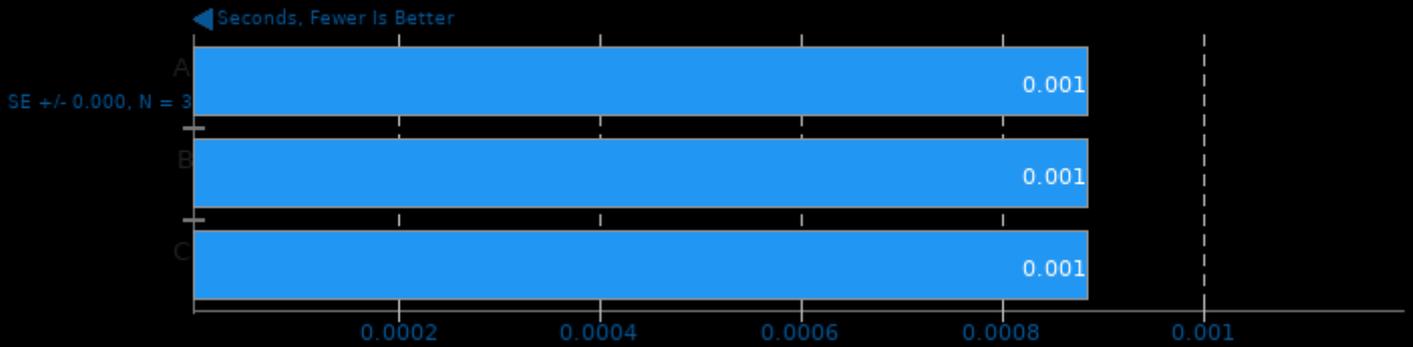
PyHPC Benchmarks 3.0

Device: CPU - Backend: PyTorch - Project Size: 4194304 - Benchmark: Isonutral Mixing



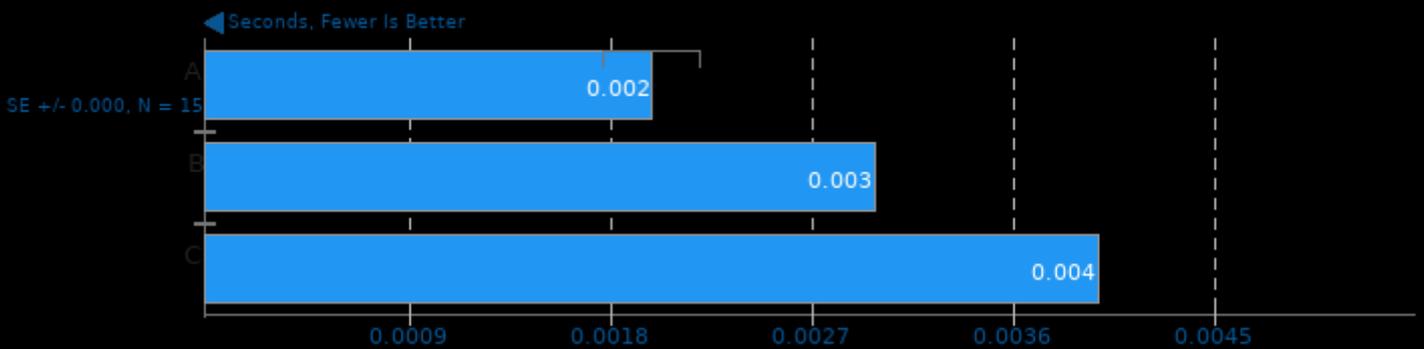
PyHPC Benchmarks 3.0

Device: CPU - Backend: TensorFlow - Project Size: 16384 - Benchmark: Equation of State



