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Core i7 4790K Haswell Intel Linux

Intel Core i7-4790K testing with a Gigabyte Z97-HD3P (F4 BIOS) and Gigabyte Intel Haswell Desktop 2GB on Ubuntu 19.10 via the Phoronix Test Suite.

Automated Executive Summary

Linux 5.5 had the most wins, coming in first place for 52% of the tests.

Based on the geometric mean of all complete results, the fastest (Linux 5.5) was 1.015x the speed of the slowest (Linux 5.9). Linux 5.8 was 0.989x the speed of Linux 5.5 and Linux 5.9 was 0.997x the speed of Linux 5.8.

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

Incompact3D (Input: Cylinder) at 1.404x

oneDNN (Harness: Deconvolution Batch deconv_1d - Data Type: f32 - Engine: CPU) at 1.403x

oneDNN (Harness: IP Batch 1D - Data Type: f32 - Engine: CPU) at 1.242x

Monte Carlo Simulations of Ionised Nebulae (Input: Dust 2D tau100.0) at 1.223x

LevelDB (Benchmark: Random Delete) at 1.214x

oneDNN (Harness: Matrix Multiply Batch Shapes Transformer - Data Type: f32 - Engine: CPU) at 1.206x

LevelDB (Benchmark: Sequential Fill) at 1.202x

LevelDB (Benchmark: Sequential Fill) at 1.199x

Basis Universal (Settings: UASTC Level 2 + RDO Post-Processing) at 1.182x

GPAW (*Input: Carbon Nanotube*) at 1.172x.

Test Systems:

Linux 5.5

Processor: Intel Core i7-4790K @ 4.40GHz (4 Cores / 8 Threads), Motherboard: Gigabyte Z97-HD3P (F4 BIOS), Chipset: Intel 4th Gen Core DRAM, Memory: 16GB, Disk: 120GB OCZ TRION100, Graphics: Gigabyte Intel Haswell Desktop 2GB (1250MHz), Audio: Intel Xeon E3-1200 v3/4th, Monitor: LG Ultra HD, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 19.10, Kernel: 5.5.0-rc2-patched (x86_64) 20200115, Desktop: GNOME Shell 3.34.1, Display Server: X Server 1.20.5, Display Driver: modesetting 1.20.5, OpenGL: 4.5 Mesa 19.2.1, Compiler: GCC 9.2.1 20191008, File-System: ext4, Screen Resolution: 3840x2160

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,objc++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-offload-targets=nvptx-none,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-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

Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw

Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x27

Java Notes: OpenJDK Runtime Environment (build 11.0.7+10-post-Ubuntu-2ubuntu219.10)

Python Notes: Python 2.7.17 + Python 3.7.5

Security Notes: i1lb_multithit: KVM: Mitigation of Split huge pages + I1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + 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 generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + tsx_async_abort: Not affected

Linux 5.8

Processor: Intel Core i7-4790K @ 4.40GHz (4 Cores / 8 Threads), Motherboard: Gigabyte Z97-HD3P (F4 BIOS), Chipset: Intel 4th Gen Core DRAM, Memory: 16GB, Disk: 120GB OCZ TRION100, Graphics: Gigabyte Intel Haswell Desktop 2GB (1250MHz), Audio: Intel Xeon E3-1200 v3/4th, Monitor: LG Ultra HD, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 19.10, Kernel: 5.8.14-050814-generic (x86_64), Desktop: GNOME Shell 3.34.1, Display Server: X Server 1.20.5, Display Driver: modesetting 1.20.5, OpenGL: 4.5 Mesa 19.2.8, Vulkan: 1.1.102, Compiler: GCC 9.2.1 20191008, File-System: ext4, Screen Resolution: 3840x2160

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,objc++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-offload-targets=nvptx-none,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-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

Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw

Processor Notes: Scaling Governor: intel_cpfufreq ondemand - CPU Microcode: 0x28

Java Notes: OpenJDK Runtime Environment (build 11.0.7+10-post-Ubuntu-2ubuntu219.10)

Python Notes: Python 2.7.17 + Python 3.7.5

Security Notes: i1lb_multithit: KVM: Mitigation of VMX disabled + I1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + 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 generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbd: Mitigation of Microcode + tsx_async_abort: Not affected

Linux 5.9

Core i7 4790K Haswell Intel Linux

Processor: Intel Core i7-4790K @ 4.40GHz (4 Cores / 8 Threads), Motherboard: Gigabyte Z97-HD3P (F4 BIOS), Chipset: Intel 4th Gen Core DRAM, Memory: 16GB, Disk: 120GB OCZ TRION100, Graphics: Gigabyte Intel Haswell Desktop 2GB (1250MHz), Audio: Intel Xeon E3-1200 v3/4th, Monitor: LG Ultra HD, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 19.10, Kernel: 5.9.0-050900rc8daily20201009-generic (x86_64) 20201008, Desktop: GNOME Shell 3.34.1, Display Server: X Server 1.20.5, Display Driver: modesetting 1.20.5, OpenGL: 4.5 Mesa 19.2.8, Vulkan: 1.1.102, Compiler: GCC 9.2.1 20191008, File-System: ext4, Screen Resolution: 3840x2160

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++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-offload-targets=nvptx-none,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-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

Disk Notes: MQ_DEADLINE / errors=remount-ro,relatime,rw

Processor Notes: Scaling Governor: intel_cpfufreq ondemand - CPU Microcode: 0x28

Java Notes: OpenJDK Runtime Environment (build 11.0.7+10-post-Ubuntu-2ubuntu219.10)

Python Notes: Python 2.7.17 + Python 3.7.5

Security Notes: iLL_multithit: KVM: Mitigation of VMX disabled + I1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapsgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbd: Mitigation of Microcode + tsx_async_abort: Not affected

	Linux 5.5	Linux 5.8	Linux 5.9
PostMark - D.T.P (TPS)	5906	6000	5906
Normalized	98.43%	100%	98.43%
Standard Deviation	1.4%	1.4%	1.4%
GLmark2 - 1920 x 1080 (Score)	290	320	319
Normalized	90.63%	100%	99.69%
GLmark2 - 1920 x 1200 (Score)	273	297	297
Normalized	91.92%	100%	100%
GLmark2 - 2560 x 1440 (Score)	194	212	213
Normalized	91.08%	99.53%	100%
GLmark2 - 3840 x 2160 (Score)	90	105	104
Normalized	85.71%	100%	99.05%
C-Blosc - blosclz (MB/s)	6589	6697	6694
Normalized	98.4%	100%	99.96%
Standard Deviation	0.4%	0.6%	0.4%
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	3.56741	3.56919	3.56784
Normalized	100%	99.95%	99.99%
Standard Deviation	0.5%	0.2%	0.2%
Dolfyn - C.F.D (sec)	19.596	19.739	19.872
Normalized	100%	99.28%	98.61%
Standard Deviation	0.2%	0.9%	0.5%
Nebular Empirical Analysis Tool (sec)	30.850	30.067	30.340
Normalized	97.46%	100%	99.1%
Standard Deviation	2%	0.8%	1.2%
Izbench - XZ 0 - Compression (MB/s)	43	43	43
Izbench - XZ 0 - Decompression (MB/s)	122	122	122
Izbench - Zstd 1 - Compression (MB/s)	499	501	501
Normalized	99.6%	100%	100%
Standard Deviation	0.3%	0.1%	

Izbench - Zstd 1 - Decompression (MB/s)	1449	1449	1448
Normalized	100%	100%	99.93%
Standard Deviation	0.1%	0%	0%
Izbench - Zstd 8 - Compression (MB/s)	92	92	92
Standard Deviation	0.6%		
Izbench - Zstd 8 - Decompression (MB/s)	1537	1519	1535
Normalized	100%	98.83%	99.87%
Standard Deviation	0.3%	2.5%	1.1%
Izbench - Crush 0 - Compression (MB/s)	99	99	99
Izbench - Crush 0 - Decompression (MB/s)	540	539	543
Normalized	99.45%	99.26%	100%
Standard Deviation	0.6%	0.6%	
Izbench - Brotli 0 - Compression (MB/s)	469	470	470
Normalized	99.79%	100%	100%
Standard Deviation	0.2%	0.4%	
Izbench - Brotli 0 - Decompression (MB/s)	644	643	647
Normalized	99.54%	99.38%	100%
Standard Deviation	1.2%	0.8%	0.2%
Izbench - Brotli 2 - Compression (MB/s)	195	195	195
Izbench - Brotli 2 - Decompression (MB/s)	755	755	754
Normalized	100%	100%	99.87%
Standard Deviation	0.3%	0.2%	0.3%
Izbench - Libdeflate 1 - Compression (MB/s)	236	236	236
Standard Deviation	0.4%		0.5%
Izbench - Libdeflate 1 - Decompression	1248	1249	1248
Normalized	99.92%	100%	99.92%
Standard Deviation	0.1%		0.1%
SMHasher - wyhash (MiB/sec)	14489	14512	14521
Normalized	99.78%	99.94%	100%
Standard Deviation	0.9%	0.8%	0.7%
SMHasher - wyhash (cycles/hash)	33.488	33.487	33.485
Normalized	99.99%	99.99%	100%
Standard Deviation	0%	0%	0%
SMHasher - MeowHash (MiB/sec)	27681	27427	27427
Normalized	100%	99.08%	99.08%
Standard Deviation	0.5%	0.5%	1%
SMHasher - MeowHash (cycles/hash)	77.702	77.658	77.647
Normalized	99.93%	99.99%	100%
Standard Deviation	0%	0%	0%
SMHasher - Spooky32 (MiB/sec)	12488	12494	12469
Normalized	99.95%	100%	99.8%
Standard Deviation	0.1%	0%	0.5%
SMHasher - Spooky32 (cycles/hash)	56.647	56.689	56.661
Normalized	100%	99.93%	99.98%
Standard Deviation	0%	0.1%	0%
SMHasher - fasthash32 (MiB/sec)	6189	6190	6190
Normalized	99.99%	100%	100%
Standard Deviation	0%	0%	0%
SMHasher - fasthash32 (cycles/hash)	43.132	43.133	43.132
Normalized	100%	100%	100%
Standard Deviation	0%	0%	0%
SMHasher - t1ha2_atonce (MiB/sec)	13314	13145	13296
Normalized	100%	98.73%	99.87%
Standard Deviation	0.1%	1.9%	0%

SMHasher - t1ha2_atonce (cycles/hash)	42.983	42.957	42.929
Normalized	99.87%	99.93%	100%
Standard Deviation	0.1%	0%	0.1%
SMHasher - t1ha0_aes_avx2 (MiB/sec)	28665	28568	29939
Normalized	95.75%	95.42%	100%
Standard Deviation	0.8%	1.2%	2.2%
SMHasher - t1ha0_aes_avx2 (cycles/hash)	43.516	43.516	43.516
Standard Deviation	0%	0%	0%
Algebraic Multi-Grid Benchmark (Figure Of Merit)	114247	114877	114721
Normalized	99.45%	100%	99.86%
Standard Deviation	0%	0.3%	0%
FFTE - N.2.3.C.F.R (MFLOPS)	18506	18803	18462
Normalized	98.42%	100%	98.19%
Standard Deviation	0.7%	0.1%	7.7%
Timed HMMer Search - P.D.S (sec)	118.474	123.516	123.633
Normalized	100%	95.92%	95.83%
Standard Deviation	0.1%	0.2%	0.2%
Incompact3D - Cylinder (sec)	679.816447	954.656250	952.584574
Normalized	100%	71.21%	71.37%
Standard Deviation	0.5%	1.8%	1.5%
Timed MAFFT Alignment - M.S.A - LSU RNA (sec)	11.472	11.528	11.687
Normalized	100%	99.51%	98.16%
Standard Deviation	0.4%	1.2%	0.9%
Monte Carlo Simulations of Ionised Nebulae - Dust 2D tau100.0 (sec)	274	331	335
Normalized	100%	82.78%	81.79%
Standard Deviation		1.8%	
LAMMPS Molecular Dynamics Simulator - Rhodopsin Protein (ns/day)	3.240	2.311	2.430
Normalized	100%	71.33%	75%
Standard Deviation	0.9%	6.8%	7.9%
LULESH (z/s)	902.41152	865.80598	872.44309
Normalized	100%	95.94%	96.68%
Standard Deviation	2%	0.4%	1.3%
WebP Image Encode - Default (Encode Time - sec)	1.607	1.595	1.599
Normalized	99.25%	100%	99.75%
Standard Deviation	1.1%	0.3%	0.8%
WebP Image Encode - Quality 100 (Encode Time - sec)	2.430	2.426	2.430
Normalized	99.84%	100%	99.84%
Standard Deviation	0.4%	0.1%	0.3%
WebP Image Encode - Q.1.L (Encode Time - sec)	16.947	16.888	16.892
Normalized	99.65%	100%	99.98%
Standard Deviation	0.2%	0.2%	0.4%
WebP Image Encode - Q.1.H.C (Encode Time - sec)	7.297	7.303	7.300
Normalized	100%	99.92%	99.96%
Standard Deviation	0.1%	0%	0.1%

WebP Image Encode - Q.1.L.H.C (Encode Time - sec)	39.755	40.022	40.026
Normalized	100%	99.33%	99.32%
Standard Deviation	0.2%	0.3%	0.5%
Java Gradle Build - Reactor (sec)	220.212	213.865	215.048
Normalized	97.12%	100%	99.45%
Standard Deviation	3.8%	4.2%	4.7%
BYTE Unix Benchmark - Dhrystone 2 (LPS)	43087970	43342185	43235594
Normalized	99.41%	100%	99.75%
Standard Deviation	1.3%	1.2%	0.9%
Zstd Compression - 3 (MB/s)	2060	2072	2038
Normalized	99.43%	100%	98.34%
Standard Deviation	2.1%	1.1%	2.5%
Zstd Compression - 19 (MB/s)	22.3	22.4	22.5
Normalized	99.11%	99.56%	100%
Standard Deviation	4.2%	3.3%	2%
Botan - KASUMI (MiB/s)	95.538	95.641	95.629
Normalized	99.89%	100%	99.99%
Standard Deviation	0.1%	0%	0%
Botan - AES-256 (MiB/s)	3896	3913	3898
Normalized	99.58%	100%	99.62%
Standard Deviation	0.2%	0%	0.6%
Botan - Twofish (MiB/s)	362.253	362.614	362.562
Normalized	99.9%	100%	99.99%
Standard Deviation	0.2%	0%	0.1%
Botan - Blowfish (MiB/s)	435.747	435.150	435.574
Normalized	100%	99.86%	99.96%
Standard Deviation	0%	0.2%	0.1%
Botan - CAST-256 (MiB/s)	138.103	138.100	138.038
Normalized	100%	100%	99.95%
Standard Deviation	0.1%	0.1%	0.1%
LibRaw - P.P.B (Mpix/sec)	31.62	31.52	31.52
Normalized	100%	99.68%	99.68%
Standard Deviation	0.5%	0.1%	0.2%
Crafty - Elapsed Time (Nodes/s)	7904901	7863882	7835355
Normalized	100%	99.48%	99.12%
Standard Deviation	0.6%	0.3%	0.4%
TSCP - A.C.P (Nodes/s)	1437317	1435819	1436568
Normalized	100%	99.9%	99.95%
Standard Deviation	0.2%	0.2%	0.2%
ArrayFire - BLAS CPU (GFLOPS)	446.786	430.465	417.604
Normalized	100%	96.35%	93.47%
Standard Deviation	1%	3%	1.1%
ArrayFire - C.G.C (ms)	34.40	34.61	35.07
Normalized	100%	99.39%	98.09%
Standard Deviation	0.7%	2.3%	1%
John The Ripper - Blowfish (Real C/S)	7584	7591	7582
Normalized	99.91%	100%	99.88%
Standard Deviation	0.2%	0.1%	0.1%
John The Ripper - MD5 (Real C/S)	486246	485299	486050
Normalized	100%	99.81%	99.96%
Standard Deviation	0%	0.2%	0.1%
oneDNN - IP Batch 1D - f32 - CPU (ms)	8.89071	9.16530	11.0422
Normalized	100%	97%	80.52%
Standard Deviation	2%	2.6%	0.5%

oneDNN - IP Batch All - f32 - CPU (ms)	108.991	114.148	115.237
Normalized	100%	95.48%	94.58%
Standard Deviation	0.5%	2.3%	2.6%
oneDNN - C.B.S.A - f32 - CPU (ms)	26.9135	26.6321	27.0384
Normalized	98.95%	100%	98.5%
Standard Deviation	0.2%	0.7%	0.2%
oneDNN - D.B.d - f32 - CPU (ms)	8.43106	8.41321	11.8026
Normalized	99.79%	100%	71.28%
Standard Deviation	0.5%	0.7%	2%
oneDNN - D.B.d - f32 - CPU (ms)	15.1563	15.1270	22.1519
Normalized	99.81%	100%	68.29%
Standard Deviation	0.1%	0.1%	14.3%
oneDNN - R.N.N.T - f32 - CPU (ms)	812.081	976.123	997.295
Normalized	100%	83.19%	81.43%
Standard Deviation	11.3%	6.8%	1.9%
oneDNN - R.N.N.I - f32 - CPU (ms)	383.616	370.098	365.466
Normalized	95.27%	98.75%	100%
Standard Deviation	0.3%	1.1%	2.9%
oneDNN - M.M.B.S.T - f32 - CPU (ms)	6.84953	7.84553	8.25877
Normalized	100%	87.3%	82.94%
Standard Deviation	0.2%	0.3%	0.6%
dav1d - Chimera 1080p (FPS)	299.36	304.51	308.60
Normalized	97.01%	98.67%	100%
Standard Deviation	0.1%	2.2%	1%
dav1d - Summer Nature 4K (FPS)	76.13	79.61	79.30
Normalized	95.63%	100%	99.61%
Standard Deviation	2.9%	0.1%	0.9%
dav1d - S.N.1 (FPS)	284.75	286.93	285.45
Normalized	99.24%	100%	99.48%
Standard Deviation	1%	0.8%	1%
dav1d - C.1.1.b (FPS)	69.14	69.83	69.53
Normalized	99.01%	100%	99.57%
Standard Deviation	0.5%	0.1%	0.2%
AOM AV1 - Speed 6 Realtime (FPS)	14.88	14.90	14.86
Normalized	99.87%	100%	99.73%
Standard Deviation	0.3%	0.3%	0.4%
AOM AV1 - Speed 6 Two-Pass (FPS)	3.02	3.00	2.99
Normalized	100%	99.34%	99.01%
Standard Deviation	0.5%	0.3%	0.2%
AOM AV1 - Speed 8 Realtime (FPS)	37.27	37.35	37.60
Normalized	99.12%	99.34%	100%
Standard Deviation	0.4%	0.3%	0.2%
Embree - Pathtracer - Crown (FPS)	4.7469	4.7257	4.7315
Normalized	100%	99.55%	99.68%
Standard Deviation	0.6%	0.5%	0.3%
Embree - Pathtracer ISPC - Crown (FPS)	5.2976	5.3319	5.3615
Normalized	98.81%	99.45%	100%
Standard Deviation	2%	1.8%	0.8%
Embree - Pathtracer - Asian Dragon (FPS)	5.5231	5.5370	5.5551
Normalized	99.42%	99.67%	100%
Standard Deviation	0.3%	0.4%	0.5%
Embree - Pathtracer - Asian Dragon Obj	5.1991	5.2095	5.2218
Normalized	99.57%	99.76%	100%
Standard Deviation	0.3%	0.6%	0.4%

Embree - Pathtracer ISPC - Asian Dragon	6.5711 (FPS)	6.5432	6.6306
Normalized	99.1%	98.68%	100%
Standard Deviation	0.1%	1.4%	1.6%
Embree - Pathtracer ISPC - Asian Dragon	5.8697	5.8932	5.8980
Obj (FPS)			
Normalized	99.52%	99.92%	100%
Standard Deviation	0.4%	0.9%	0.6%
SVT-AV1 - Enc Mode 0 - 1080p (FPS)	0.083	0.075	0.076
Normalized	100%	90.36%	91.57%
Standard Deviation	0.7%	2%	0.8%
SVT-AV1 - Enc Mode 4 - 1080p (FPS)	1.442	1.414	1.423
Normalized	100%	98.06%	98.68%
Standard Deviation	0.4%	1%	0.7%
SVT-AV1 - Enc Mode 8 - 1080p (FPS)	11.787	11.663	11.685
Normalized	100%	98.95%	99.13%
Standard Deviation	0.2%	0.5%	0.2%
SVT-VP9 - VMAF Optimized - Bosphorus	79.49	81.94	80.64
1080p (FPS)			
Normalized	97.01%	100%	98.41%
Standard Deviation	2.8%	2.8%	2.3%
SVT-VP9 - P.S.O - Bosphorus 1080p (FPS)	81.34	83.58	83.12
Normalized	97.32%	100%	99.45%
Standard Deviation	1.3%	0.3%	0.4%
SVT-VP9 - V.Q.O - Bosphorus 1080p (FPS)	65.84	66.19	66.72
Normalized	98.68%	99.21%	100%
Standard Deviation	1.4%	0.3%	0.4%
x264 - H.2.V.E (FPS)	40.84	40.49	40.21
Normalized	100%	99.14%	98.46%
Standard Deviation	3%	2.7%	2.7%
Intel Open Image Denoise - Memorial	3.90 (Images / Sec)	3.90	3.90
Standard Deviation	0.1%	0%	0%
OpenVKL - vklBenchmark (Items / Sec)	56.39	56.36	55.92
Normalized	100%	99.95%	99.17%
Standard Deviation	0.5%	0.2%	0.3%
LuxCoreRender - DLSC (M samples/sec)	0.72	0.73	0.73
Normalized	98.63%	100%	100%
Standard Deviation	0.2%	0.1%	0.7%
LuxCoreRender - R.C.a.P (M samples/sec)	0.78	0.77	0.78
Normalized	100%	98.72%	100%
Standard Deviation	0.1%	2.5%	0.7%
7-Zip Compression - C.S.T (MIPS)	24772 (MIPS)	23888	24843
Normalized	99.71%	96.16%	100%
Standard Deviation	0.7%	0.8%	2.1%
libavif avifenc - 0 (sec)	181.596	182.536	183.769
Normalized	100%	99.49%	98.82%
Standard Deviation	0.5%	0.7%	0.2%
libavif avifenc - 2 (sec)	107.370	108.132	107.967
Normalized	100%	99.3%	99.45%
Standard Deviation	0.1%	0.3%	0.1%
libavif avifenc - 8 (sec)	7.836	7.875	7.900
Normalized	100%	99.5%	99.19%
Standard Deviation	0.1%	0.7%	0.2%

libavif avifenc - 10 (sec)	7.213	7.265	7.301
Normalized	100%	99.28%	98.79%
Standard Deviation	0.3%	0.2%	0.2%
Timed Apache Compilation - Time To Compile (sec)	28.707	29.373	29.806
Normalized	100%	97.73%	96.31%
Standard Deviation	0.5%	1%	1.6%
Timed FFmpeg Compilation - Time To Compile (sec)	128.769	128.887	127.984
Normalized	99.39%	99.3%	100%
Standard Deviation	0.6%	1.6%	0.7%
Timed GDB GNU Debugger Compilation - Time To Compile (sec)	146.419	153.153	153.951
Normalized	100%	95.6%	95.11%
Standard Deviation	0.4%	1.8%	0.6%
Timed Linux Kernel Compilation - Time To Compile (sec)	176.908	176.110	177.527
Normalized	99.55%	100%	99.2%
Standard Deviation	2.6%	2.7%	1.9%
Timed LLVM Compilation - Time To Compile (sec)	1322	1330	1333
Normalized	100%	99.44%	99.21%
Standard Deviation	0.1%	0.1%	0.1%
Timed MPlayer Compilation - Time To Compile (sec)	84.925	84.500	84.875
Normalized	99.5%	100%	99.56%
Standard Deviation	0.1%	0.1%	0.1%
Timed PHP Compilation - Time To Compile (sec)	103.124	102.955	103.757
Normalized	99.84%	100%	99.23%
Standard Deviation	0.1%	0.5%	0.2%
Build2 - Time To Compile (sec)	219.121	224.729	224.411
Normalized	100%	97.5%	97.64%
Standard Deviation	0.7%	0.1%	1.5%
YafaRay - T.T.F.S.S (sec)	364.332	364.626	364.311
Normalized	99.99%	99.91%	100%
Standard Deviation	0.2%	0.3%	0.3%
eSpeak-NG Speech Engine - T.T.S.S (sec)	55.724	58.328	60.828
Normalized	100%	95.54%	91.61%
Standard Deviation	13.8%	7.4%	7.3%
Montage Astronomical Image Mosaic Engine - M.o.M.K.b.1.5.d.x.1.5.d (sec)	85.809	86.222	85.176
Normalized	99.26%	98.79%	100%
Standard Deviation	0.1%	1.7%	2.6%
RNNoise (sec)	23.502	23.254	23.176
Normalized	98.61%	99.66%	100%
Standard Deviation	9.8%	7.6%	8.6%
System GZIP Decompression (sec)	2.896	2.899	2.900
Normalized	100%	99.9%	99.86%
Standard Deviation	2.9%	2.9%	3.1%
Tachyon - Total Time (sec)	242.2099	242.5570	242.6636
Normalized	100%	99.86%	99.81%
Standard Deviation	0%	0.1%	0.1%
LevelDB - Hot Read (us/Op)	3.262	3.333	3.325