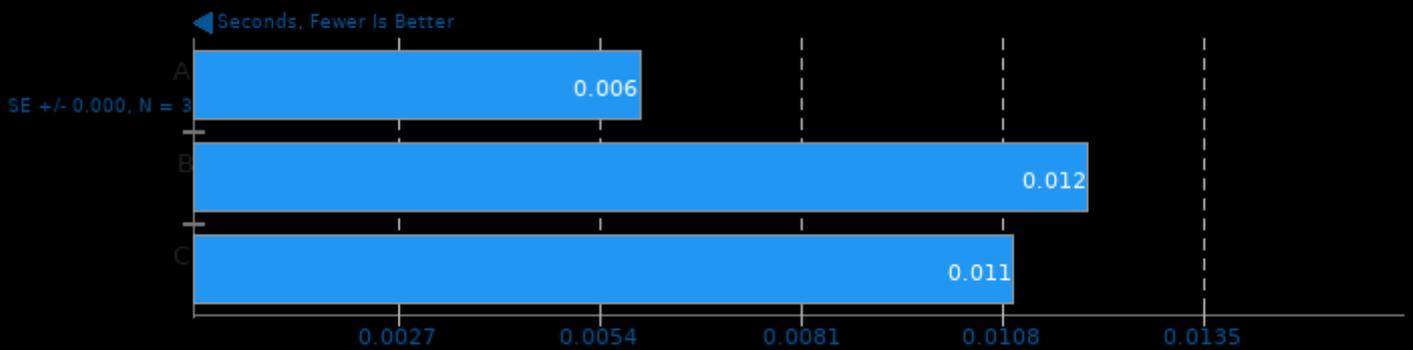
PyHPC Benchmarks 3.0

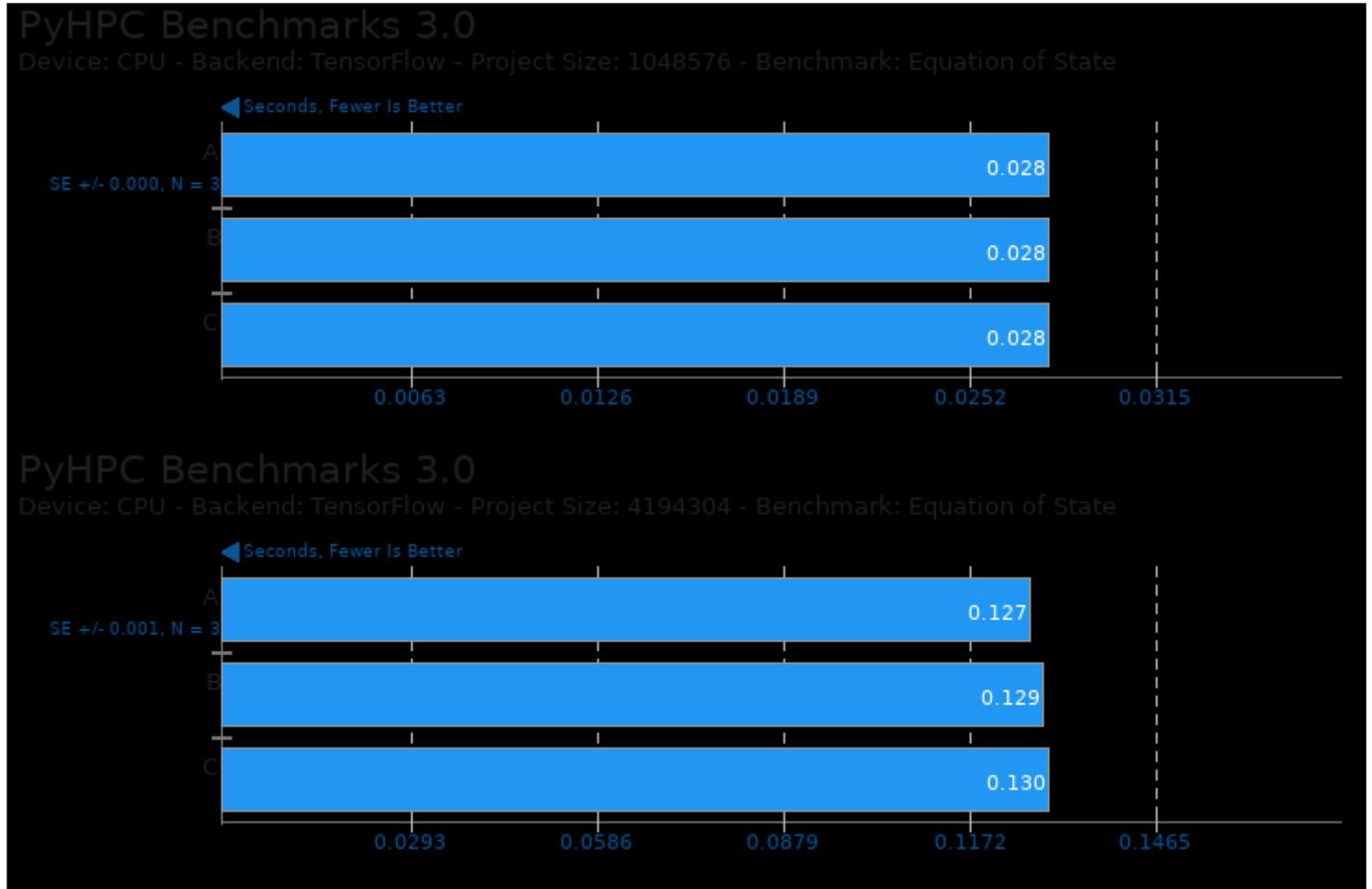
Device: CPU - Backend: TensorFlow - Project Size: 65536 - Benchmark: Equation of State



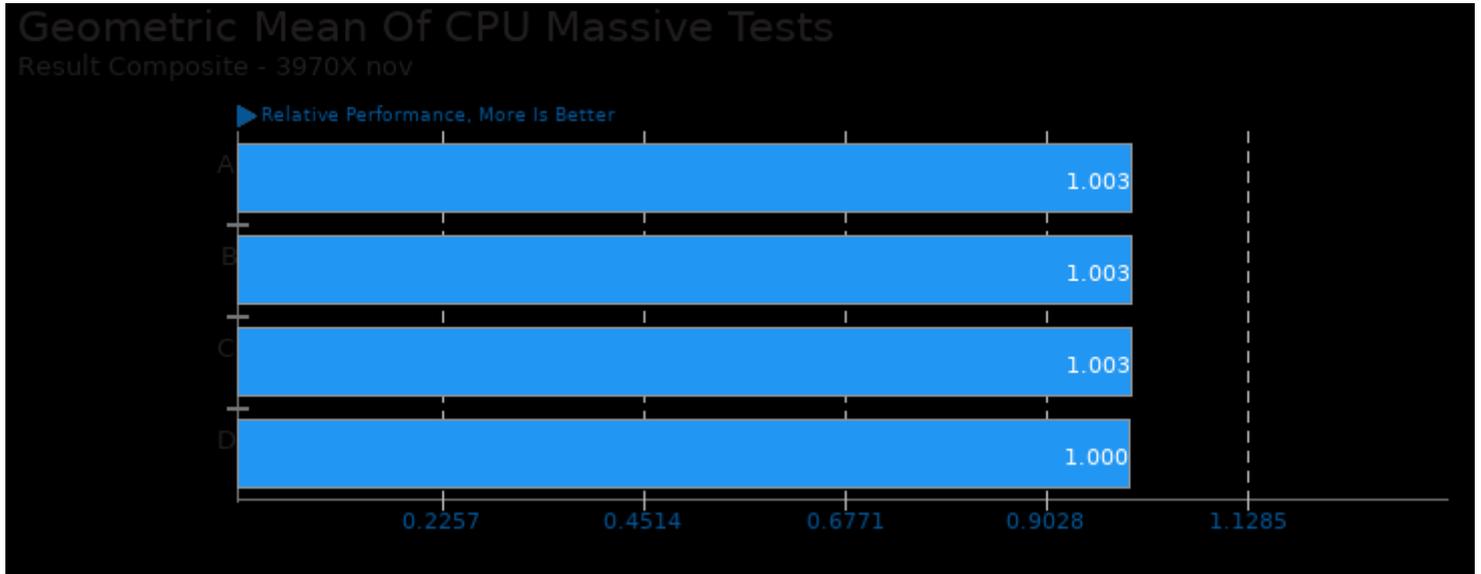
PyHPC Benchmarks 3.0

Device: CPU - Backend: TensorFlow - Project Size: 262144 - Benchmark: Equation of State