Normalized	100%	97.87%	98.11%
Standard Deviation	1.8%	1.7%	2%
LevelDB - Fill Sync (MB/s)	0.2	0.2	0.2
Normalized	0%	0%	20.9%
LevelDB - Fill Sync (us/Op)	4734	4387	3999
Normalized	84.47%	91.16%	100%
Standard Deviation	10.1%	10.8%	19.6%
LevelDB - Overwrite (MB/s)	24.9	21.5	22.5
Normalized	100%	86.35%	90.36%
Standard Deviation	18.9%	18%	16.3%
LevelDB - Overwrite (us/Op)	36.930	42.414	40.464
Normalized	100%	87.07%	91.27%
Standard Deviation	21%	19%	18.7%
LevelDB - Rand Fill (MB/s)	25.1	22.7	23.4
Normalized	100%	90.44%	93.23%
Standard Deviation	18.4%	16.3%	12.7%
LevelDB - Rand Fill (us/Op)	36.615	40.098	38.554
Normalized	100%	91.31%	94.97%
Standard Deviation	21%	19.5%	16.1%
LevelDB - Rand Read (us/Op)	3.269	3.350	3.325
Normalized	100%	97.58%	98.32%
Standard Deviation	0.4%	0.5%	0.5%
LevelDB - Seek Rand (us/Op)	4.498	4.516	4.472
Normalized	99.42%	99.03%	100%
Standard Deviation	0.8%	1.5%	1%
LevelDB - Rand Delete (us/Op)	29.916	35.942	36.331
Normalized	100%	83.23%	82.34%
Standard Deviation	4.1%	2.9%	3.5%
LevelDB - Seq Fill (MB/s)	27.4	22.8	23.1
Normalized	100%	83.21%	84.31%
Standard Deviation	5.8%	5.1%	4.3%
LevelDB - Seq Fill (us/Op)	32.397	38.856	38.402
Normalized	100%	83.38%	84.36%
Standard Deviation	6%	5.1%	4.4%
KeyDB (Ops/sec)	406173	402813	406735
Normalized	99.86%	99.04%	100%
Standard Deviation	0.6%	1.6%	1.3%
GROMACS - Water Benchmark (Ns/Day)	0.407	0.407	0.406
Normalized	100%	100%	99.75%
Standard Deviation	2.8%	1.5%	1.9%
TensorFlow Lite - SqueezeNet (us)	478990	479932	480001
Normalized	100%	99.8%	99.79%
Standard Deviation	0%	0%	0%
TensorFlow Lite - Inception V4 (us)	6912373	6929577	6930130
Normalized	100%	99.75%	99.74%
Standard Deviation	0.1%	0.1%	0.1%
TensorFlow Lite - NASNet Mobile (us)	347219	347818	347722
Normalized	100%	99.83%	99.86%
Standard Deviation	0.1%	0.1%	0.1%
TensorFlow Lite - Mobilenet Float (us)	324779	325562	325294
Normalized	100%	99.76%	99.84%
Standard Deviation	0.1%	0%	0.1%
TensorFlow Lite - Mobilenet Quant (us)	312183	312621	312321
Normalized	100%	99.86%	99.96%
Standard Deviation	0.1%	0.1%	0%

TensorFlow Lite - I.R.V (us)	6252180	6265000	6259830
Normalized	100%	99.8%	99.88%
Standard Deviation	0.1%	0.1%	0.1%
Tensorflow - Cifar10 (sec)	113.83	114.69	114.39
Normalized	100%	99.25%	99.51%
Standard Deviation	0.5%	0.3%	0.6%
ASTC Encoder - Fast (sec)	7.64	7.69	7.66
Normalized	100%	99.35%	99.74%
Standard Deviation	0.1%	0.6%	0.2%
ASTC Encoder - Medium (sec)	10.39	10.39	10.40
Normalized	100%	100%	99.9%
Standard Deviation	0.1%	0.1%	0.1%
ASTC Encoder - Thorough (sec)	69.46	69.56	69.50
Normalized	100%	99.86%	99.94%
Standard Deviation	0%	0.1%	0%
ASTC Encoder - Exhaustive (sec)	567.08	567.82	567.17
Normalized	100%	99.87%	99.98%
Standard Deviation	0%	0.1%	0%
Basis Universal - ETC1S (sec)	71.708	72.334	72.317
Normalized	100%	99.13%	99.16%
Standard Deviation	0.5%	0.1%	0.7%
Basis Universal - UASTC Level 0 (sec)	10.670	10.531	10.667
Normalized	98.7%	100%	98.73%
Standard Deviation	1.9%	0.8%	1.9%
Basis Universal - UASTC Level 2 (sec)	74.240	74.284	74.463
Normalized	100%	99.94%	99.7%
Standard Deviation	0.3%	0.2%	0.5%
Basis Universal - UASTC Level 3 (sec)	145.422	146.172	145.365
Normalized	99.96%	99.45%	100%
Standard Deviation	0%	0.3%	0.1%
Basis Universal - U.L.2.R.P.P (sec)	828.986	961.402	979.594
Normalized	100%	86.23%	84.63%
Standard Deviation	0%	1.8%	1.9%
G'MIC - 2.F.P.1.T (sec)	100.327	101.346	100.807
Normalized	100%	98.99%	99.52%
Standard Deviation	2.9%	0.8%	1.9%
G'MIC - P.I.O.A.3.V.1.T (sec)	19.251	19.201	19.201
Normalized	99.74%	100%	100%
Standard Deviation	0.1%	0.3%	0%
G'MIC - 3.E.F.I.R.C.1.T (sec)	65.406	65.463	65.430
Normalized	100%	99.91%	99.96%
Standard Deviation	0.1%	0%	0%
Hugin - P.P.A.S.T (sec)	74.887	74.378	74.014
Normalized	98.83%	99.51%	100%
Standard Deviation	1.4%	1%	1.3%
OCRMyPDF - P.6.P.P.D (sec)	51.400	50.983	50.967
Normalized	99.16%	99.97%	100%
Standard Deviation	2.2%	0.5%	0.2%
GNU Octave Benchmark (sec)	8.857	8.851	8.946
Normalized	99.93%	100%	98.94%
Standard Deviation	1.3%	0.4%	1.5%
RawTherapee - T.B.T (sec)	90.533	91.005	90.916
Normalized	100%	99.48%	99.58%
Standard Deviation	0%	0.1%	0%
Caffe - AlexNet - CPU - 100 (ms)	57059	57084	56949

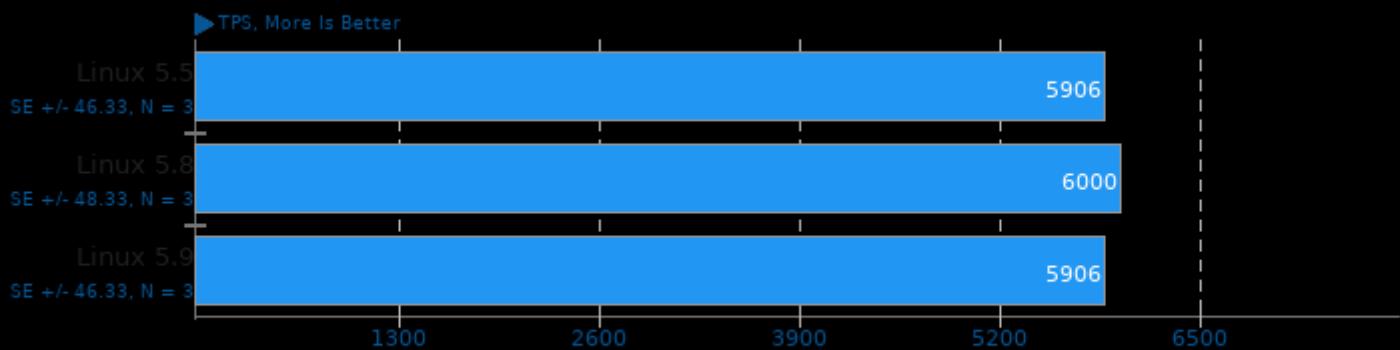
Normalized	99.81%	99.76%	100%
Standard Deviation	0.5%	0.3%	0.3%
Caffe - AlexNet - CPU - 200 (ms)	114292	114038	115045
Normalized	99.78%	100%	99.12%
Standard Deviation	0.5%	0.4%	0.7%
Caffe - GoogleNet - CPU - 100 (ms)	134039	134543	134327
Normalized	100%	99.63%	99.79%
Standard Deviation	0.1%	0.1%	0.3%
Caffe - GoogleNet - CPU - 200 (ms)	268283	269547	269249
Normalized	100%	99.53%	99.64%
Standard Deviation	0.2%	0.1%	0.2%
GPAW - Carbon Nanotube (sec)	712.537	833.146	834.861
Normalized	100%	85.52%	85.35%
Standard Deviation	0.5%	0.5%	1%
NCNN - CPU - squeezenet (ms)	28.23	28.29	27.27
Normalized	96.6%	96.39%	100%
Standard Deviation	2.9%	1.7%	2.1%
NCNN - CPU - mobilenet (ms)	31.94	31.69	31.53
Normalized	98.72%	99.5%	100%
Standard Deviation	1.4%	1.2%	0.7%
NCNN - CPU-v2-v2 - mobilenet-v2 (ms)	9.00	8.47	8.40
Normalized	93.33%	99.17%	100%
Standard Deviation	2.8%	0.9%	0.5%
NCNN - CPU-v3-v3 - mobilenet-v3 (ms)	7.29	7.09	7.11
Normalized	97.26%	100%	99.72%
Standard Deviation	1.3%	0.4%	1.2%
NCNN - CPU - shufflenet-v2 (ms)	4.80	4.77	4.78
Normalized	99.38%	100%	99.79%
Standard Deviation	0.7%	0.4%	0.3%
NCNN - CPU - mnasnet (ms)	7.04	6.75	6.81
Normalized	95.88%	100%	99.12%
Standard Deviation	1.9%	1.3%	1.9%
NCNN - CPU - efficientnet-b0 (ms)	11.75	11.29	11.41
Normalized	96.09%	100%	98.95%
Standard Deviation	1.1%	1.2%	0.5%
NCNN - CPU - blazeface (ms)	1.94	1.88	1.93
Normalized	96.91%	100%	97.41%
Standard Deviation	2.8%	0.3%	3.5%
NCNN - CPU - googlenet (ms)	25.02	24.44	24.14
Normalized	96.48%	98.77%	100%
Standard Deviation	0.7%	0.3%	0.6%
NCNN - CPU - vgg16 (ms)	112.61	112.10	112.08
Normalized	99.53%	99.98%	100%
Standard Deviation	0.7%	0.8%	0.9%
NCNN - CPU - resnet18 (ms)	25.78	26.36	25.49
Normalized	98.88%	96.7%	100%
Standard Deviation	0.9%	1.6%	0.2%
NCNN - CPU - alexnet (ms)	24.32	25.29	24.35
Normalized	100%	96.16%	99.88%
Standard Deviation	0.2%	0.7%	1.1%
NCNN - CPU - resnet50 (ms)	52.66	51.72	52.11
Normalized	98.21%	100%	99.25%
Standard Deviation	0.6%	1.1%	1.7%
NCNN - CPU - yolov4-tiny (ms)	46.58	45.5	44.75
Normalized	96.07%	98.35%	100%

	Standard Deviation	1.5%	2.1%	1.3%
TNN - CPU - MobileNet v2 (ms)	264.923	266.529	264.087	
	Normalized	99.68%	99.08%	100%
	Standard Deviation	0.2%	0.8%	0.1%
TNN - CPU - SqueezeNet v1.1 (ms)	250.742	250.232	250.699	
	Normalized	99.8%	100%	99.81%
	Standard Deviation	0.1%	0.1%	0.1%
PyPerformance - go (Milliseconds)	235	235	235	
	Standard Deviation	0.2%		
PyPerformance - 2to3 (Milliseconds)	324	324	325	
	Normalized	100%	100%	99.69%
	Standard Deviation	0.2%		
PyPerformance - chaos (Milliseconds)	104	104	104	
PyPerformance - float (Milliseconds)	114	114	113	
	Normalized	99.12%	99.12%	100%
PyPerformance - nbody (Milliseconds)	112	112	112	
PyPerformance - pathlib (Milliseconds)	20.1	19.5	19.5	
	Normalized	97.01%	100%	100%
	Standard Deviation	0.3%	0.3%	0%
PyPerformance - raytrace (Milliseconds)	461	461	461	
	Standard Deviation	0.2%		
PyPerformance - json.loads (Milliseconds)	21.9	21.9	22.0	
	Normalized	100%	100%	99.55%
	Standard Deviation	0.3%	0.5%	0.3%
PyPerformance - crypto_pyaes	98.8	98.9	98.9	
	Normalized	100%	99.9%	99.9%
	Standard Deviation	0.1%	0%	0.1%
PyPerformance - regex_compile	178	179	178	
	Normalized	100%	99.44%	100%
	Standard Deviation	0.2%		0.6%
PyPerformance - python_startup	7.86	7.96	8.43	
	Normalized	100%	98.74%	93.24%
	Standard Deviation	0.2%	0.1%	0.2%
PyPerformance - django_template (Milliseconds)	54.6	55.1	54.7	
	Normalized	100%	99.09%	99.82%
	Standard Deviation	0.5%	0.3%	0.1%
PyPerformance - pickle_pure_python (Milliseconds)	440	441	441	
	Normalized	100%	99.77%	99.77%
	Standard Deviation	0.3%		0.1%
Hierarchical INTegration - FLOAT (QUIPs)	402761428	403395536	402298795	
	Normalized	99.84%	100%	99.73%
	Standard Deviation	0.5%	0.1%	0.3%
Git - T.T.C.C.G.C (sec)	50.198	50.459	50.759	
	Normalized	100%	99.48%	98.89%
	Standard Deviation	0.7%	0.2%	0.6%
Milpack Benchmark - scikit_ica (sec)	55.32	55.25	55.29	
	Normalized	99.87%	100%	99.93%
	Standard Deviation	0.5%	0.4%	0.3%
Milpack Benchmark - scikit_qda (sec)	97.55	97.00	97.52	
	Normalized	99.44%	100%	99.47%
	Standard Deviation	2.9%	0.1%	0.3%
Milpack Benchmark - scikit_svm (sec)	11.67	11.67	11.68	

Mipack Benchmark - scikit_linearridge_regression (sec)	Normalized Standard Deviation	100% 0.2%	100% 0.1%	99.91% 0.1%
Tesseract OCR - T.T.O.7.I (sec)	4.61 24.057		4.52 24.614	4.55 24.593
BRL-CAD - V.P.M (VGR Performance Metric)	Normalized Standard Deviation	100% 0.2%	97.74% 1.8%	97.82% 2.1%
InfluxDB - 4 - 10000 - 2,5000,1 - 10000	48610		48451	48631
InfluxDB - 64 - 10000 - 2,5000,1 - 10000	724681 (val/sec)	Normalized Standard Deviation	99.63% 99.63% 96.11% 2.3%	100% 100% 100% 0.7%
InfluxDB - 1024 - 10000 - 2,5000,1 - 10000	846581 (val/sec)	Normalized Standard Deviation	832296 1047519	854944 1014696
		Normalized Standard Deviation	99.02% 97.35% 96.87% 1.7% 1.2%	100% 100% 98.58% 1.5% 1.5%
				1032595