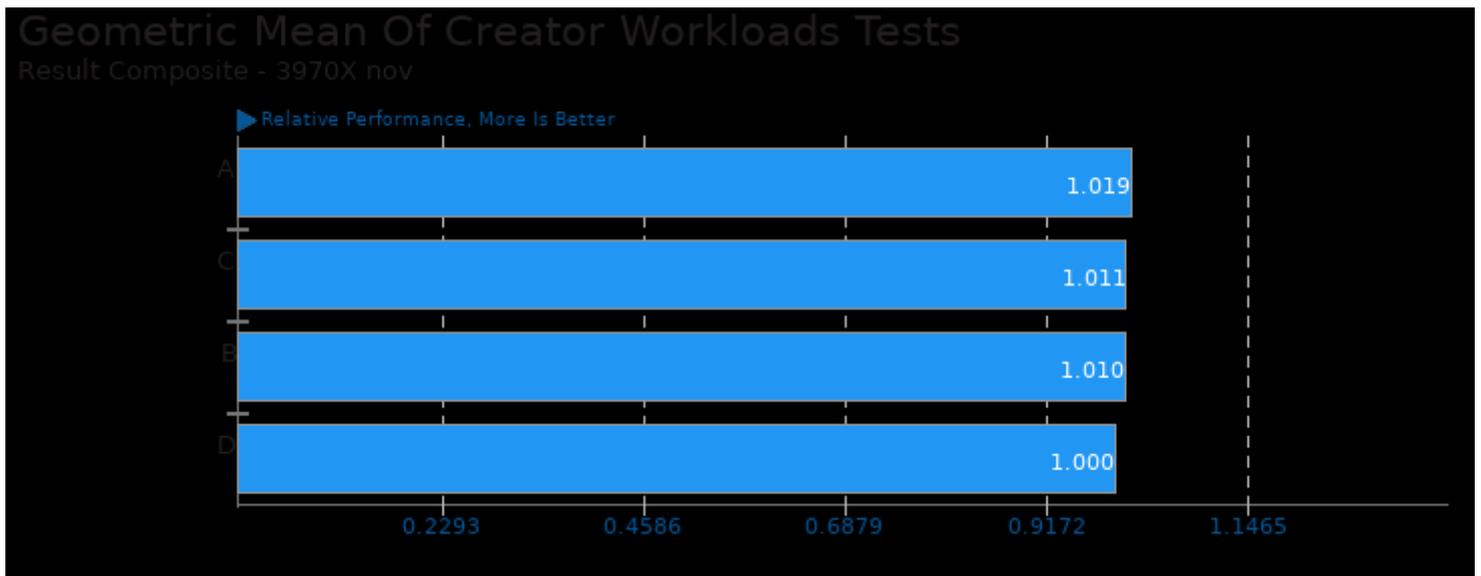




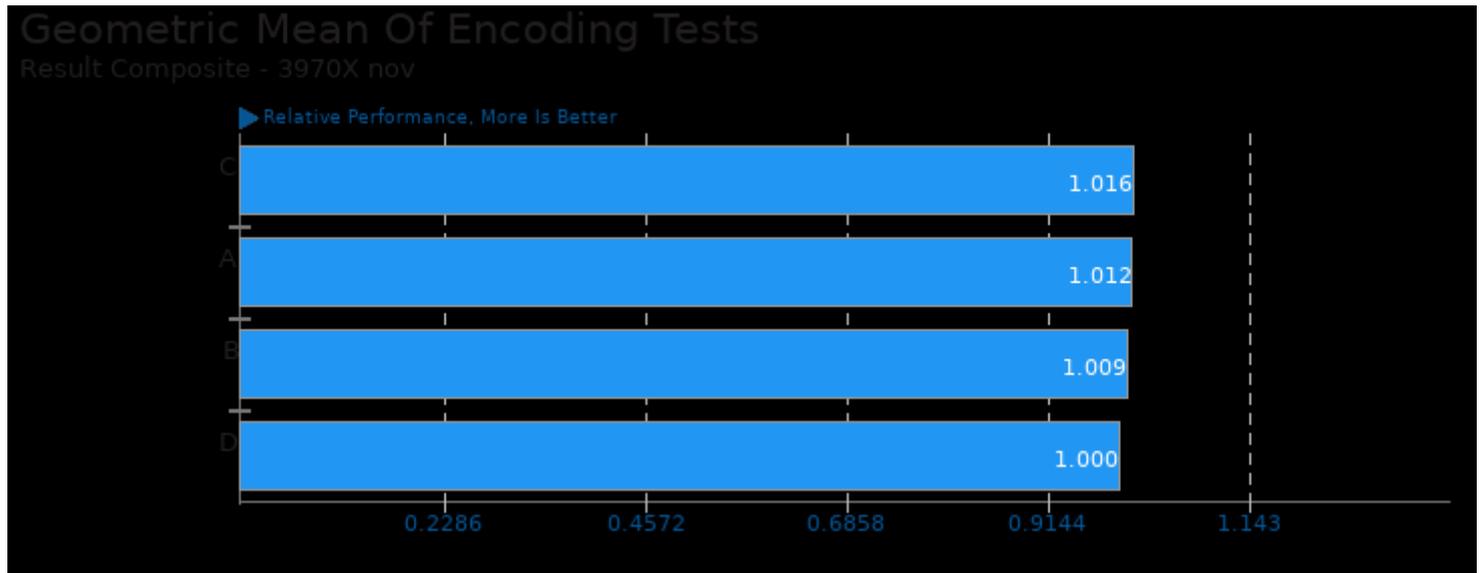
These geometric means are based upon test groupings / test suites for this result file.