PostMark 1.51

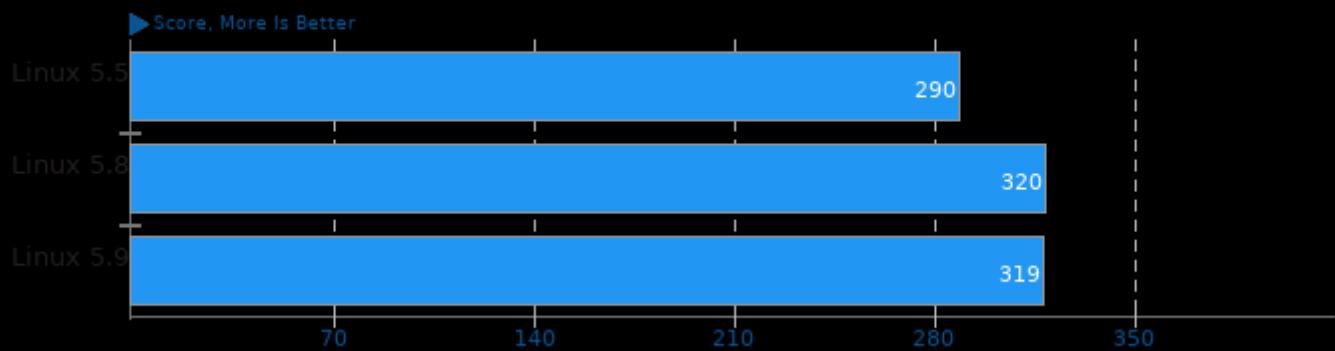
Disk Transaction Performance



1. (CC) gcc options: -O3

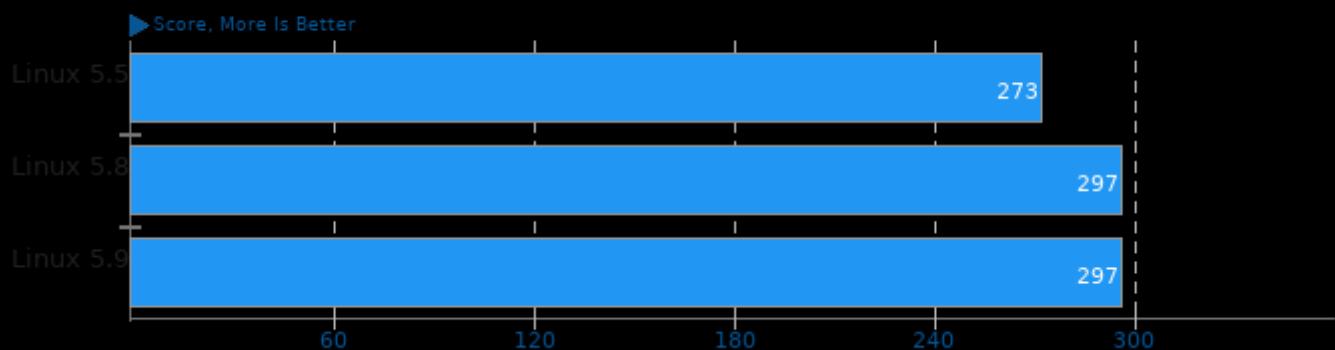
GLmark2 2020.04

Resolution: 1920 x 1080



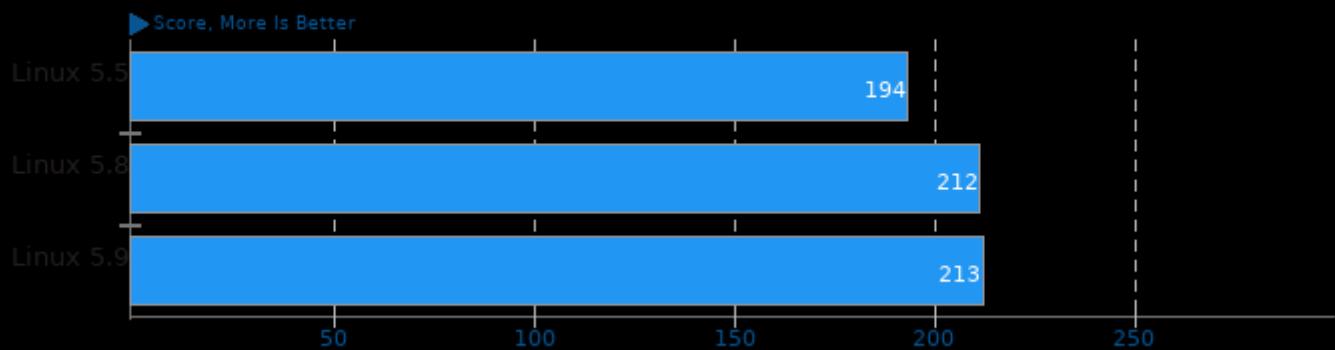
GLmark2 2020.04

Resolution: 1920 x 1200



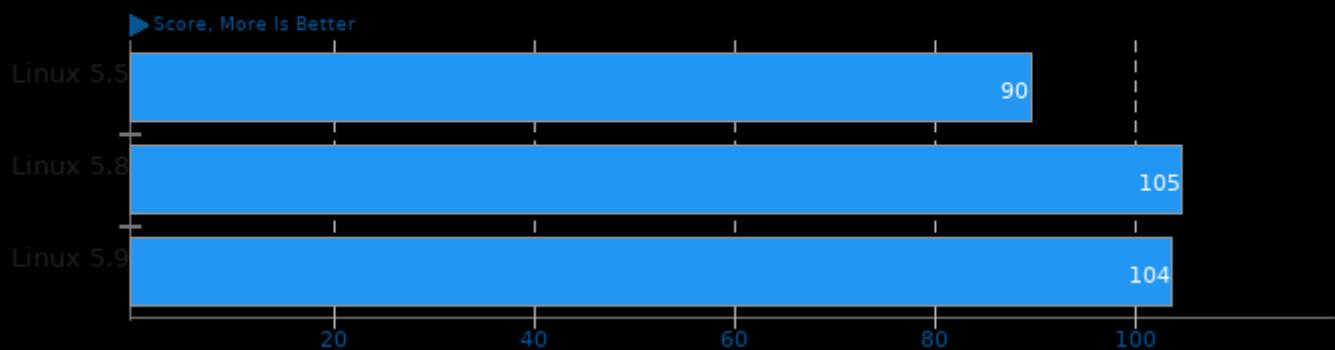
GLmark2 2020.04

Resolution: 2560 x 1440



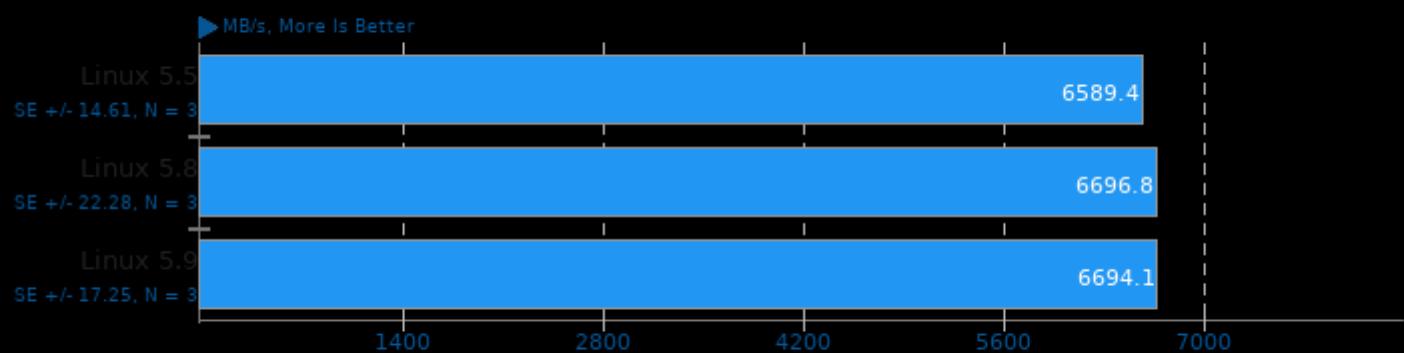
GLmark2 2020.04

Resolution: 3840 x 2160



C-Blosc 2.0 Beta 5

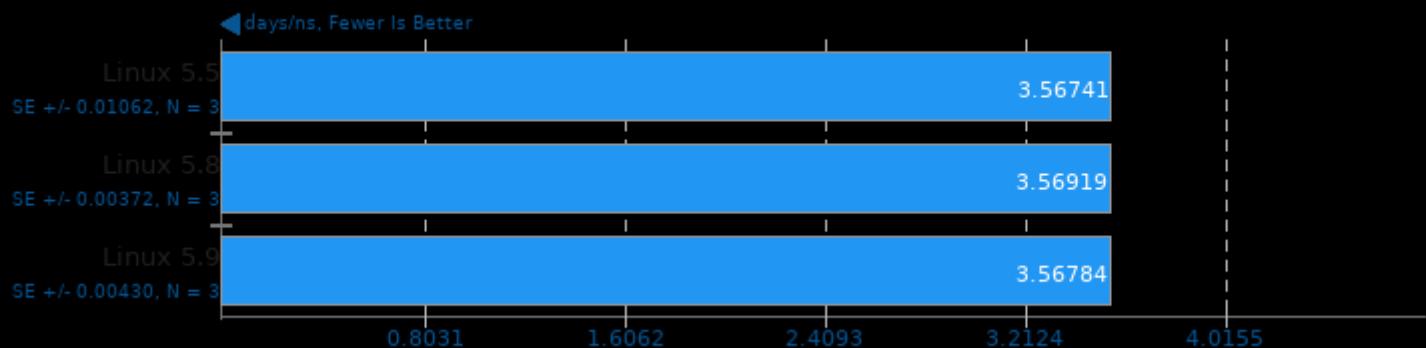
Compressor: blosclz



1. (CXX) g++ options: -rdynamic

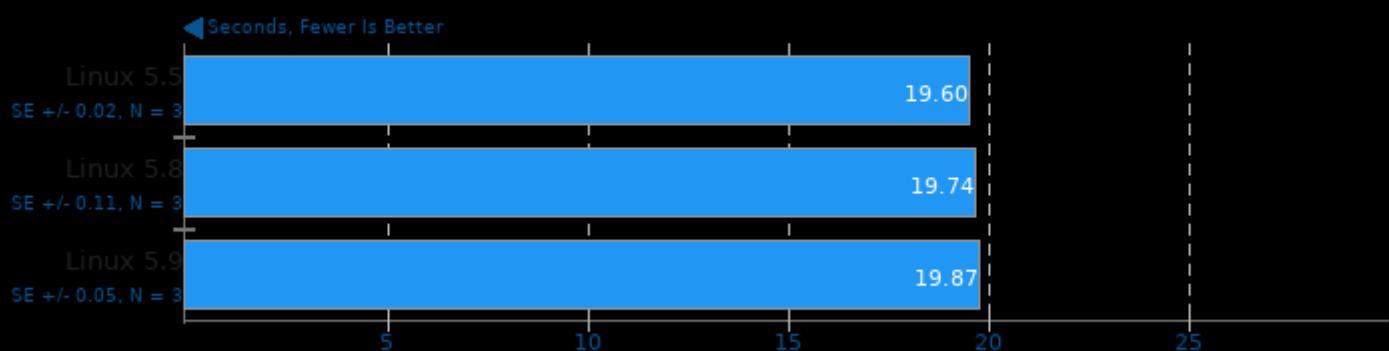
NAMD 2.14

ATPase Simulation - 327,506 Atoms

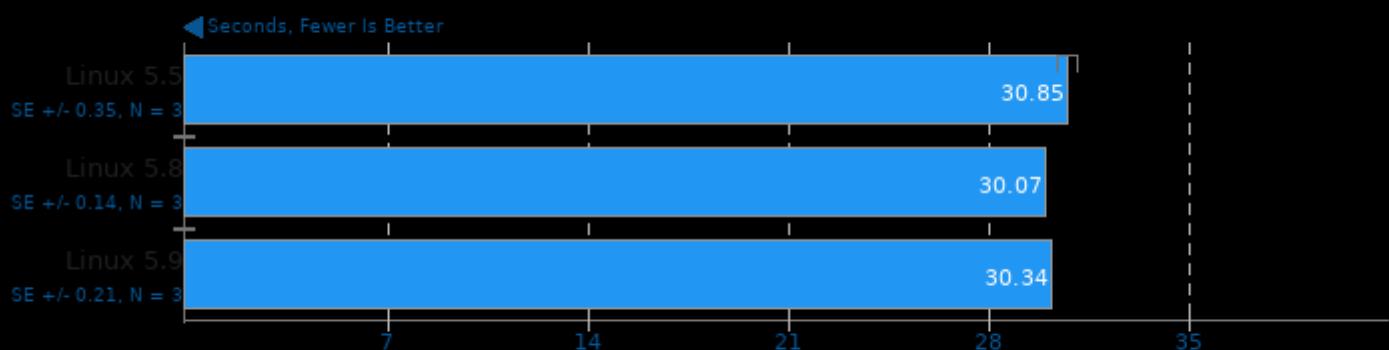


Dolfyn 0.527

Computational Fluid Dynamics



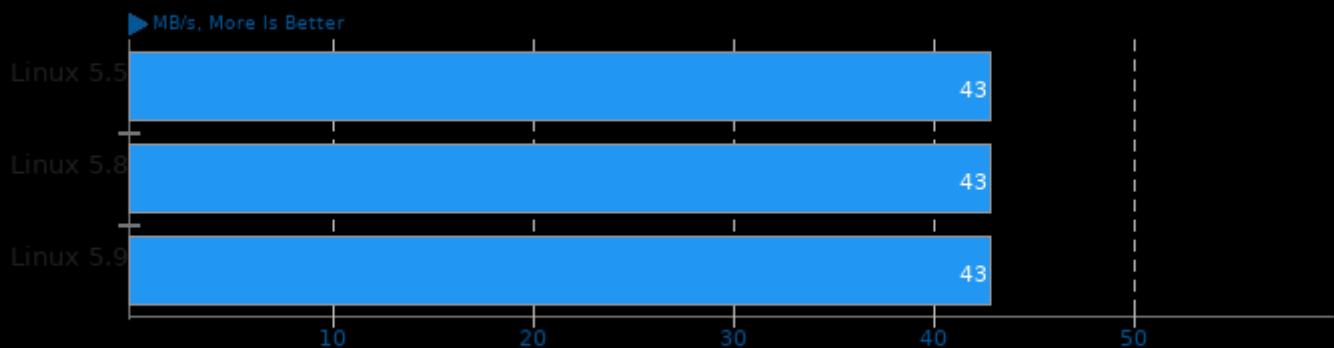
Nebular Empirical Analysis Tool 2020-02-29



1. (F9X) gfortran options: -cpp -ffree-line-length-0 -fsource/ -fopenmp -O3 -fno-backtrace

Izbench 1.8

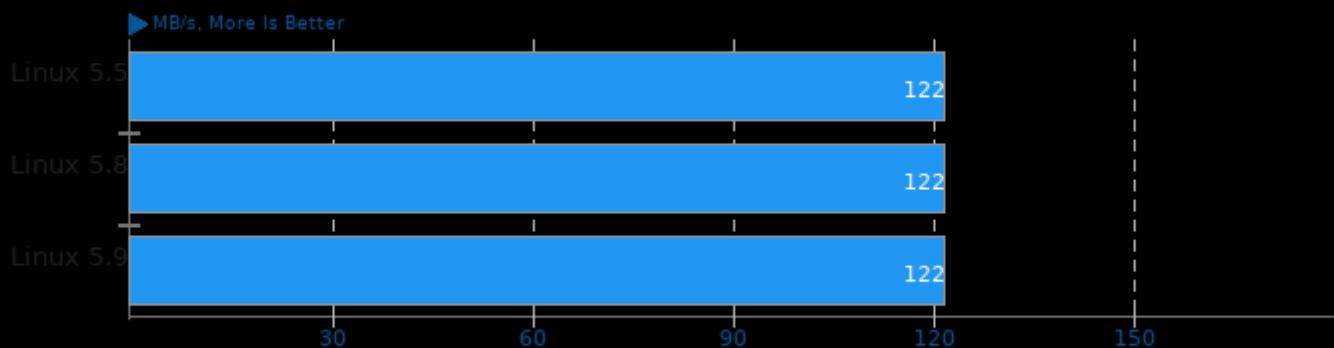
Test: XZ 0 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

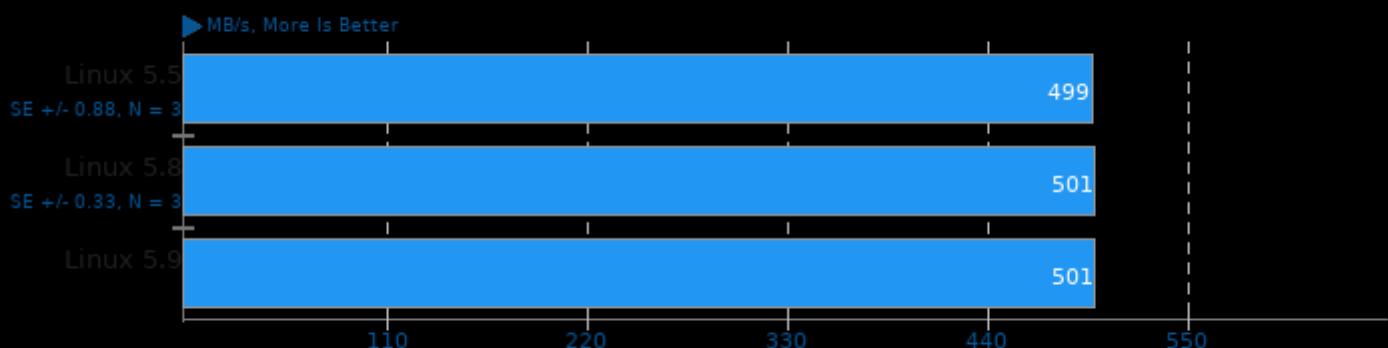
Test: XZ 0 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

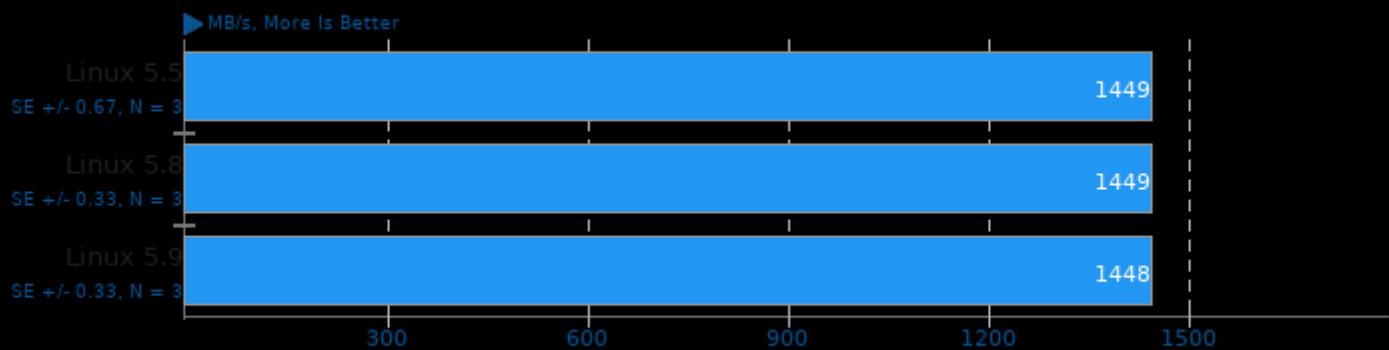
Test: Zstd 1 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

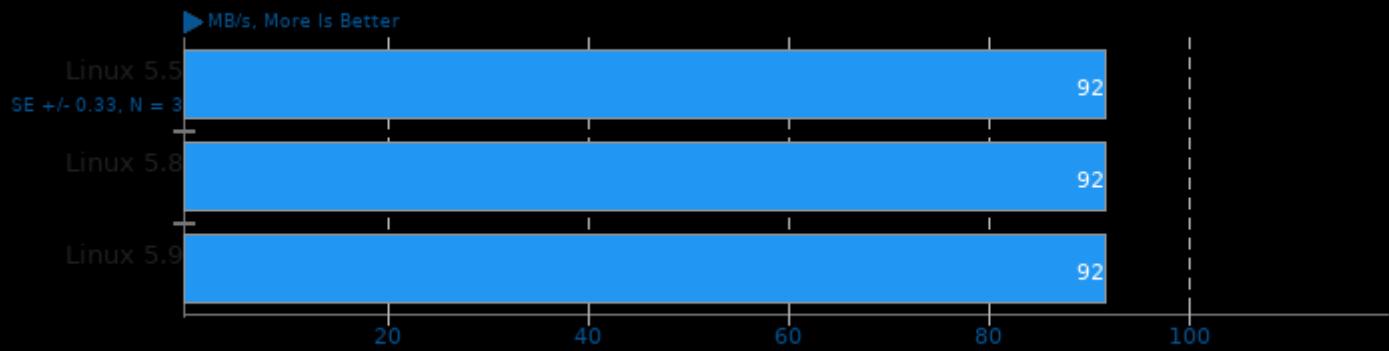
Test: Zstd 1 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

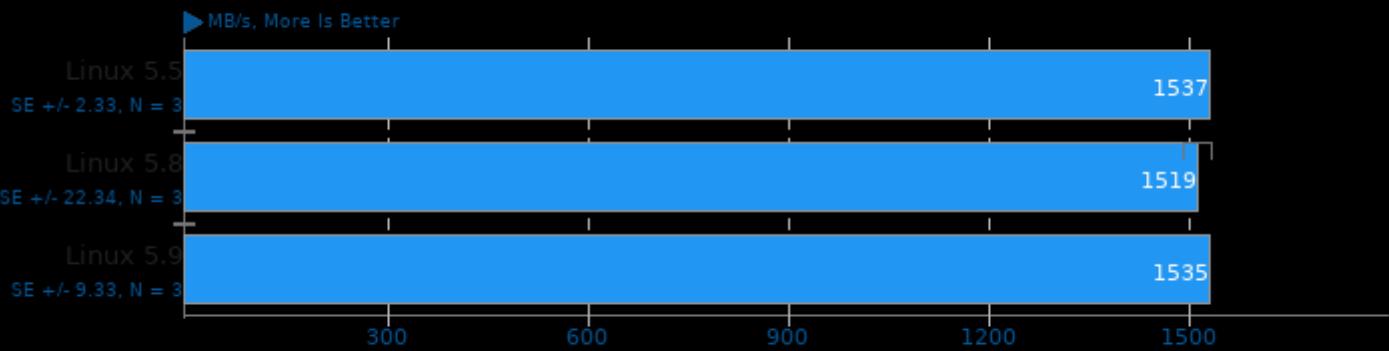
Test: Zstd 8 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

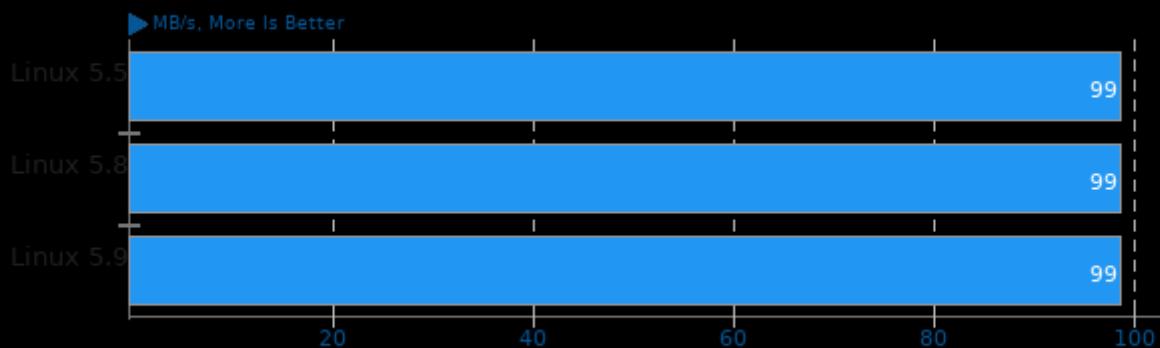
Test: Zstd 8 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

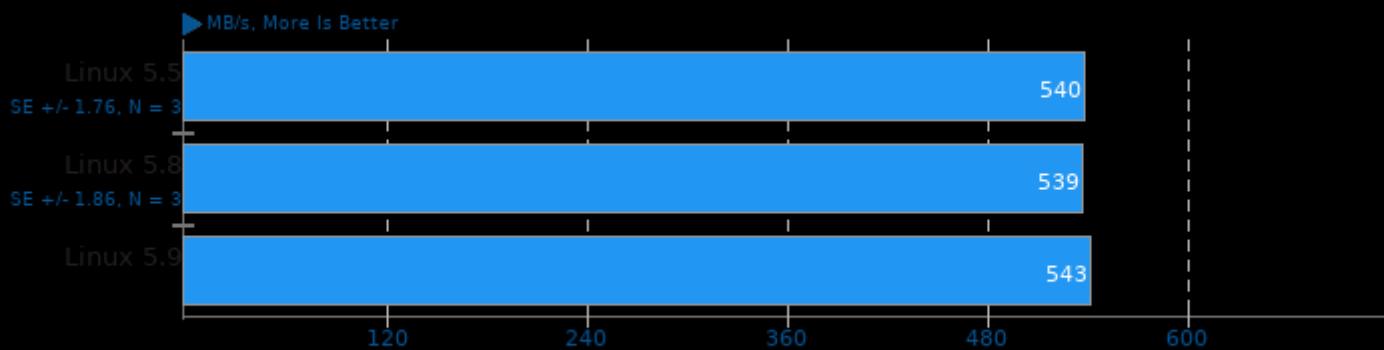
Test: Crush 0 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

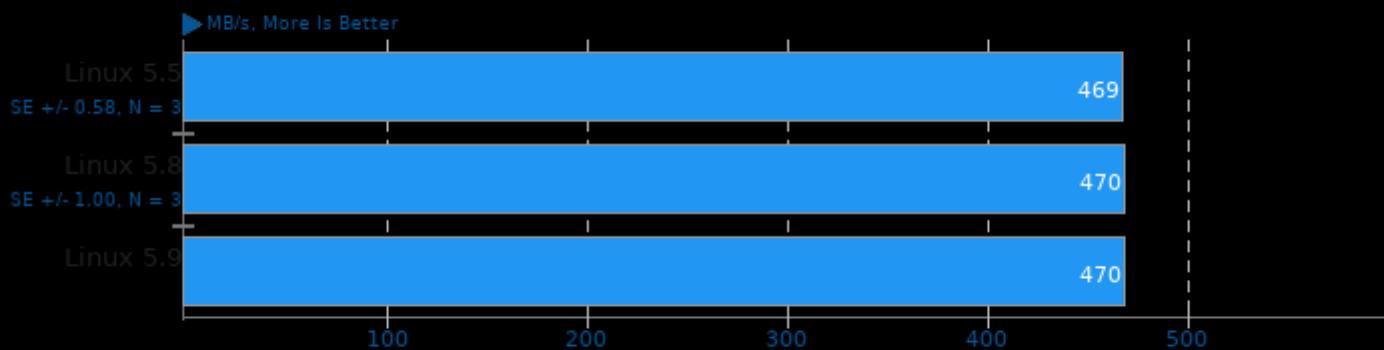
Test: Crush 0 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

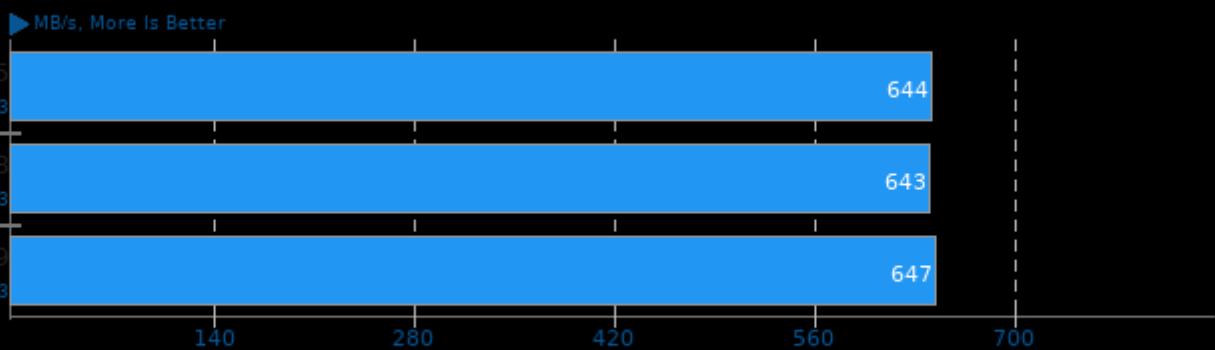
Test: Brotli 0 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

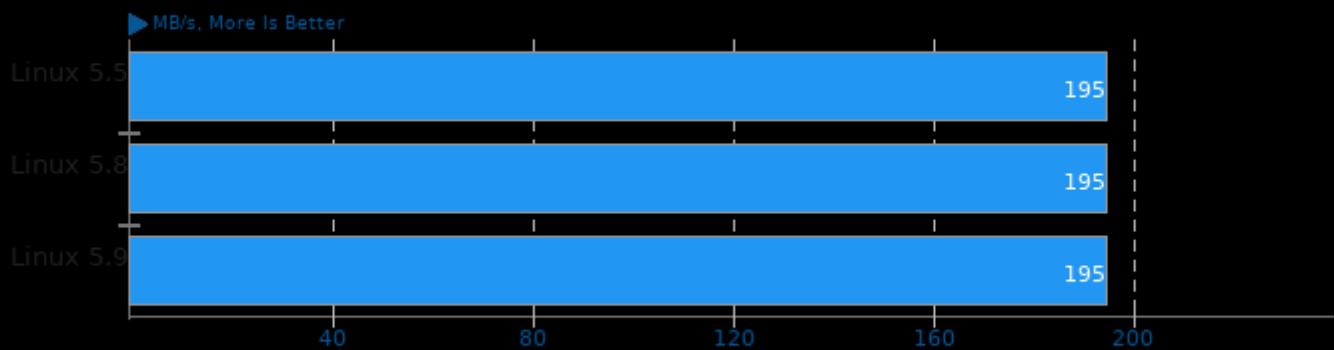
Test: Brotli 0 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

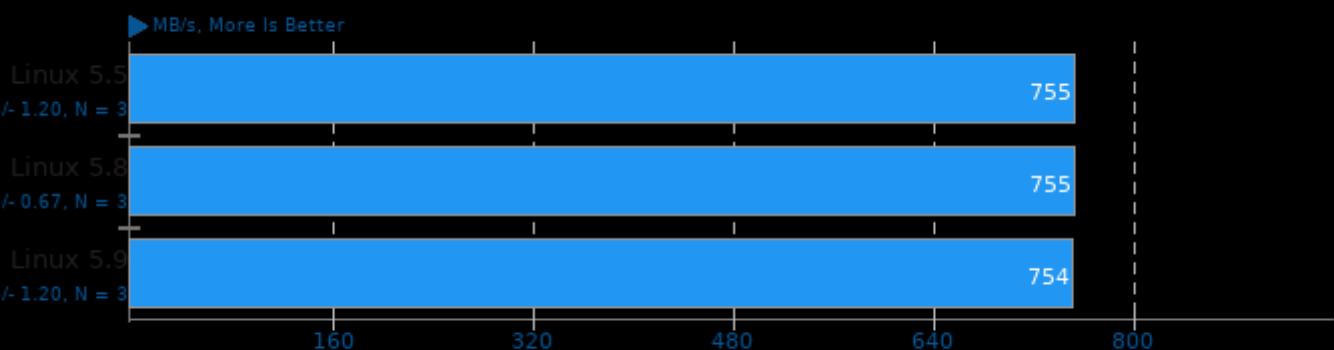
Test: Brotli 2 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