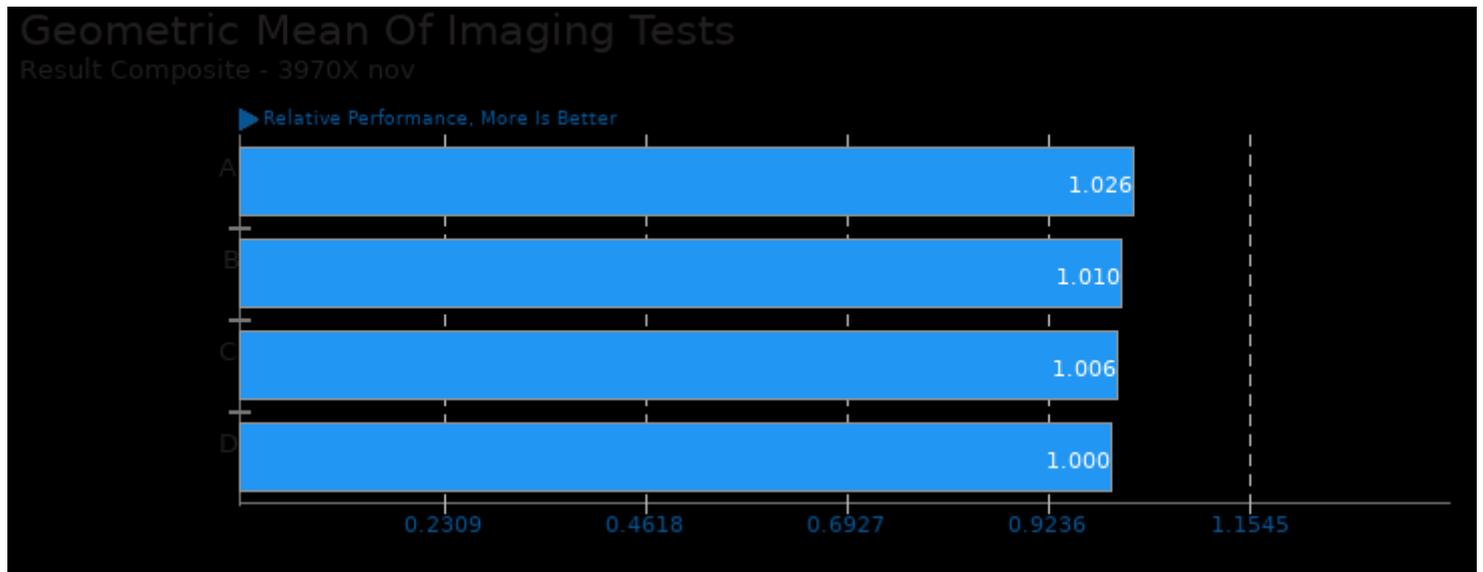
Geometric mean based upon tests: pts/blake2, pts/dav1d and pts/blender



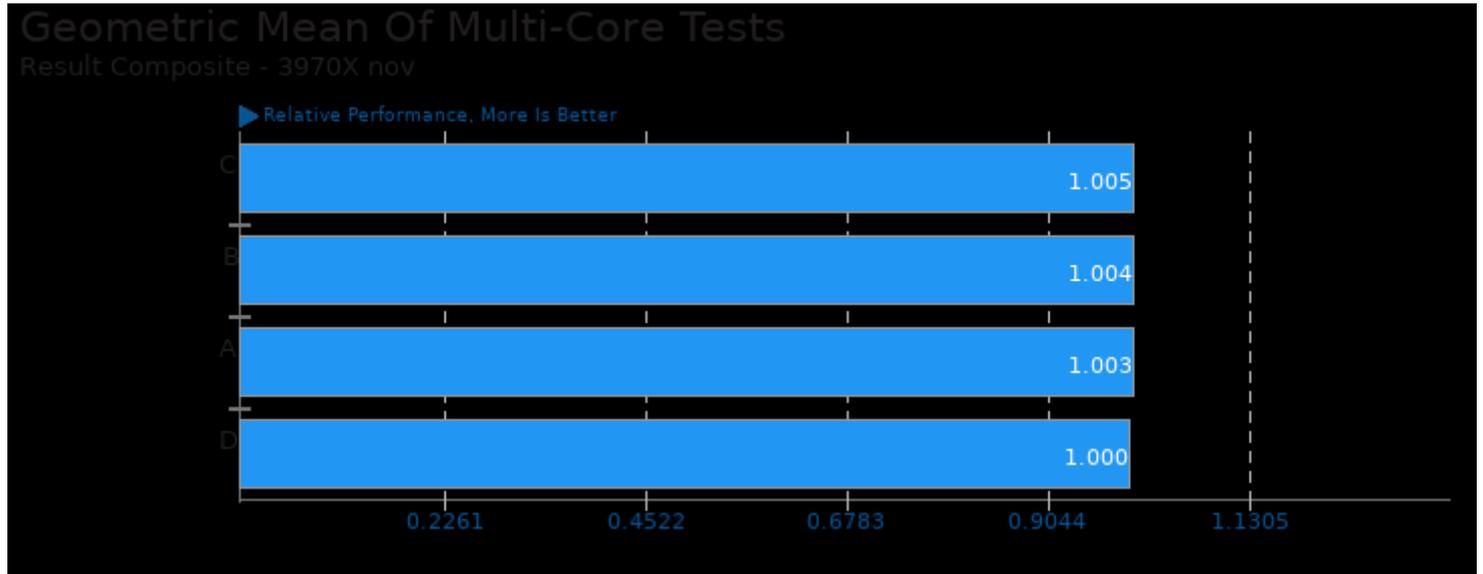
Geometric mean based upon tests: pts/blender, pts/dav1d, pts/stargate, pts/jpegxl, pts/jpegxl-decode and system/gimp



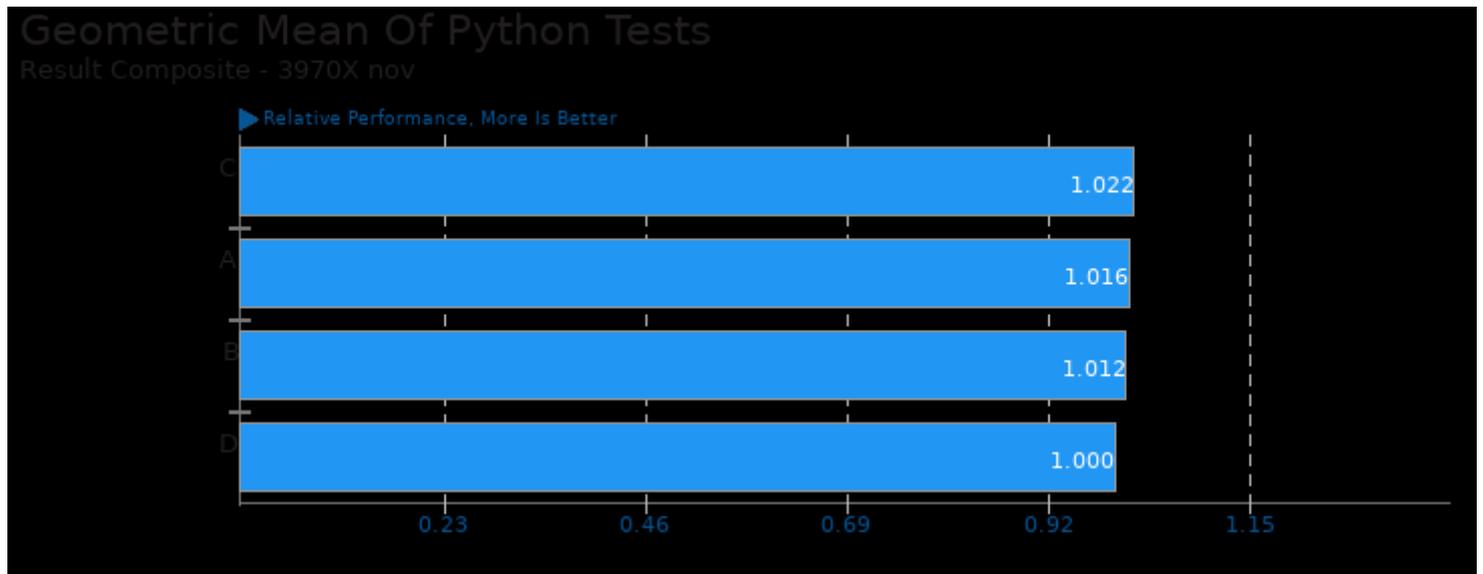
Geometric mean based upon tests: pts/stargate and pts/dav1d