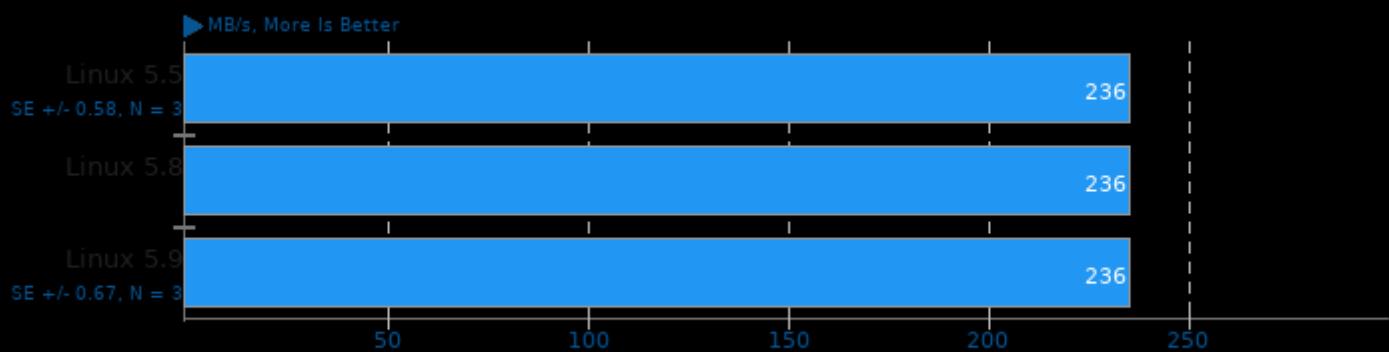
Test: Brotli 2 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

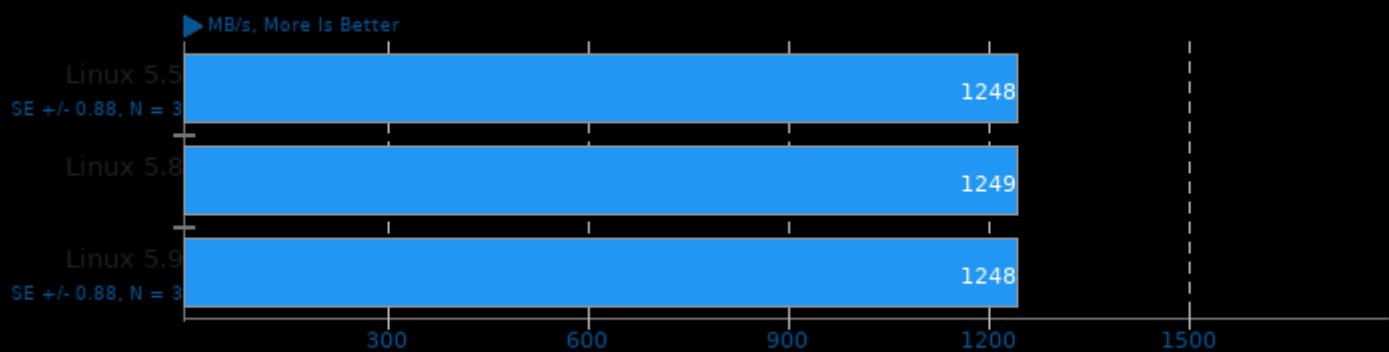
Test: Libdeflate 1 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

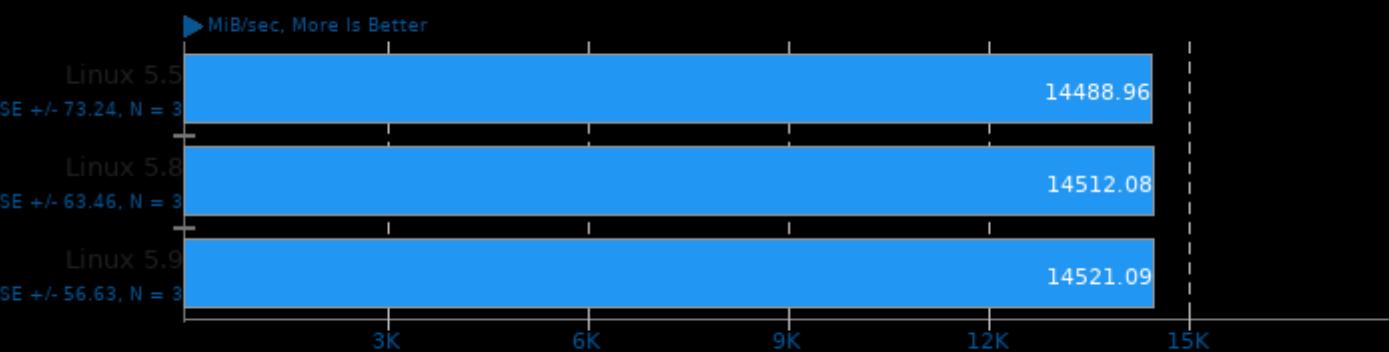
Test: Libdeflate 1 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

SMHasher 2020-02-29

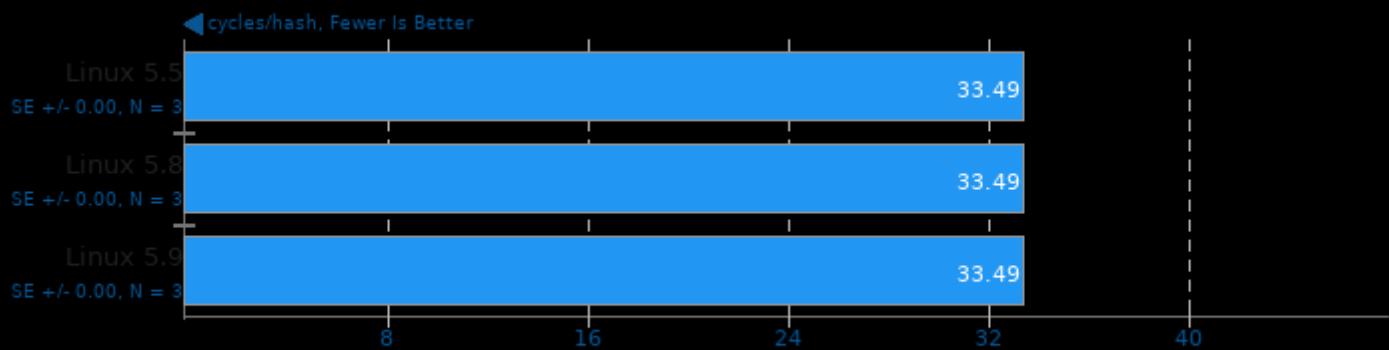
Hash: wyhash



1. (CXX) g++ options: -march=native -O3 -pthread

SMHasher 2020-02-29

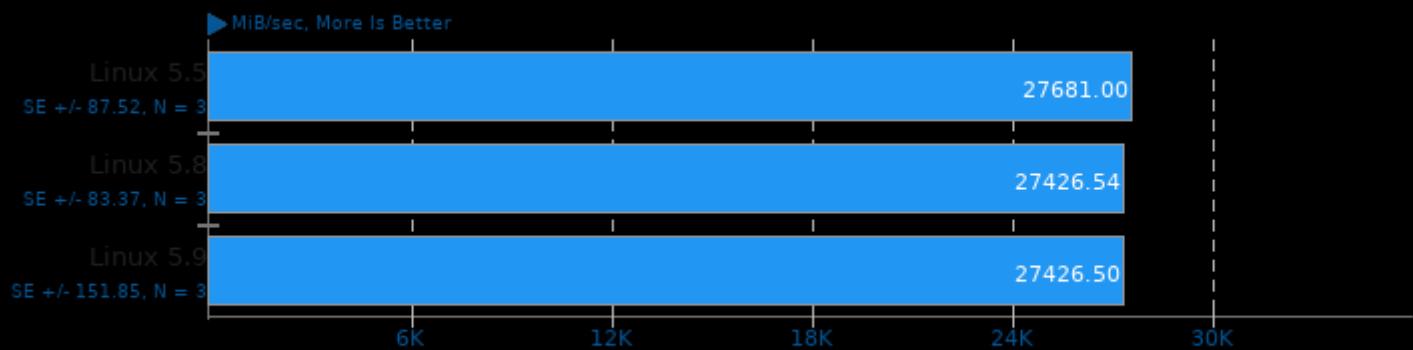
Hash: wyhash



1. (CXX) g++ options: -march=native -O3 -lpthread

SMHasher 2020-02-29

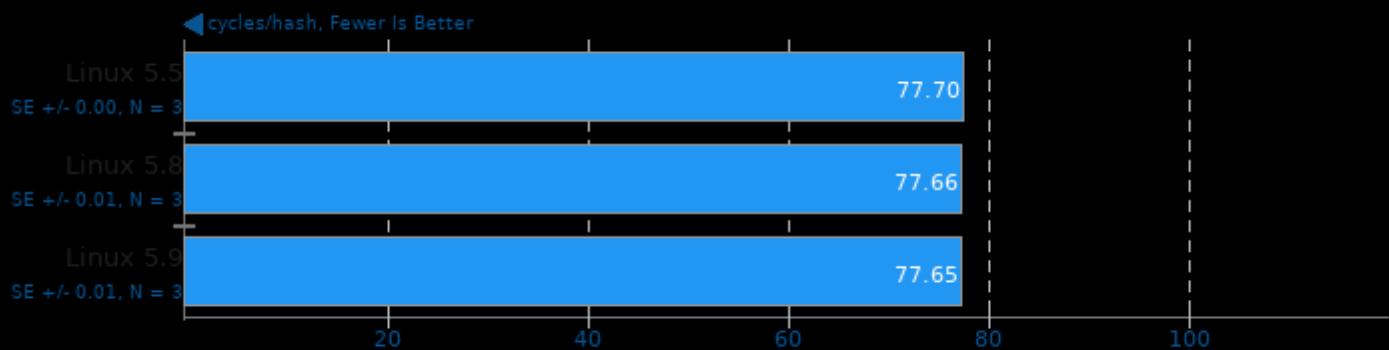
Hash: MeowHash



1. (CXX) g++ options: -march=native -O3 -lpthread

SMHasher 2020-02-29

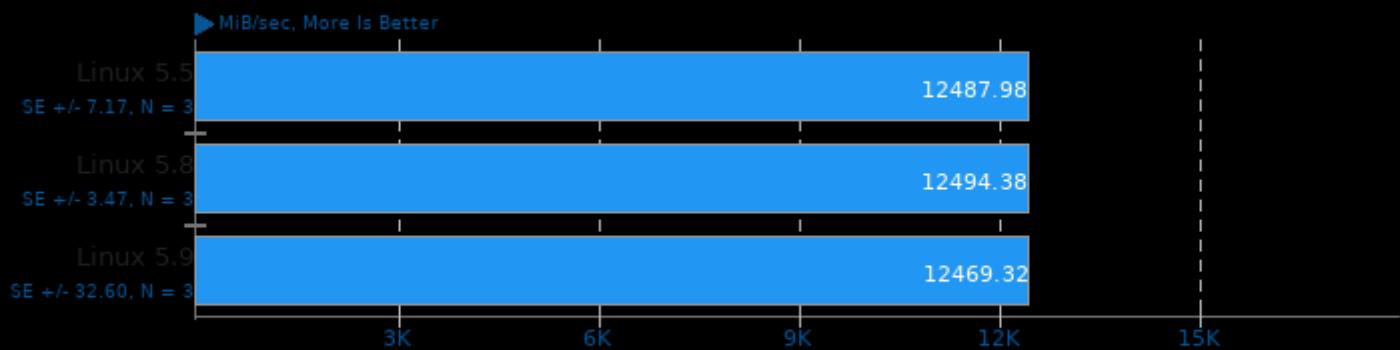
Hash: MeowHash



1. (CXX) g++ options: -march=native -O3 -lpthread

SMHasher 2020-02-29

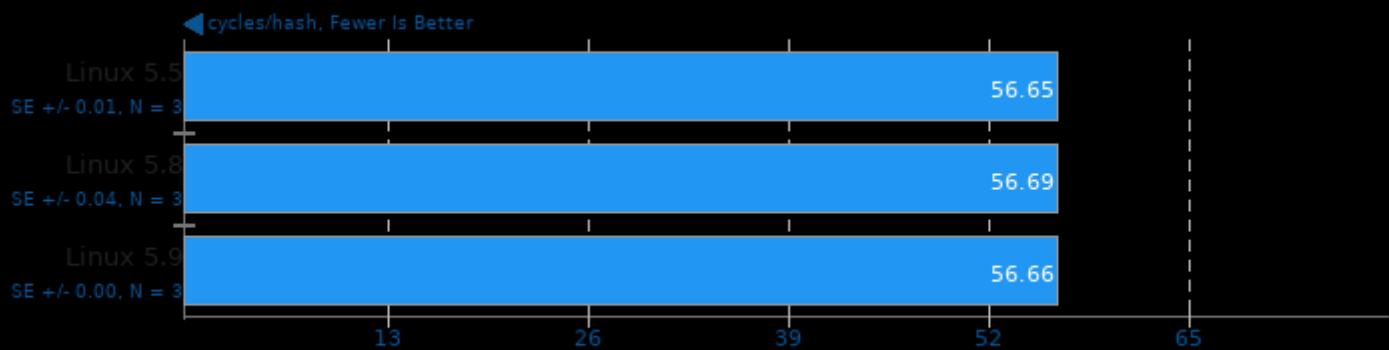
Hash: Spooky32



1. (CXX) g++ options: -march=native -O3 -lpthread

SMHasher 2020-02-29

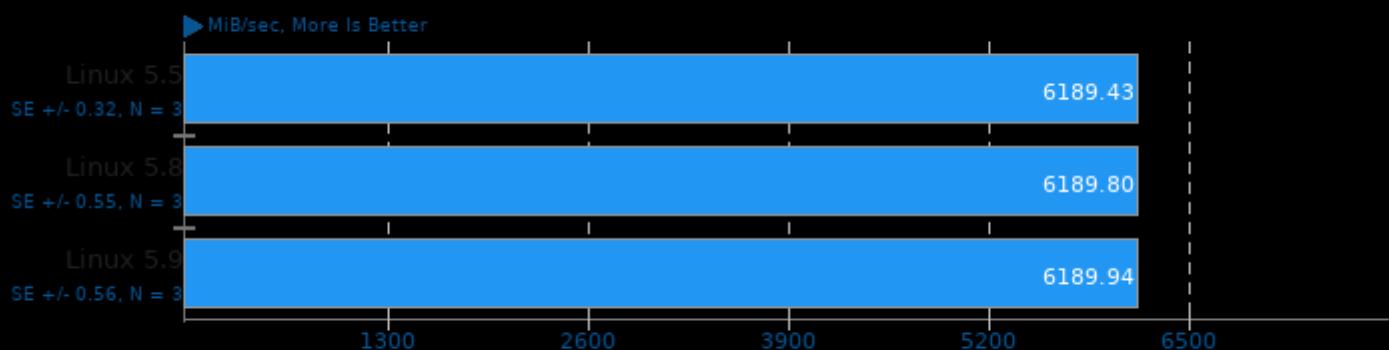
Hash: Spooky32



1. (CXX) g++ options: -march=native -O3 -lpthread

SMHasher 2020-02-29

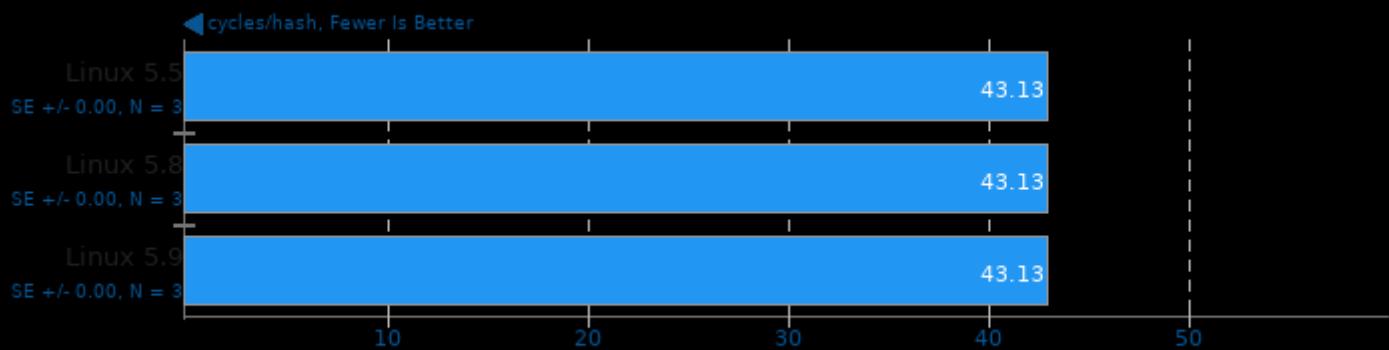
Hash: fasthash32



1. (CXX) g++ options: -march=native -O3 -lpthread

SMHasher 2020-02-29

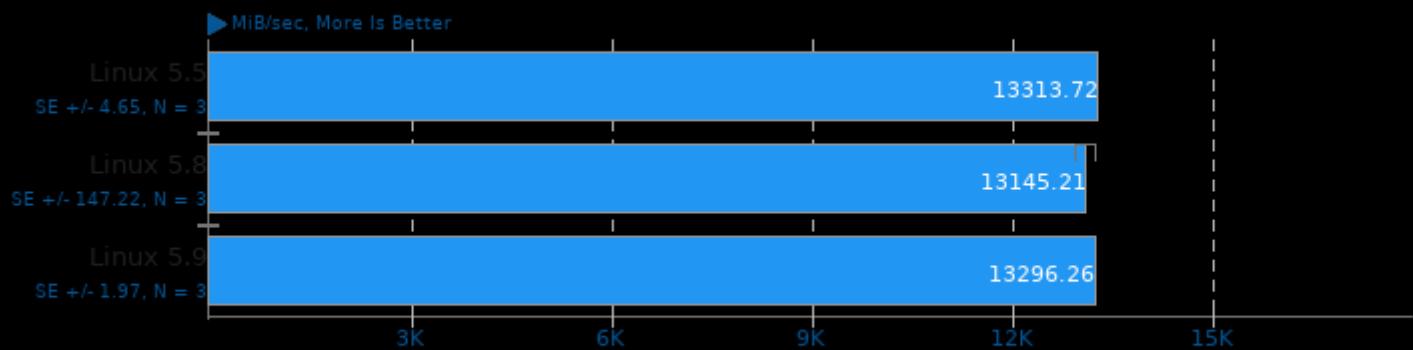
Hash: fasthash32



1. (CXX) g++ options: -march=native -O3 -lpthread

SMHasher 2020-02-29

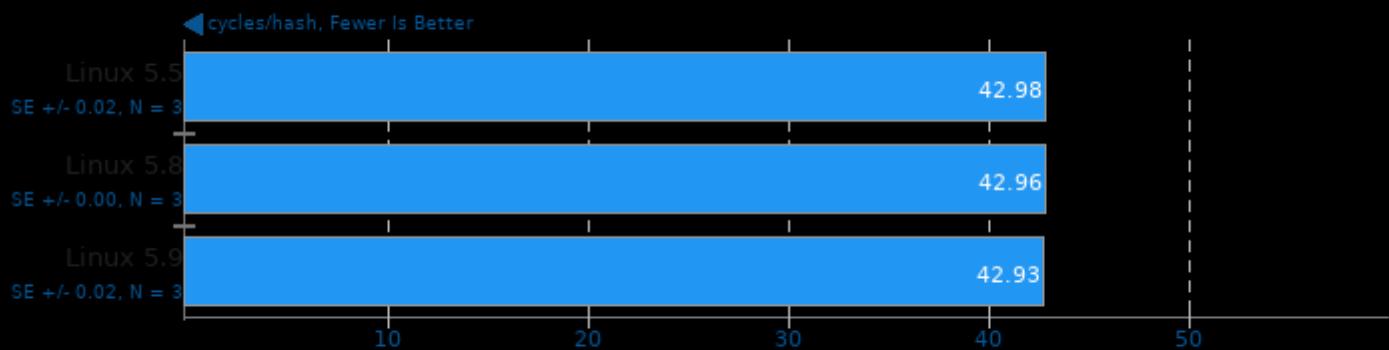
Hash: tlha2_atonce



1. (CXX) g++ options: -march=native -O3 -lpthread

SMHasher 2020-02-29

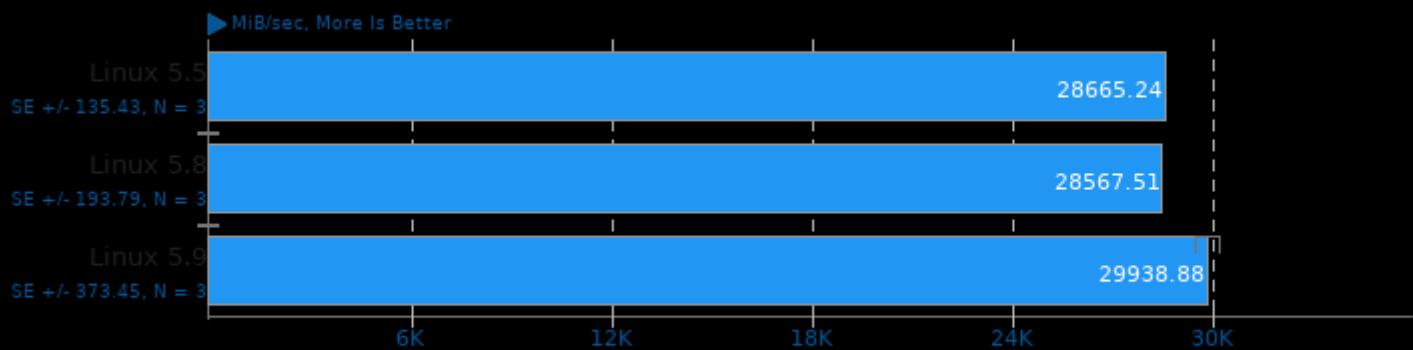
Hash: tlha2_atonce



1. (CXX) g++ options: -march=native -O3 -lpthread

SMHasher 2020-02-29

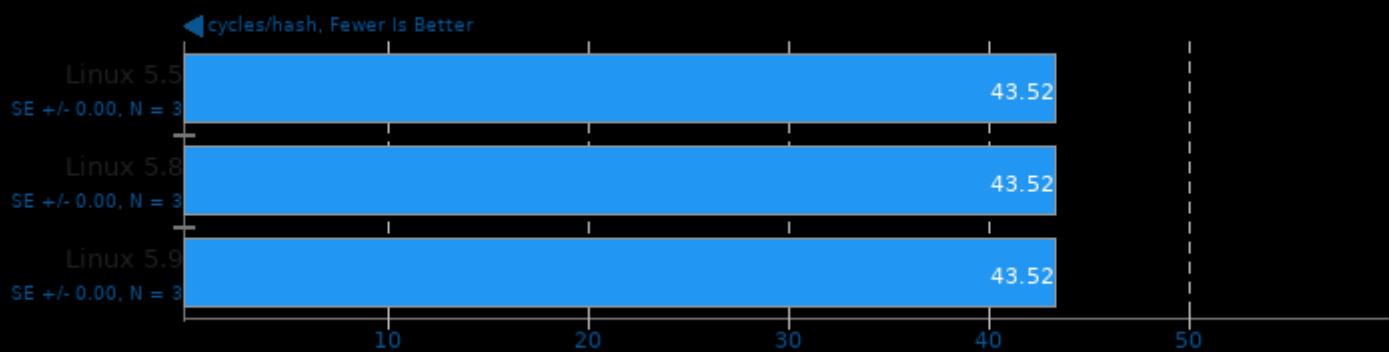
Hash: t1ha0_aes_avx2



1. (CXX) g++ options: -march=native -O3 -lpthread

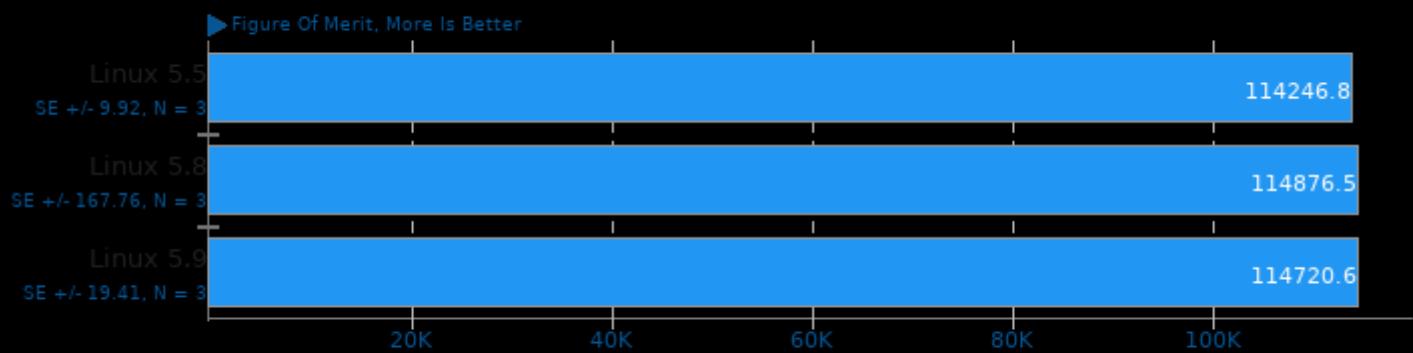
SMHasher 2020-02-29

Hash: t1ha0_aes_avx2



1. (CXX) g++ options: -march=native -O3 -lpthread

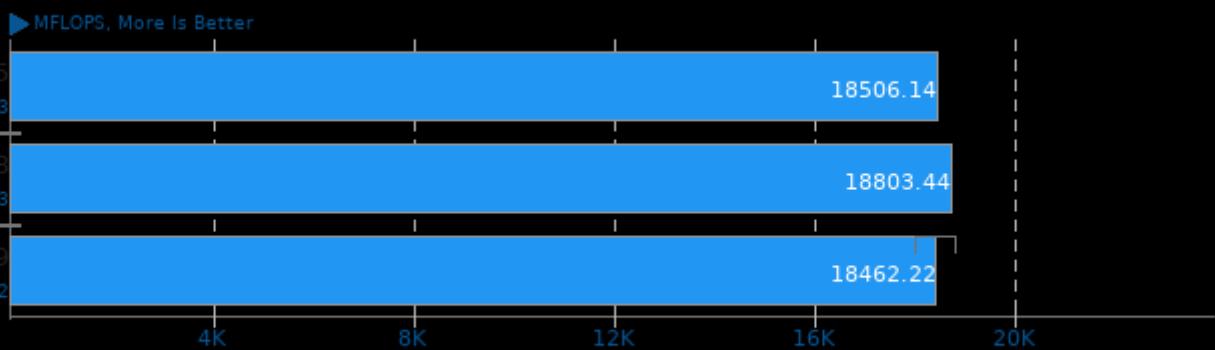
Algebraic Multi-Grid Benchmark



1. (CC) gcc options: -fparcsr_ls -fparcsr_mv -fseq_mv -fij_mv -fkrylov -fHYPRE_utilities -fopenmp -pthread -fmpi

FFTE 7.0

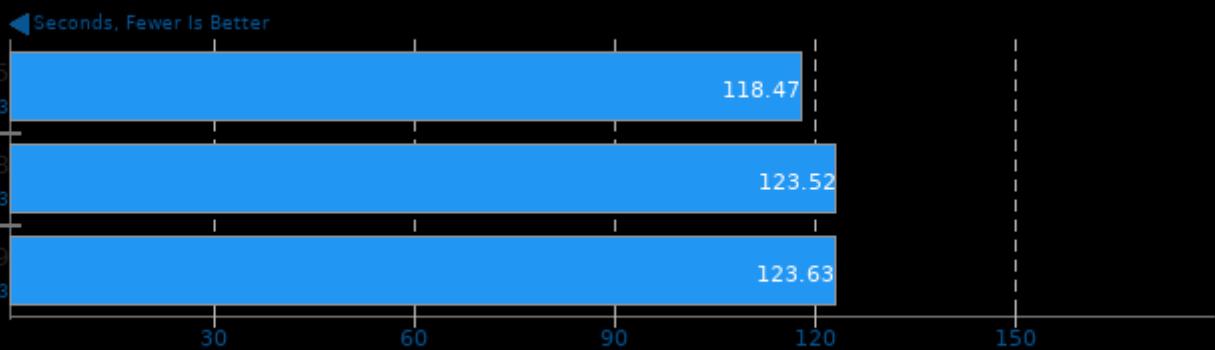
N=256, 3D Complex FFT Routine



1. (F9X) gfortran options: -O3 -fomit-frame-pointer -fopenmp

Timed HMMer Search 3.3.1

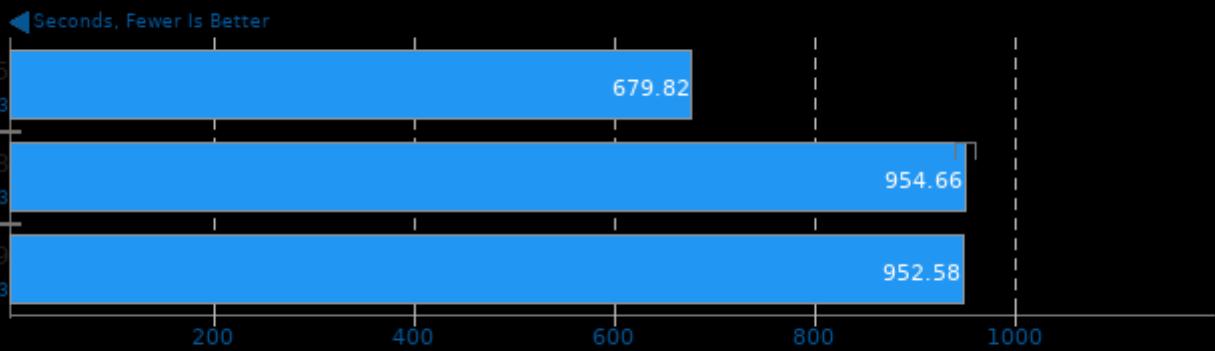
Pfam Database Search



1. (CC) gcc options: -O3 -pthread -lhmmer -leasel -lm

Incompact3D 2020-09-17

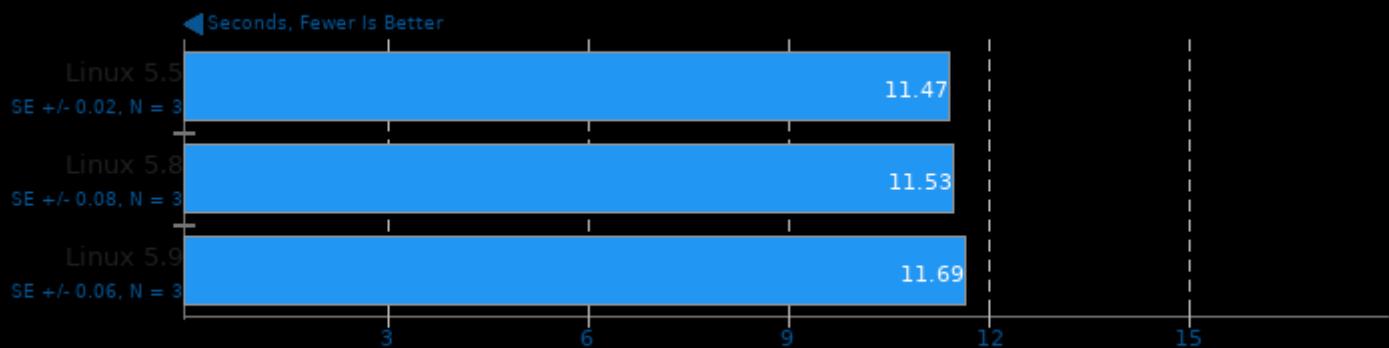
Input: Cylinder



1. (F9X) gfortran options: -cpp -funroll-loops -floop-optimize -fcray-pointer -fbacktrace -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

Timed MAFFT Alignment 7.471

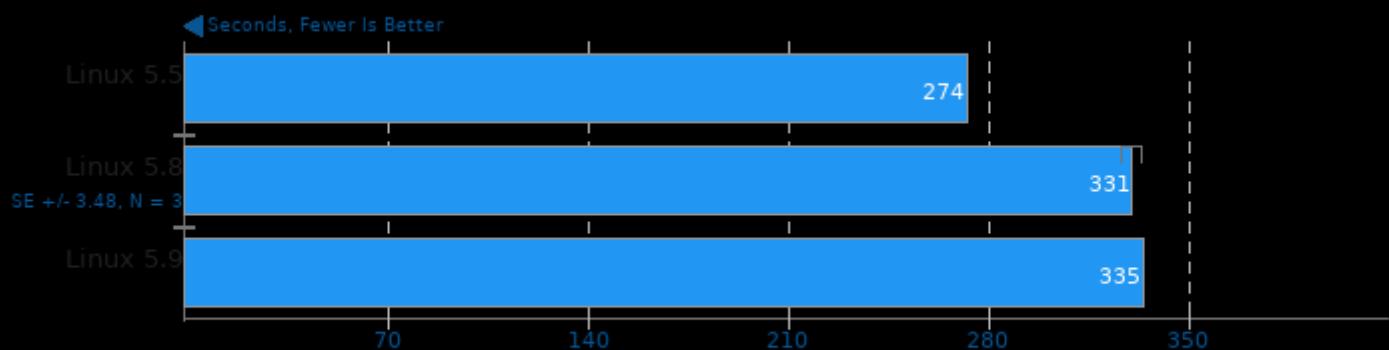
Multiple Sequence Alignment - LSU RNA



1. (CC) gcc options: -std=c99 -O3 -lm -lpthread

Monte Carlo Simulations of Ionised Nebulae 2019-03-24

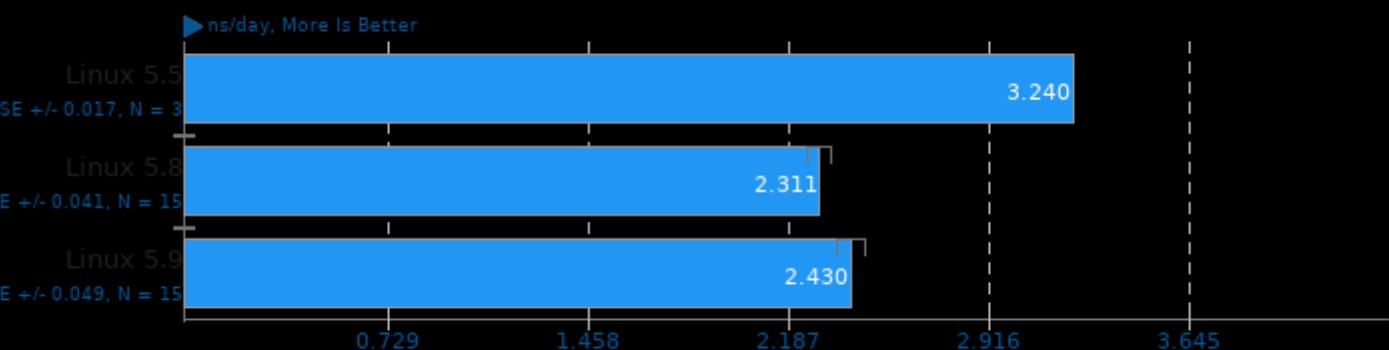
Input: Dust 2D tau100.0



1. (F9X) gfortran options: -cpp -jsource/ -ffree-line-length-0 -lm -std=legacy -O3 -O2 -pthread -lmpif08 -lmpif08 -lmpifh -lmpi

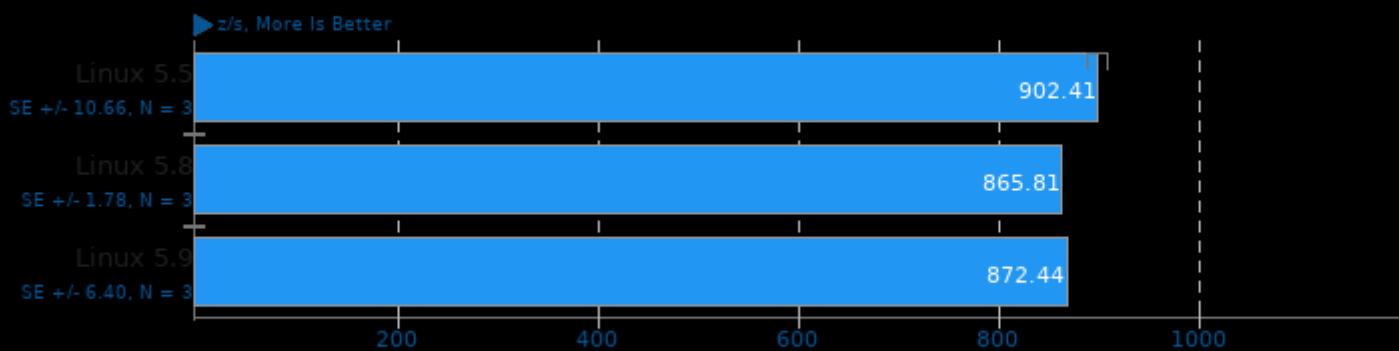
LAMMPS Molecular Dynamics Simulator 24Aug2020

Model: Rhodopsin Protein



1. (CXX) g++ options: -O3 -pthread -lm

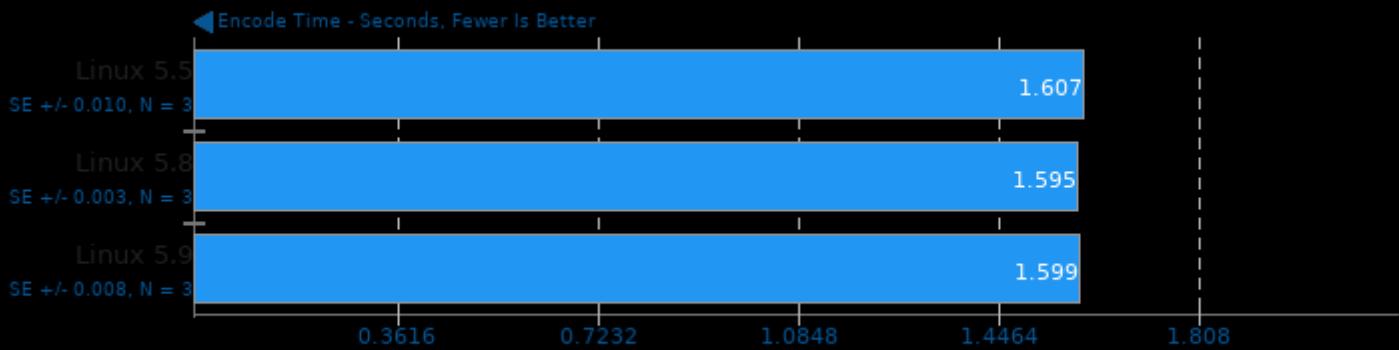
LULESH 2.0.3



1. (CXX) g++ options: -O3 -fopenmp -lm -pthread -lmpi_cxx -lmpi

WebP Image Encode 1.1

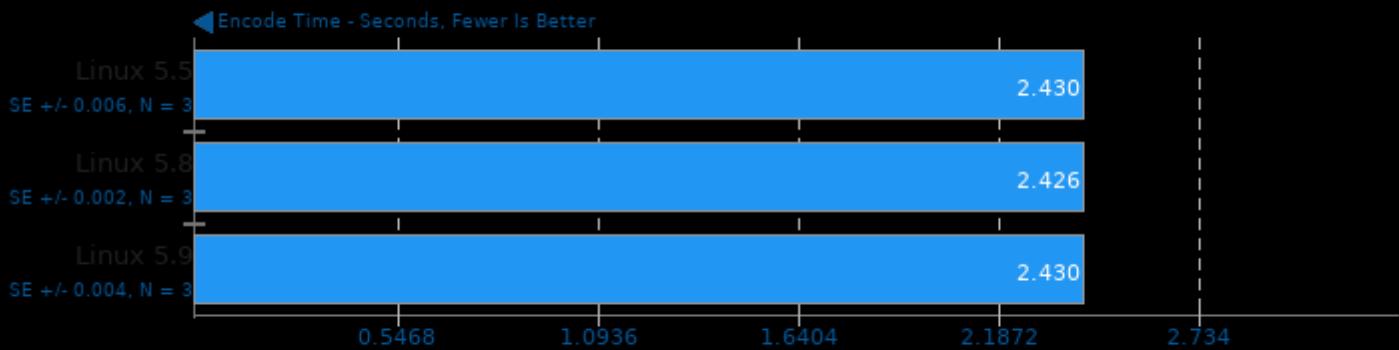
Encode Settings: Default



1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

WebP Image Encode 1.1

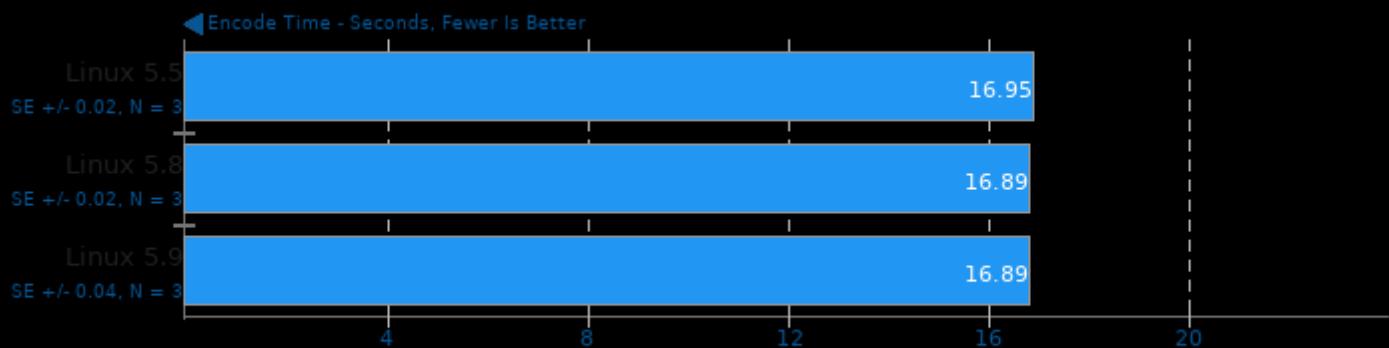
Encode Settings: Quality 100



1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

WebP Image Encode 1.1

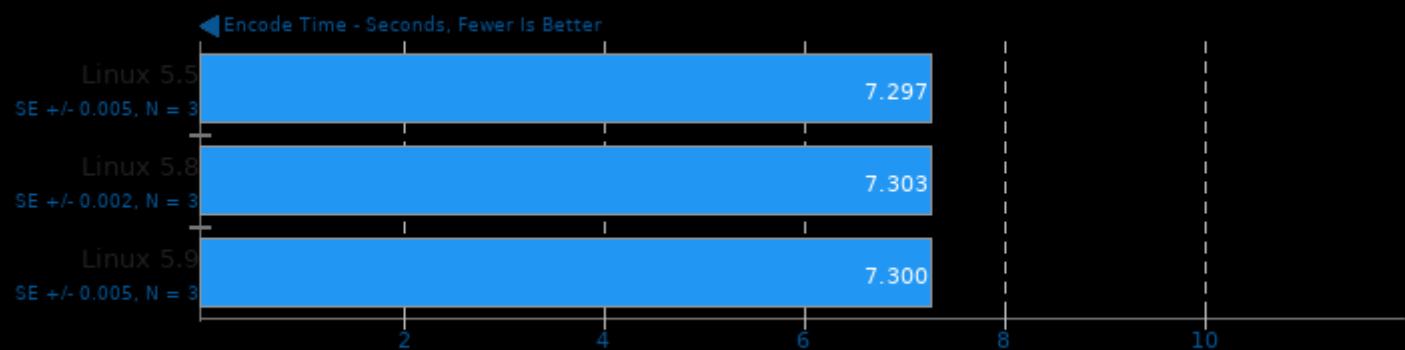
Encode Settings: Quality 100, Lossless



1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

WebP Image Encode 1.1

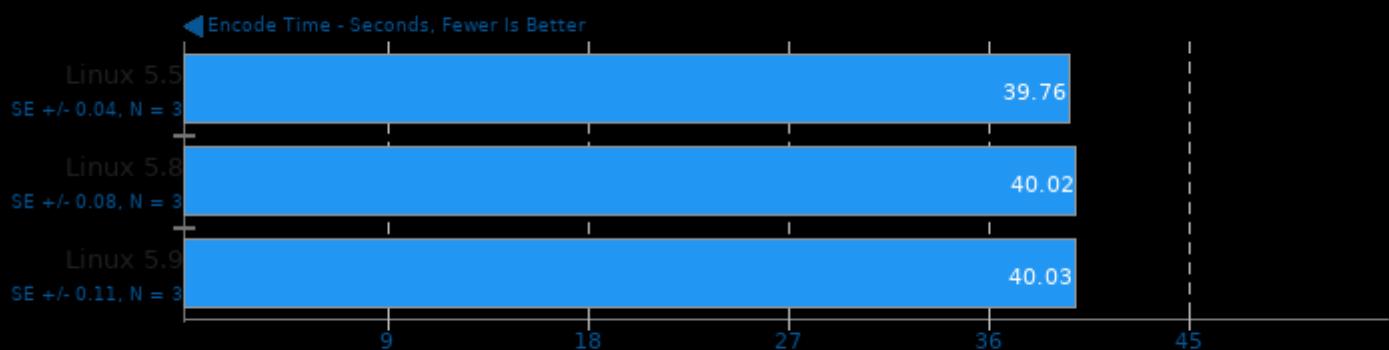
Encode Settings: Quality 100, Highest Compression



1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

WebP Image Encode 1.1

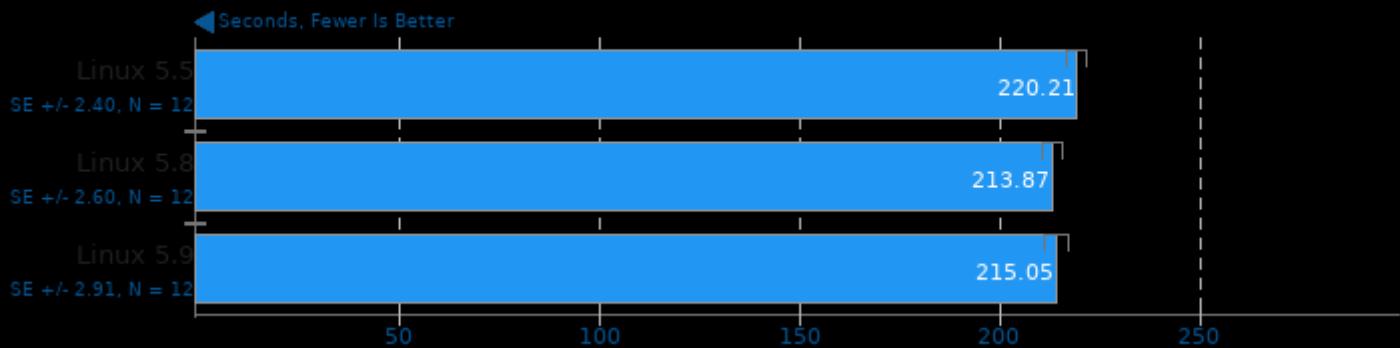
Encode Settings: Quality 100, Lossless, Highest Compression