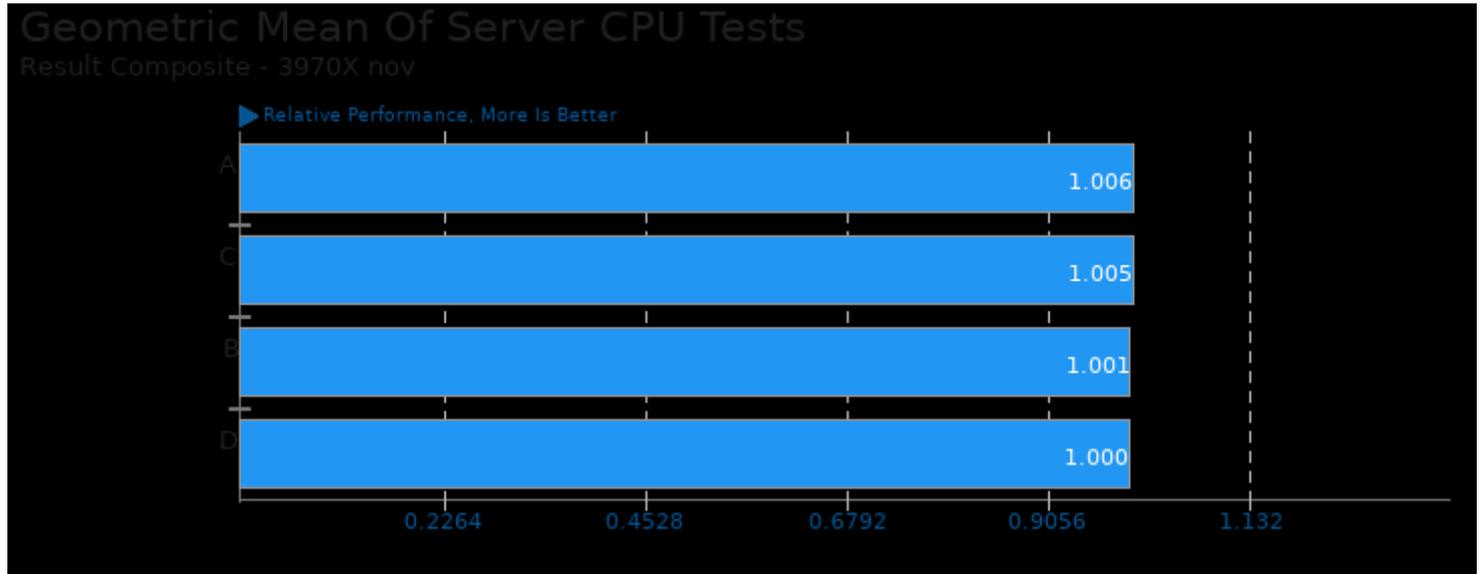
Geometric mean based upon tests: pts/jpegxl, pts/jpegxl-decode and system/gimp



Geometric mean based upon tests: pts/blender and pts/dav1d



Geometric mean based upon tests: pts/stargate and pts/pyhpc



Geometric mean based upon tests: pts/cp2k, pts/dav1d, system/gimp and pts/blender

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 02:50.