1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

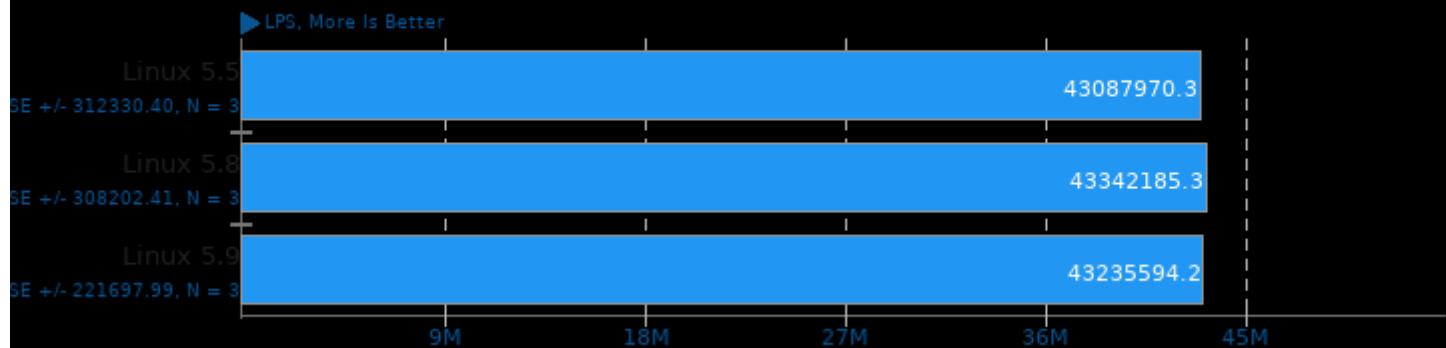
Java Gradle Build

Gradle Build: Reactor



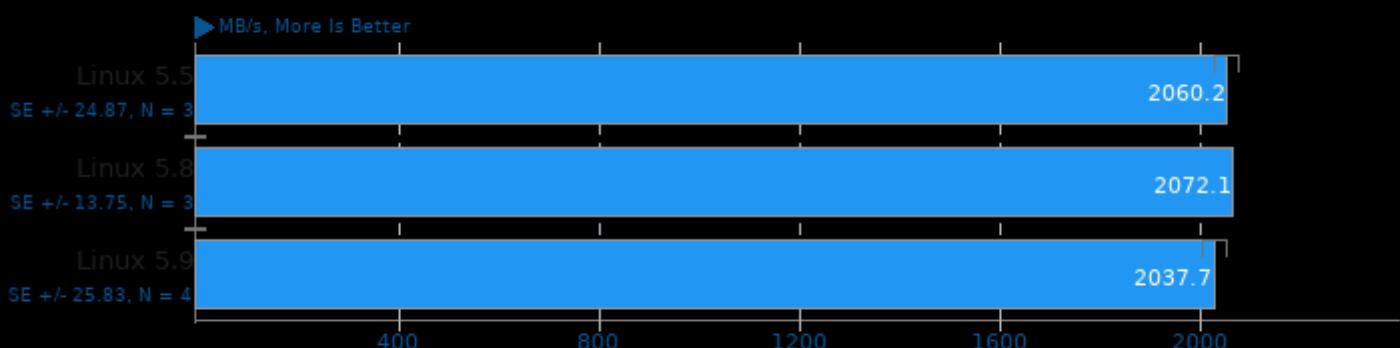
BYTE Unix Benchmark 3.6

Computational Test: Dhrystone 2



Zstd Compression 1.4.5

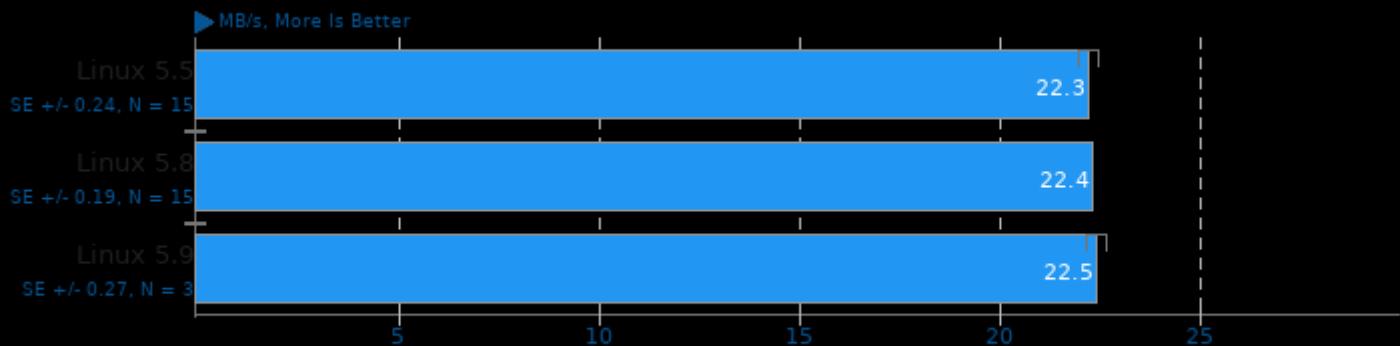
Compression Level: 3



1. (CC) gcc options: -O3 -pthread -lz -lzma

Zstd Compression 1.4.5

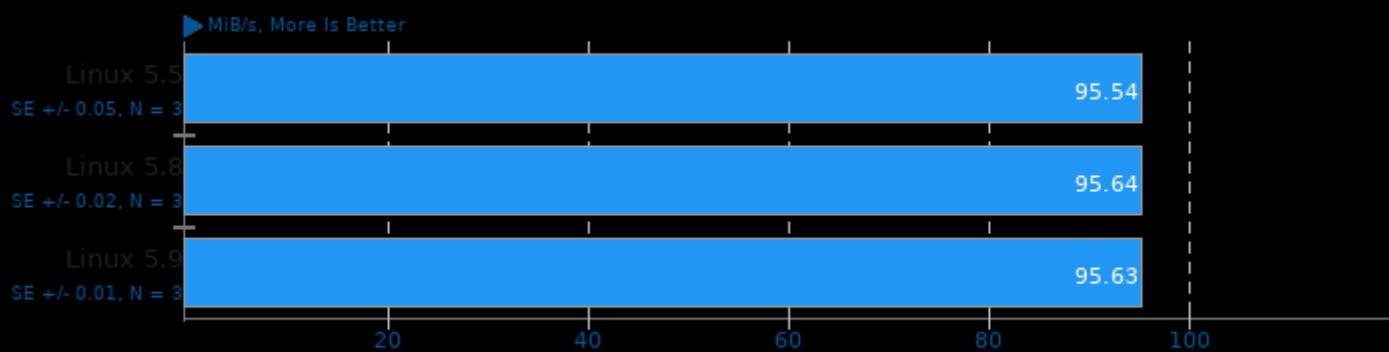
Compression Level: 19



1. (CC) gcc options: -O3 -pthread -lz -lzma

Botan 2.13.0

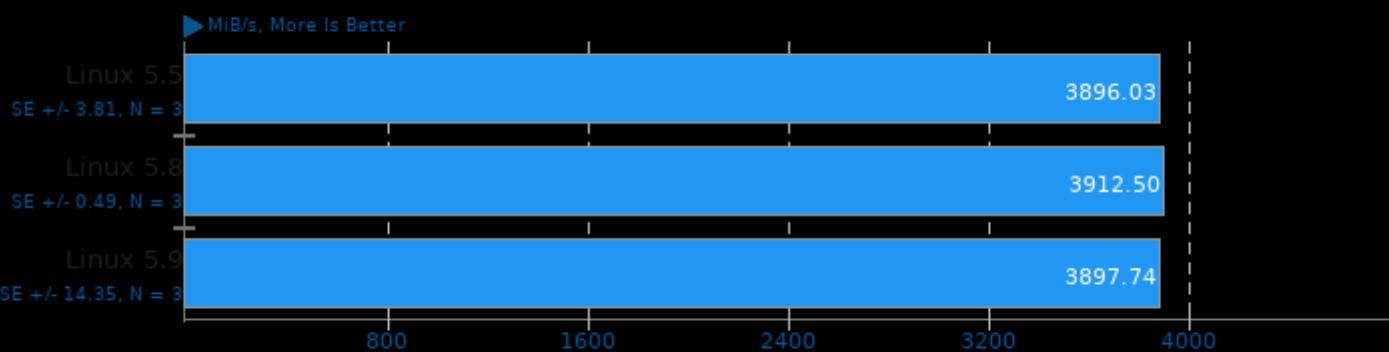
Test: KASUMI



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.13.0

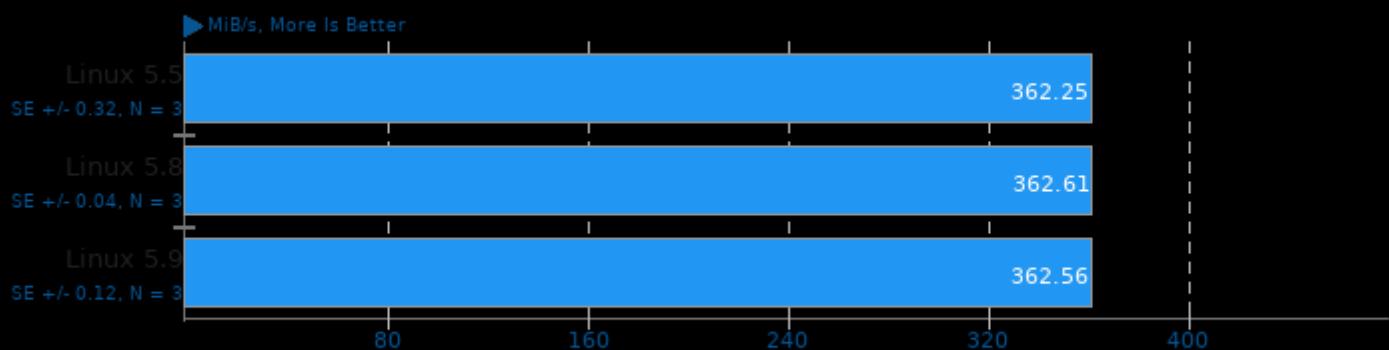
Test: AES-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.13.0

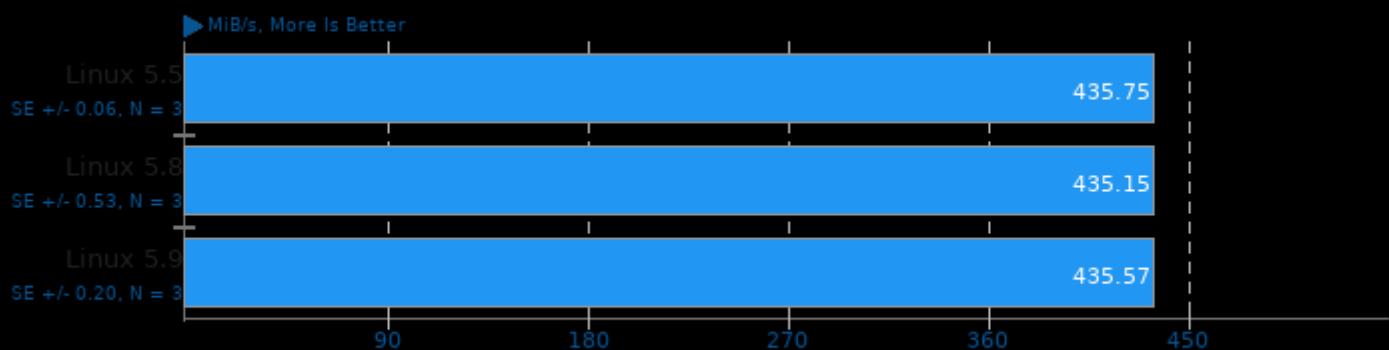
Test: Twofish



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.13.0

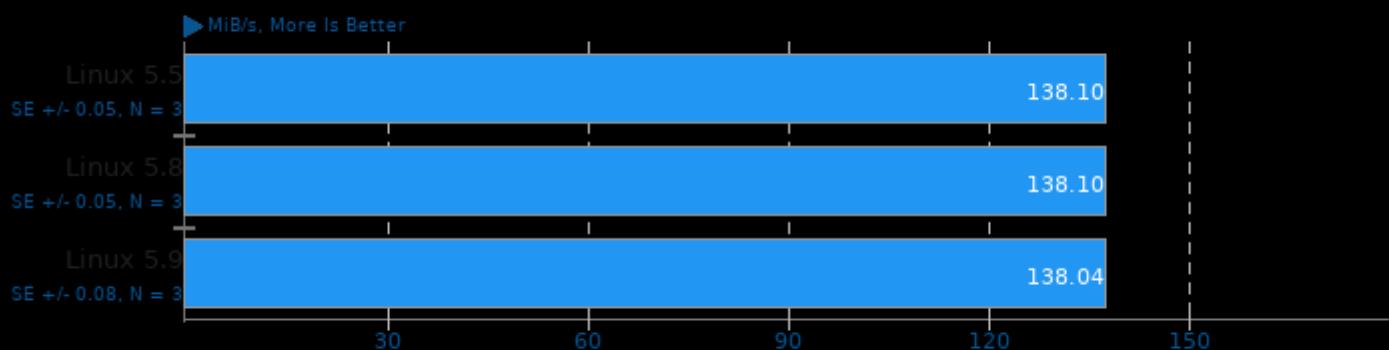
Test: Blowfish



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.13.0

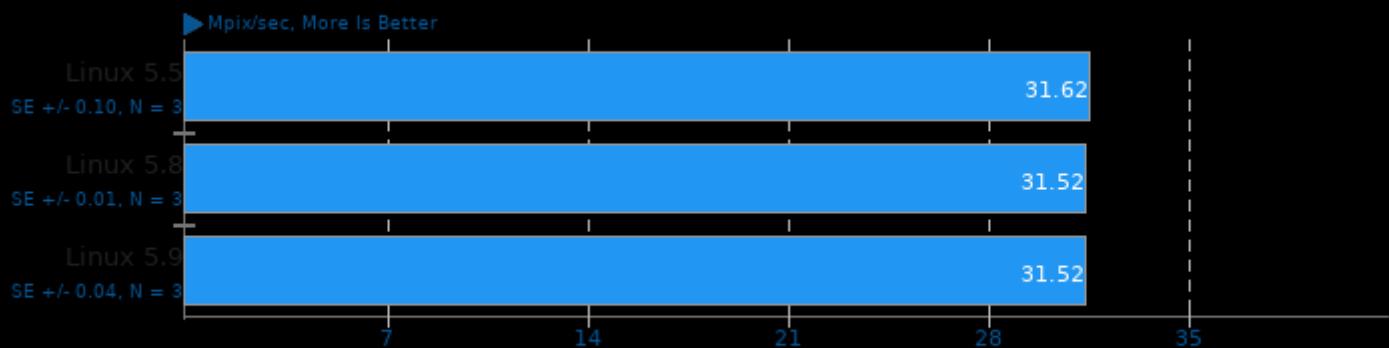
Test: CAST-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

LibRaw 0.20

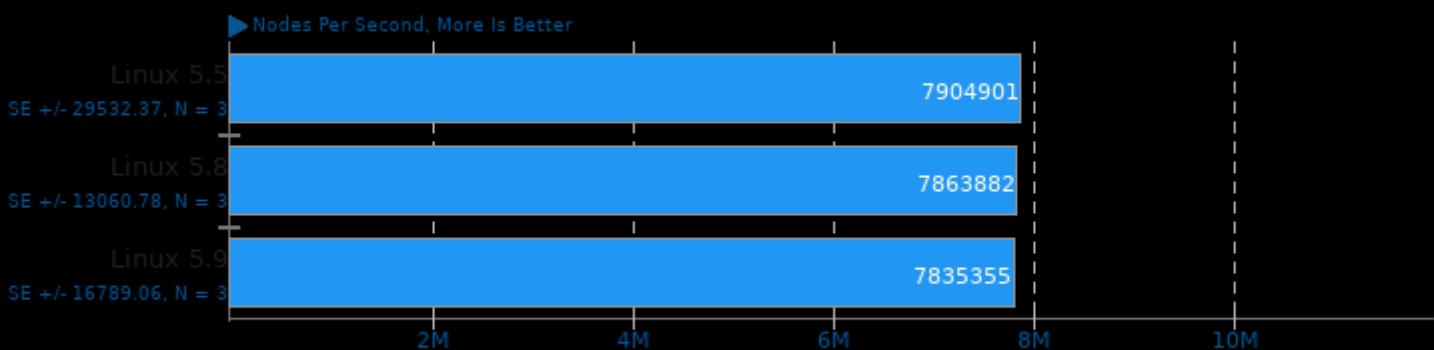
Post-Processing Benchmark



1. (CXX) g++ options: -O2 -fopenmp -ljpeg -lz -lm

Crafty 25.2

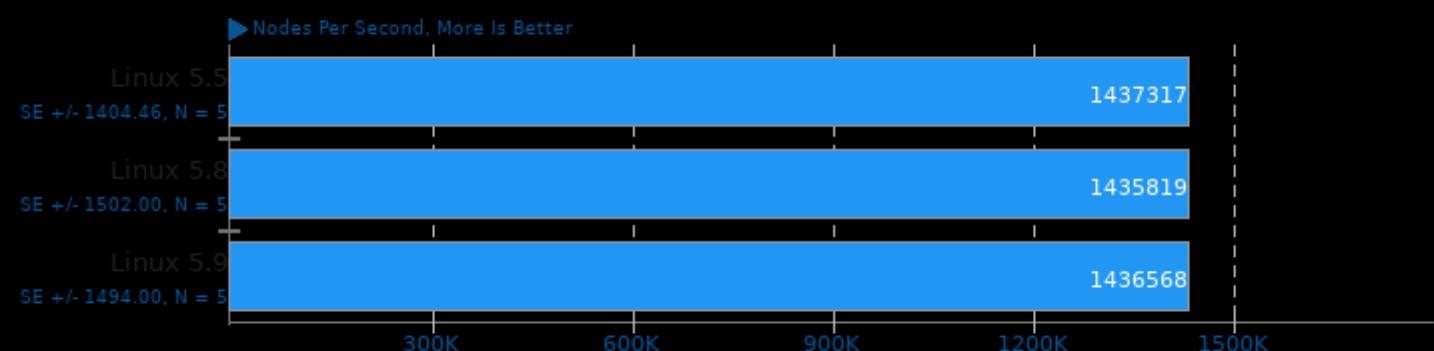
Elapsed Time



1. (CC) gcc options: -pthread -lstdc++ -fprofile-use -lm

TSCP 1.81

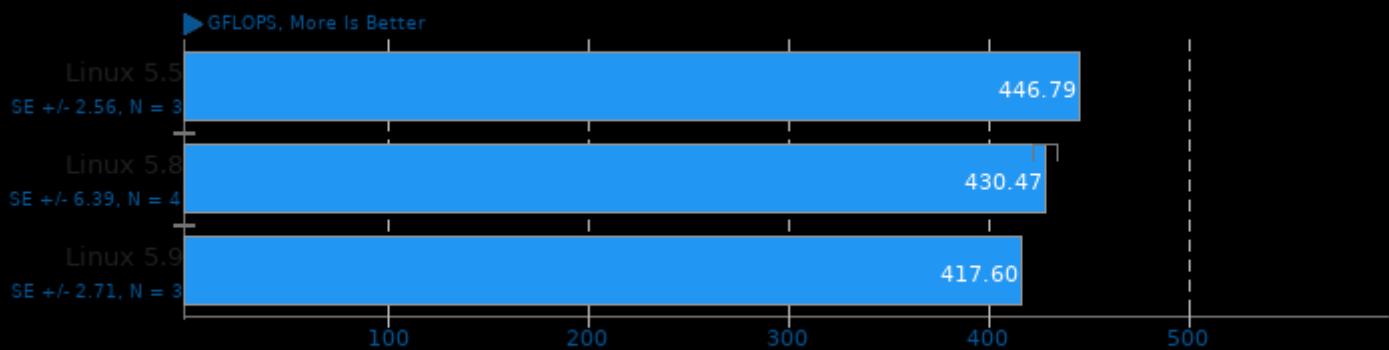
AI Chess Performance



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

ArrayFire 3.7

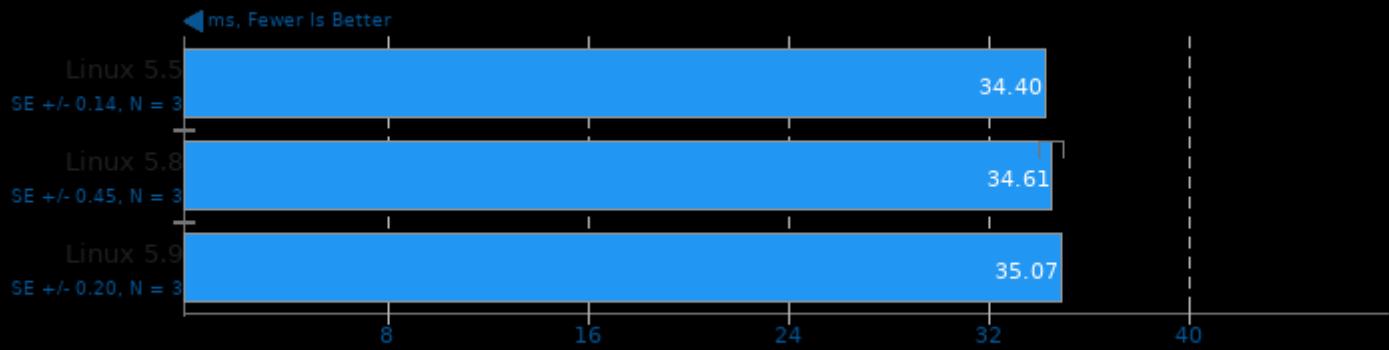
Test: BLAS CPU



1. (CXX) g++ options: -rdynamic

ArrayFire 3.7

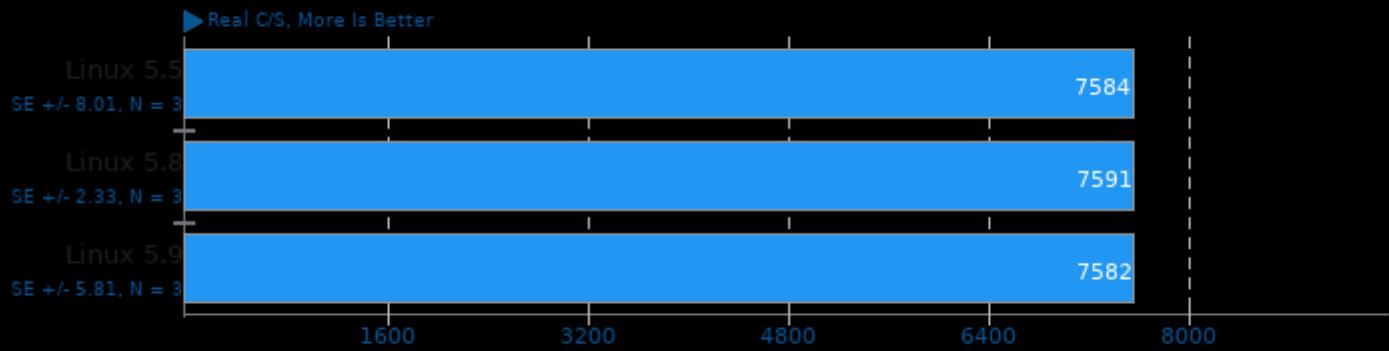
Test: Conjugate Gradient CPU



1. (CXX) g++ options: -rdynamic

John The Ripper 1.9.0-jumbo-1

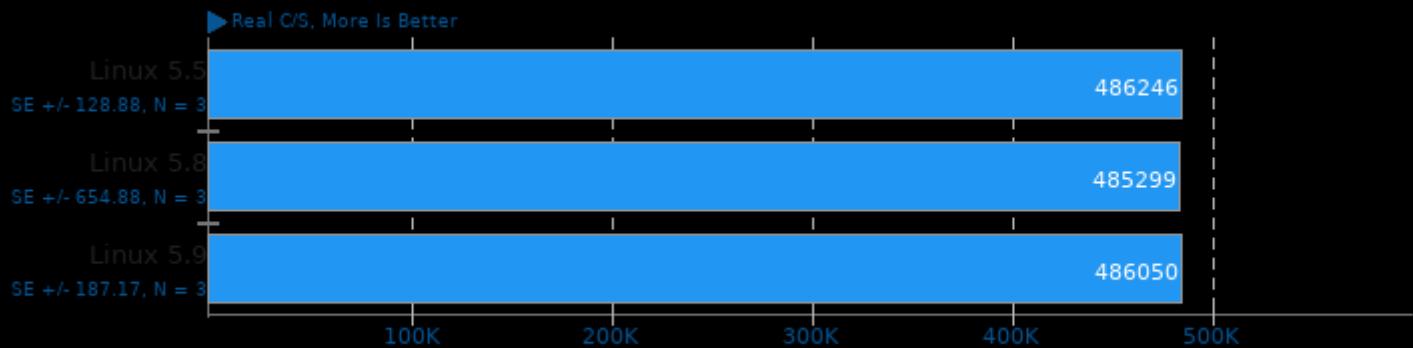
Test: Blowfish



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

John The Ripper 1.9.0-jumbo-1

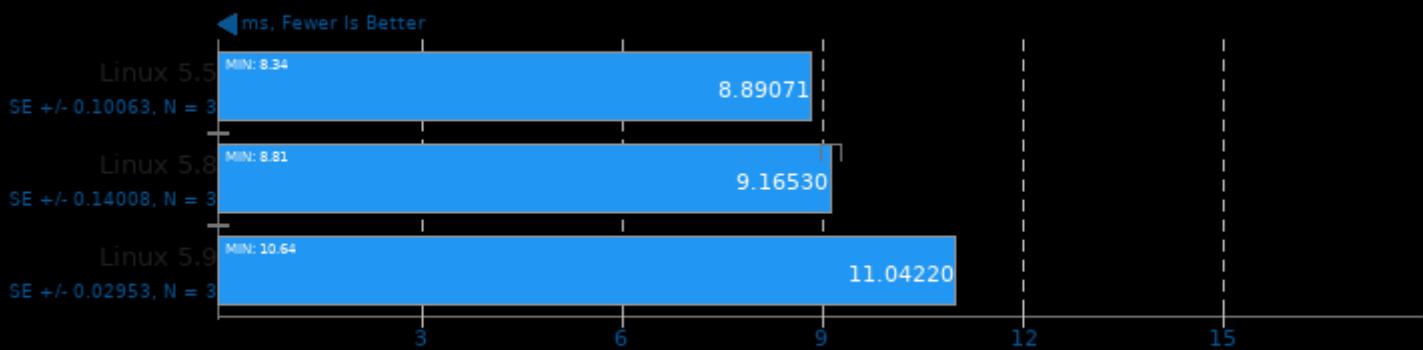
Test: MD5



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

oneDNN 1.5

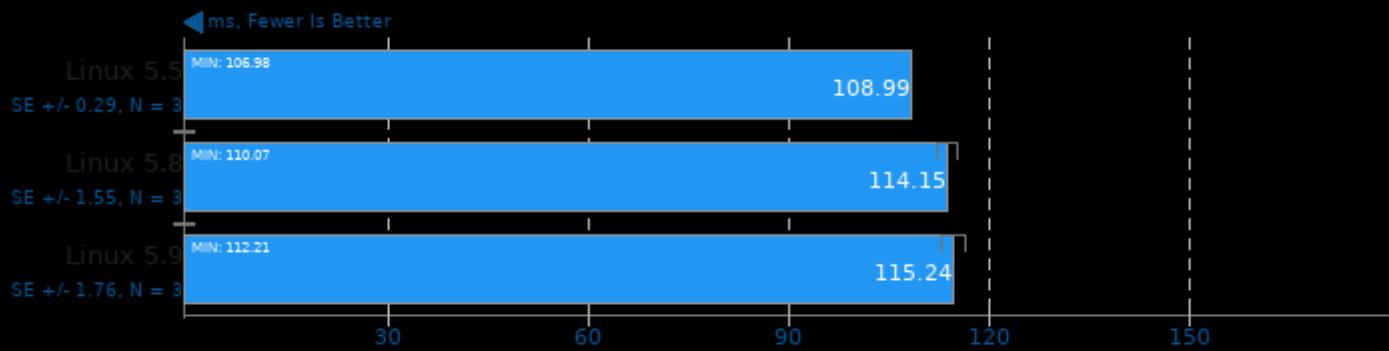
Harness: IP Batch 1D - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -pthread -ldl

oneDNN 1.5

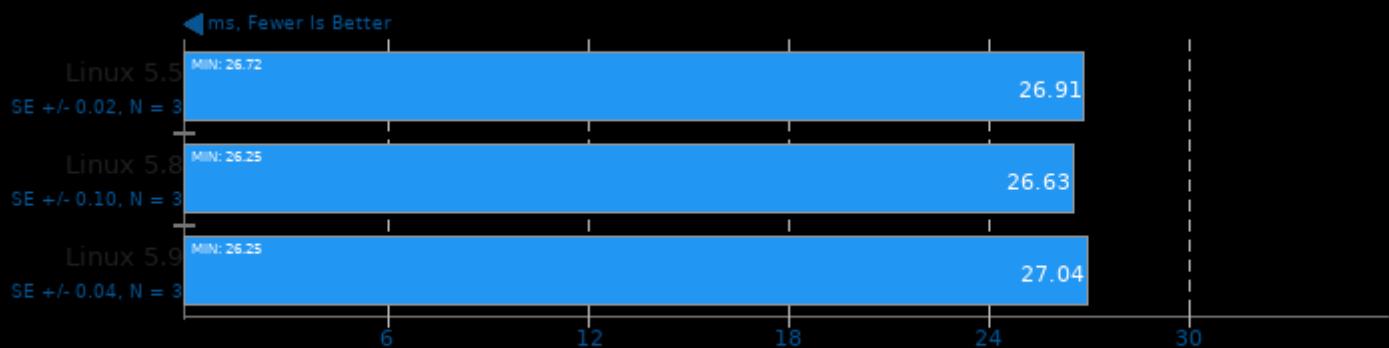
Harness: IP Batch All - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -pthread -ldl

oneDNN 1.5

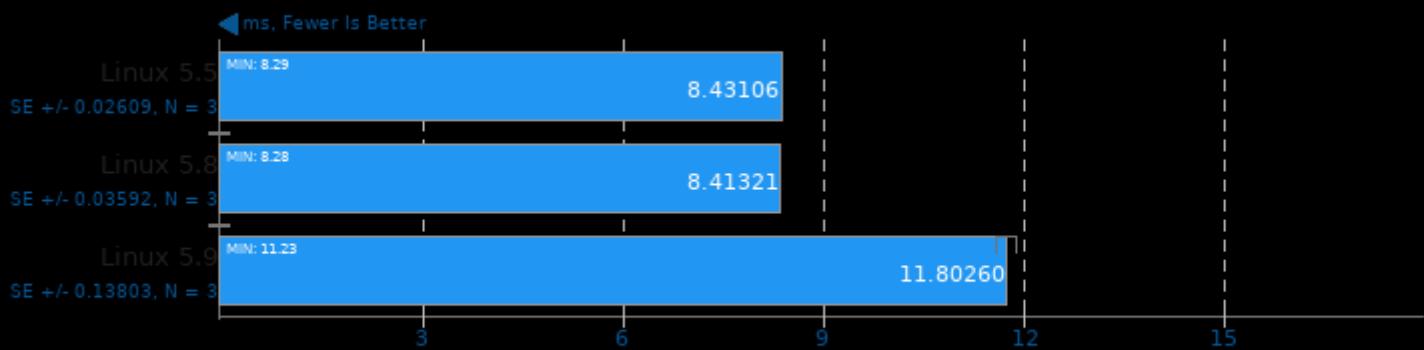
Harness: Convolution Batch Shapes Auto - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 1.5

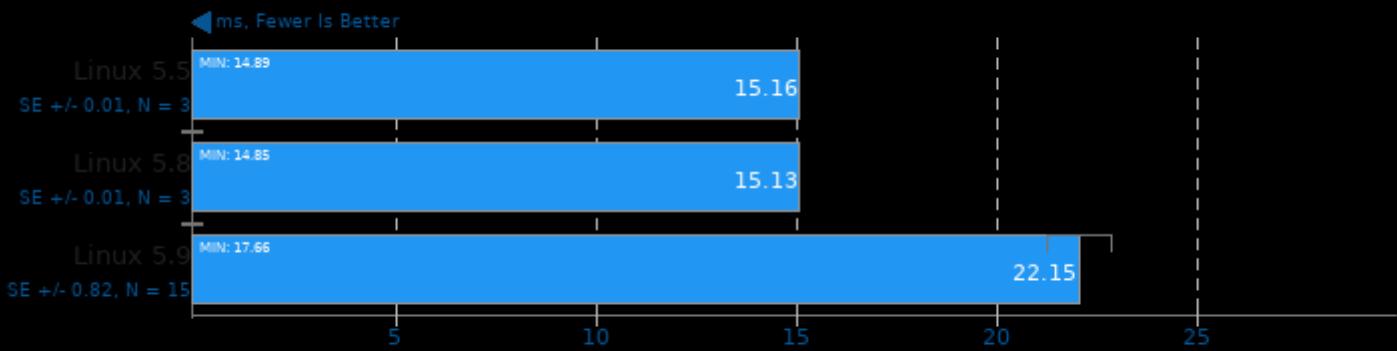
Harness: Deconvolution Batch deconv_1d - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 1.5

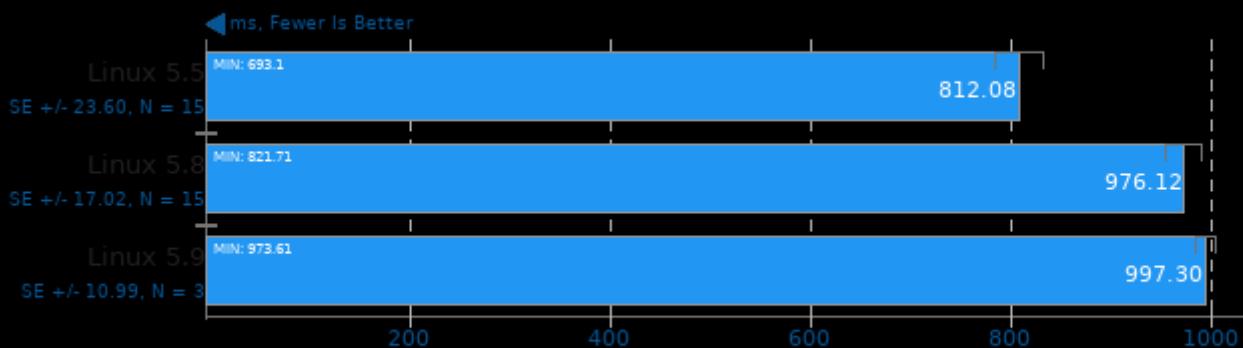
Harness: Deconvolution Batch deconv_3d - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 1.5

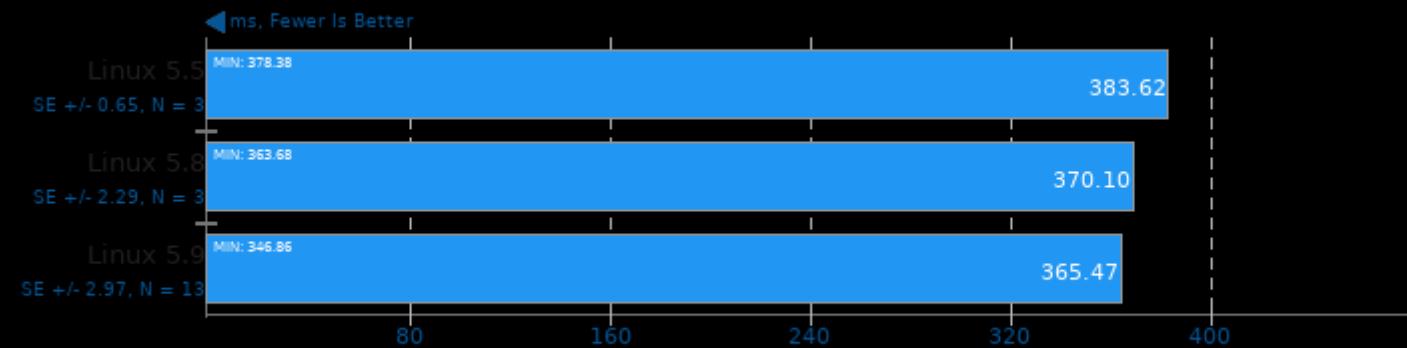
Harness: Recurrent Neural Network Training - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 1.5

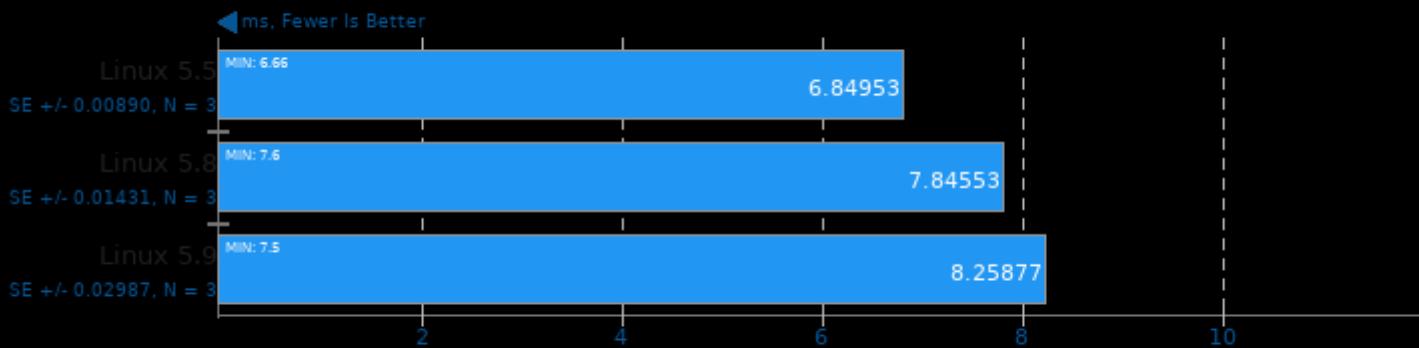
Harness: Recurrent Neural Network Inference - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 1.5

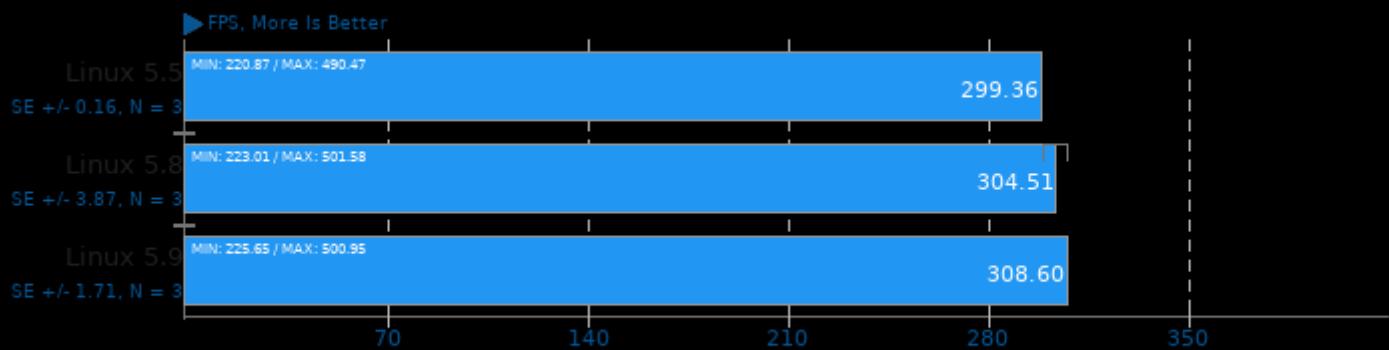
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

dav1d 0.7.0

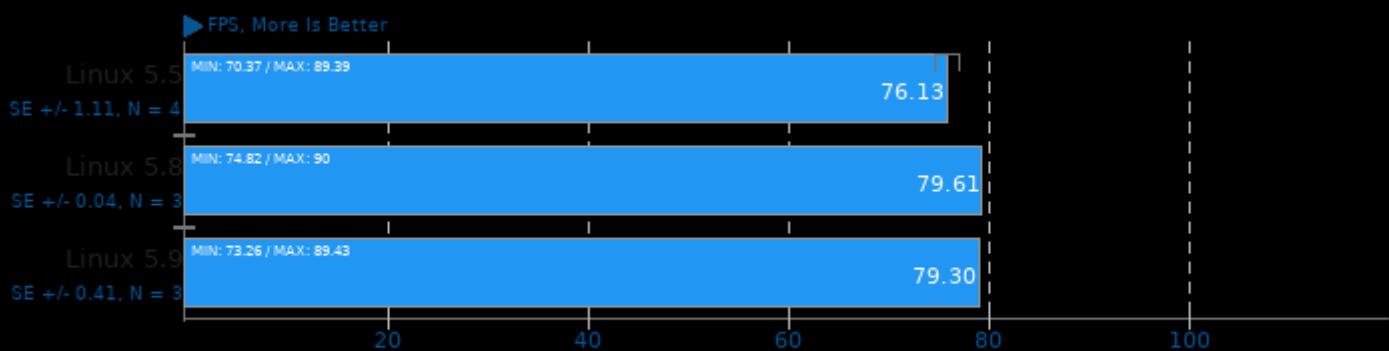
Video Input: Chimera 1080p



1. (CC) gcc options: -pthread

dav1d 0.7.0

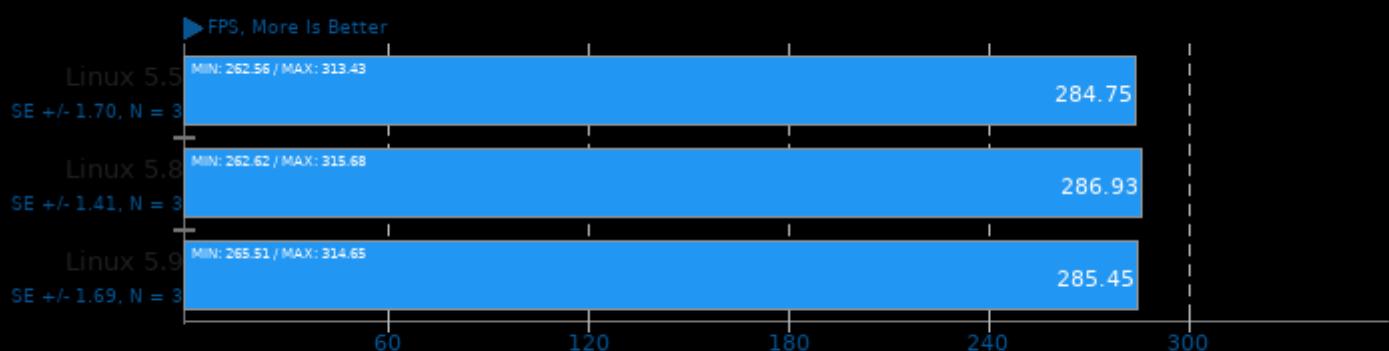
Video Input: Summer Nature 4K



1. (CC) gcc options: -pthread

dav1d 0.7.0

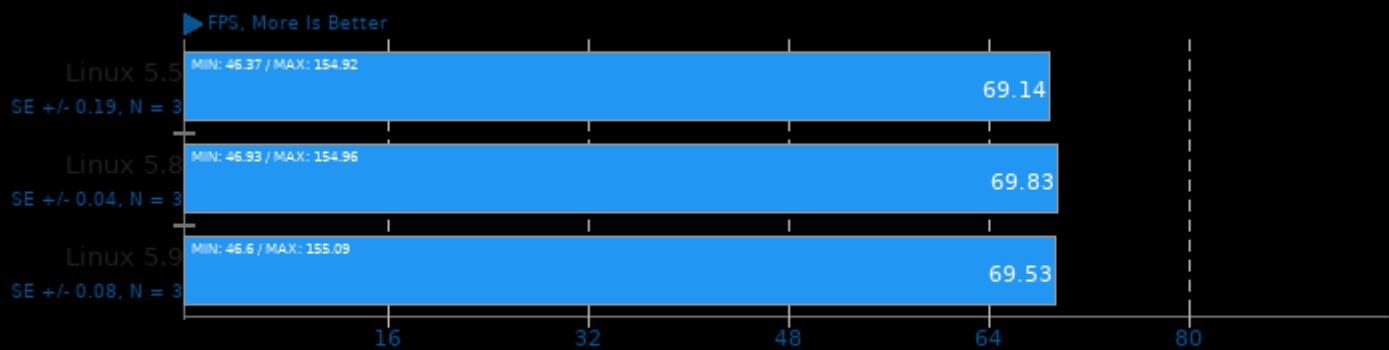
Video Input: Summer Nature 1080p



1. (CC) gcc options: -pthread

dav1d 0.7.0

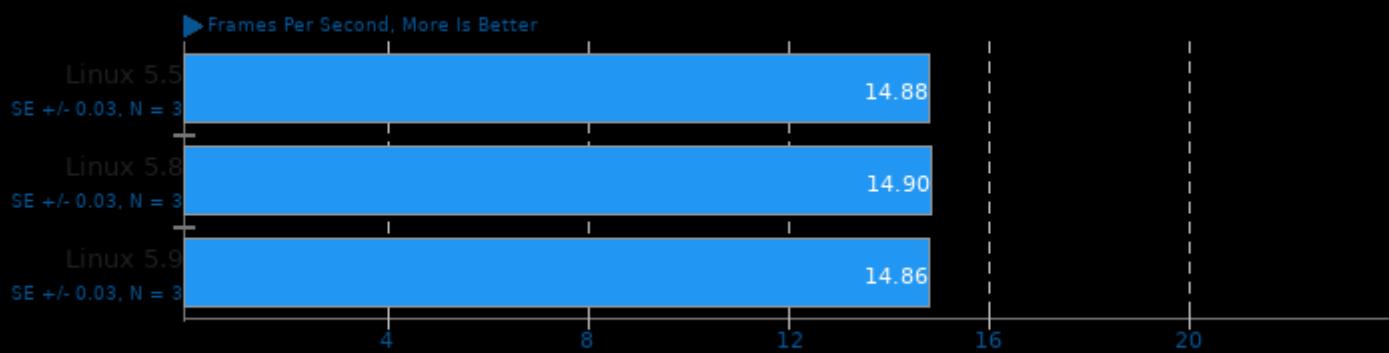
Video Input: Chimera 1080p 10-bit



1. (CC) gcc options: -pthread

AOM AV1 2.0

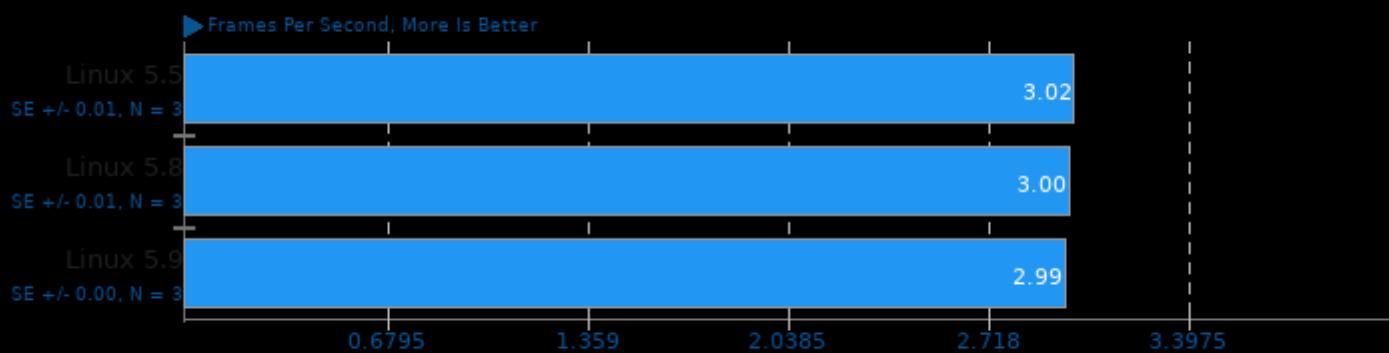
Encoder Mode: Speed 6 Realtime



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -fno-plt -fno-threadsafe-statics

AOM AV1 2.0

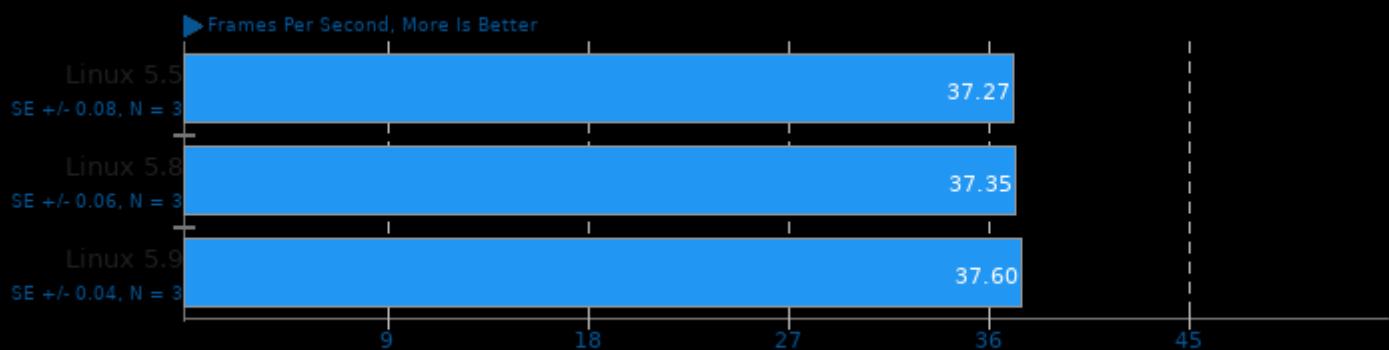
Encoder Mode: Speed 6 Two-Pass



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -fno-plt -fno-threadsafe-statics

AOM AV1 2.0

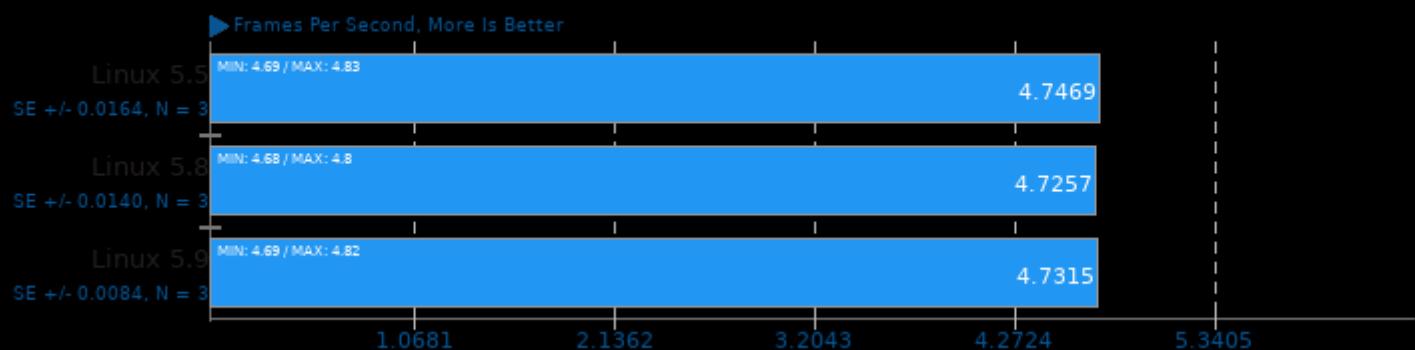
Encoder Mode: Speed 8 Realtime



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

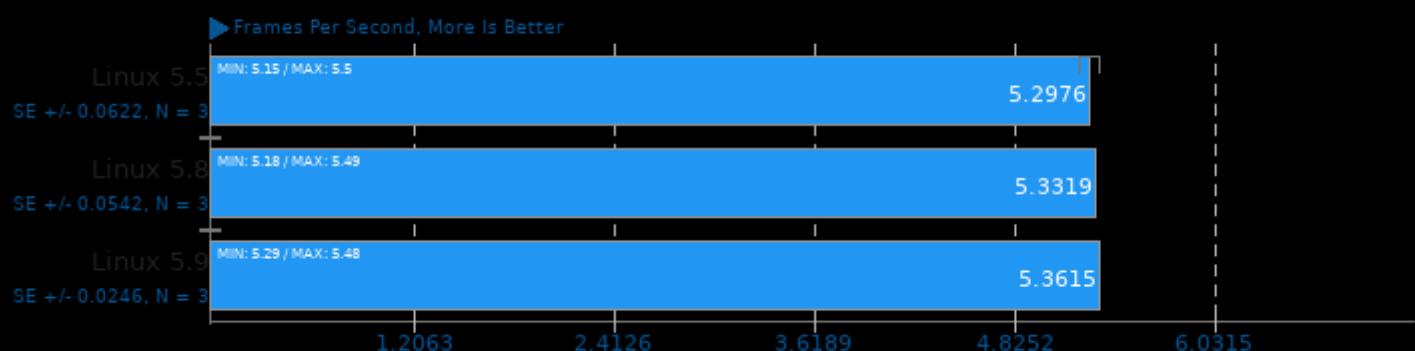
Embree 3.9.0

Binary: Pathtracer - Model: Crown



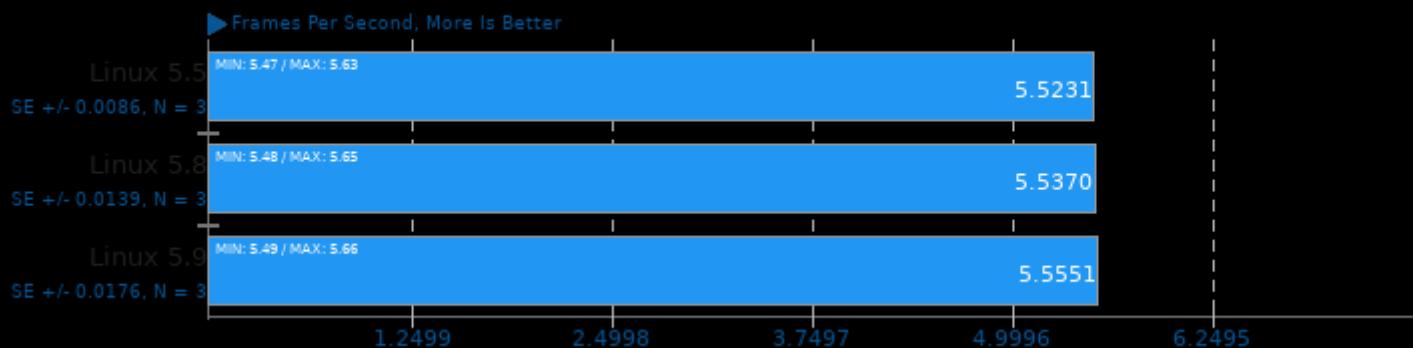
Embree 3.9.0

Binary: Pathtracer ISPC - Model: Crown



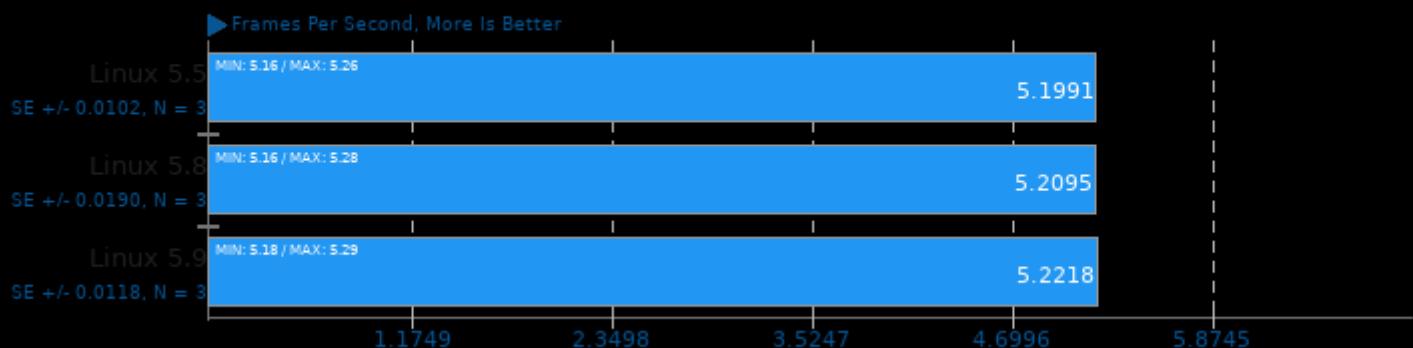
Embree 3.9.0

Binary: Pathtracer - Model: Asian Dragon



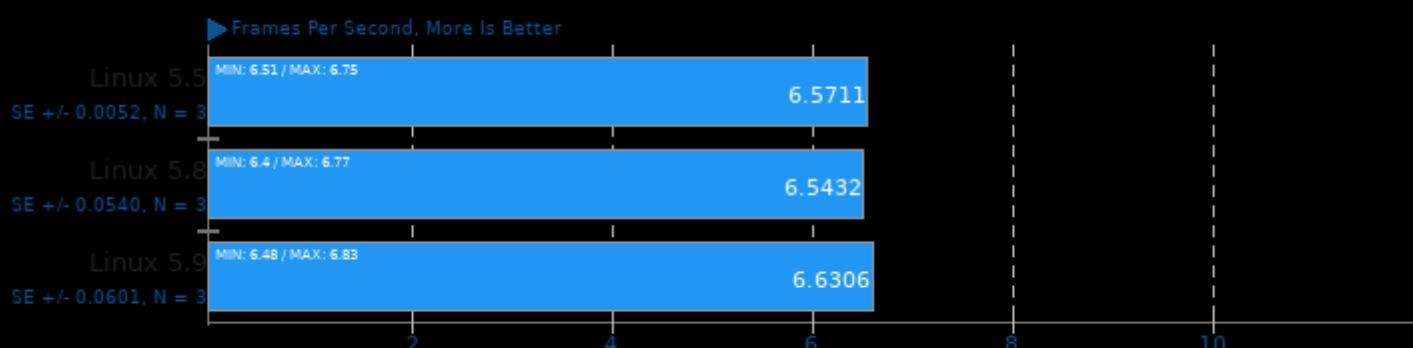
Embree 3.9.0

Binary: Pathtracer - Model: Asian Dragon Obj



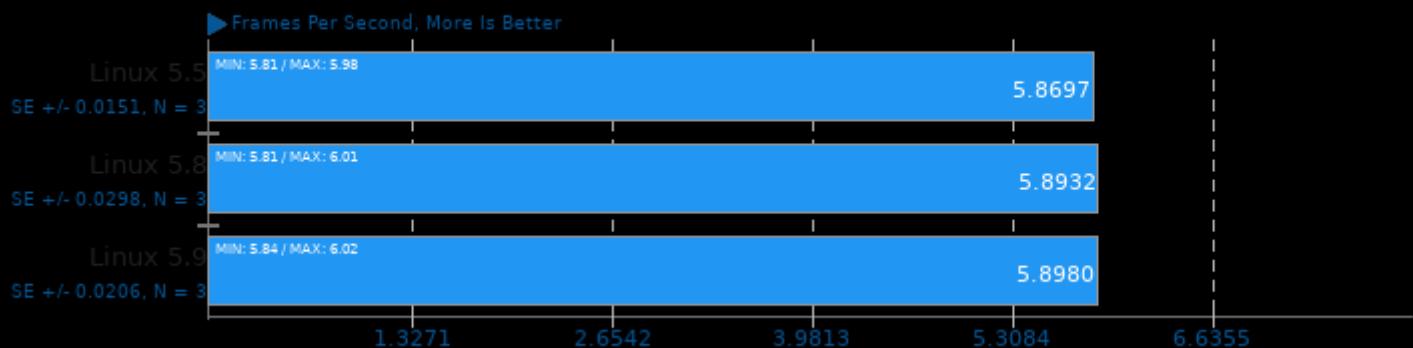
Embree 3.9.0

Binary: Pathtracer ISPC - Model: Asian Dragon



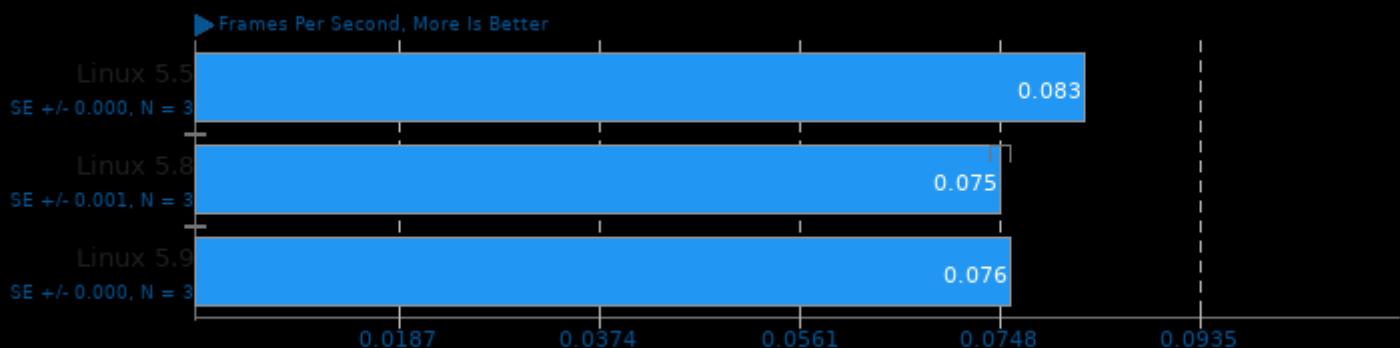
Embree 3.9.0

Binary: Pathtracer ISPC - Model: Asian Dragon Obj



SVT-AV1 0.8

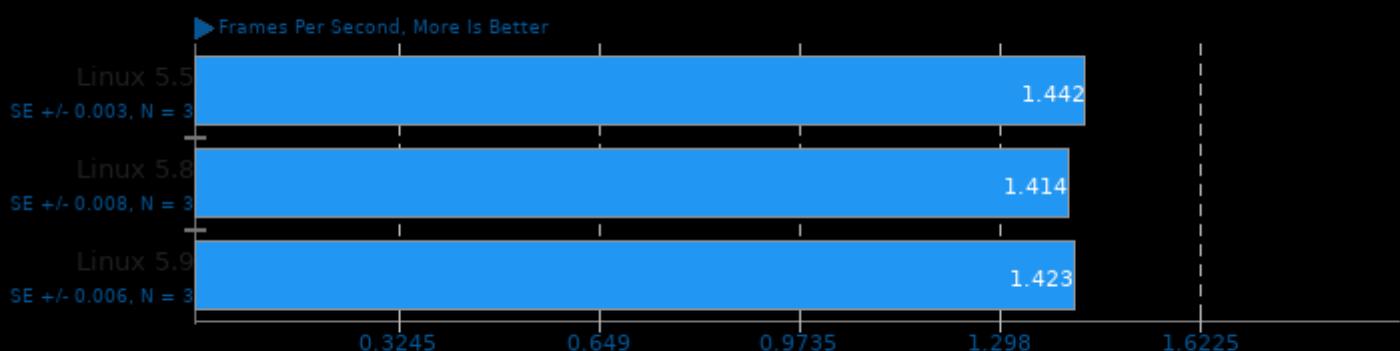
Encoder Mode: Enc Mode 0 - Input: 1080p



1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

SVT-AV1 0.8

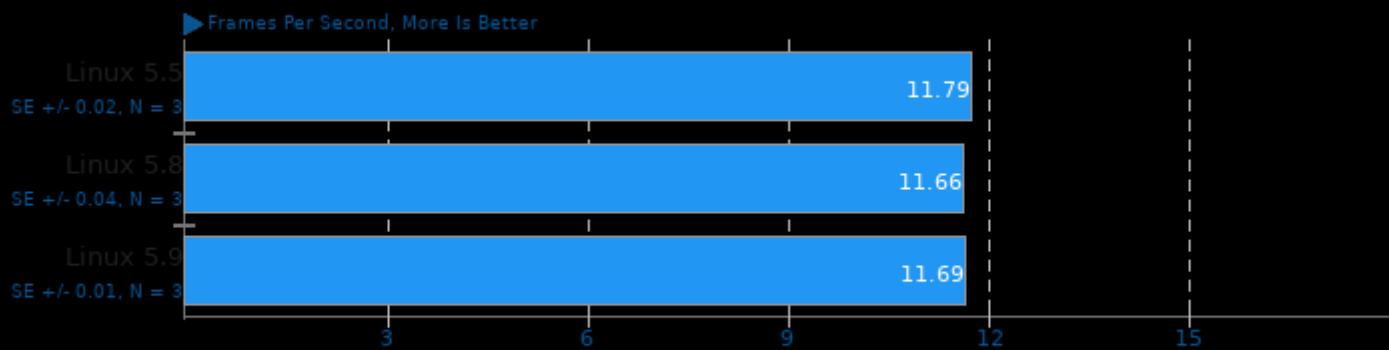
Encoder Mode: Enc Mode 4 - Input: 1080p



1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

SVT-AV1 0.8

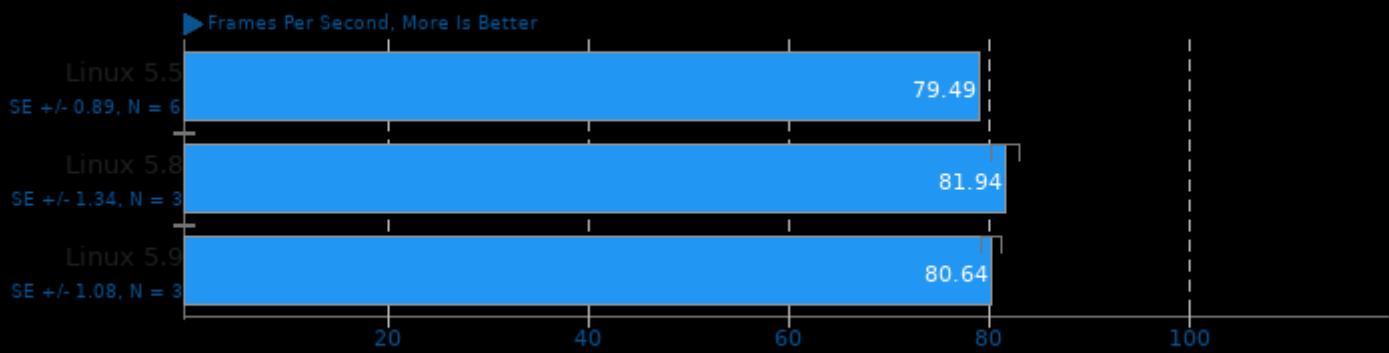
Encoder Mode: Enc Mode 8 - Input: 1080p



1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

SVT-VP9 0.1

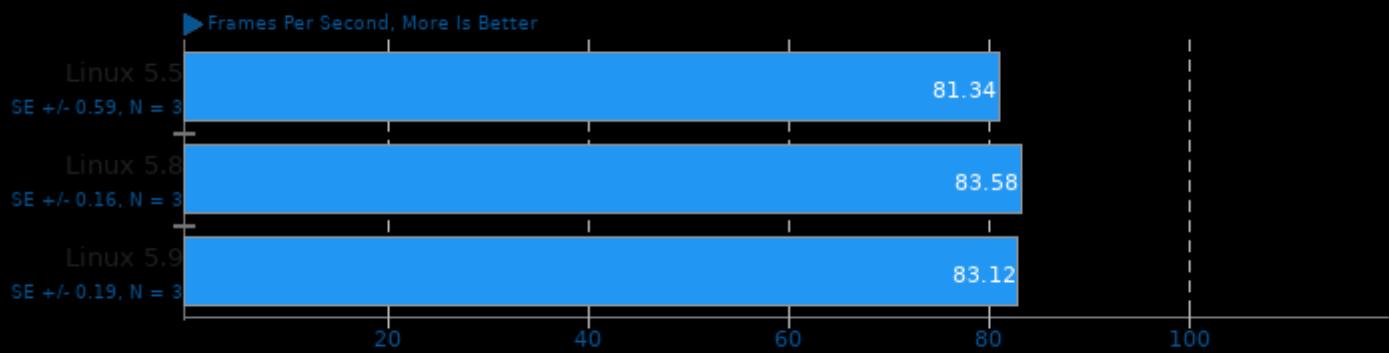
Tuning: VMAF Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-VP9 0.1

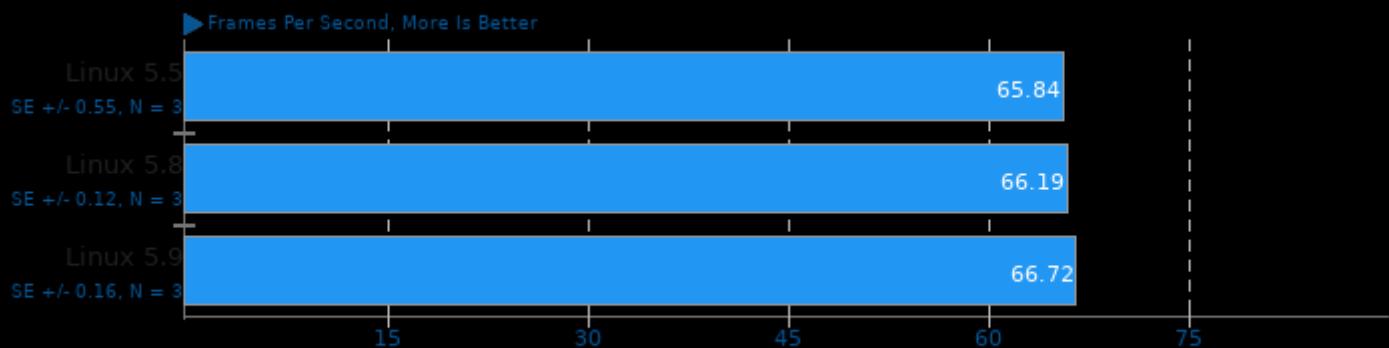
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-VP9 0.1

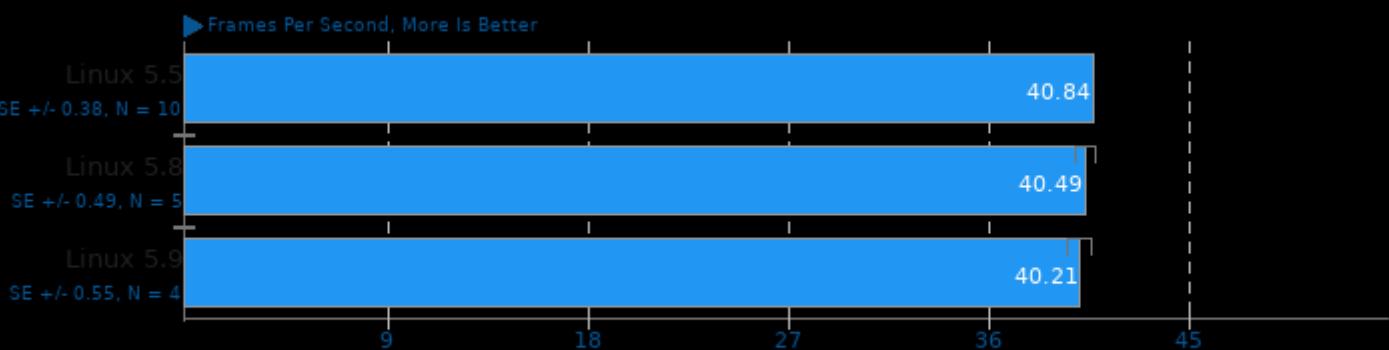
Tuning: Visual Quality Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

x264 2019-12-17

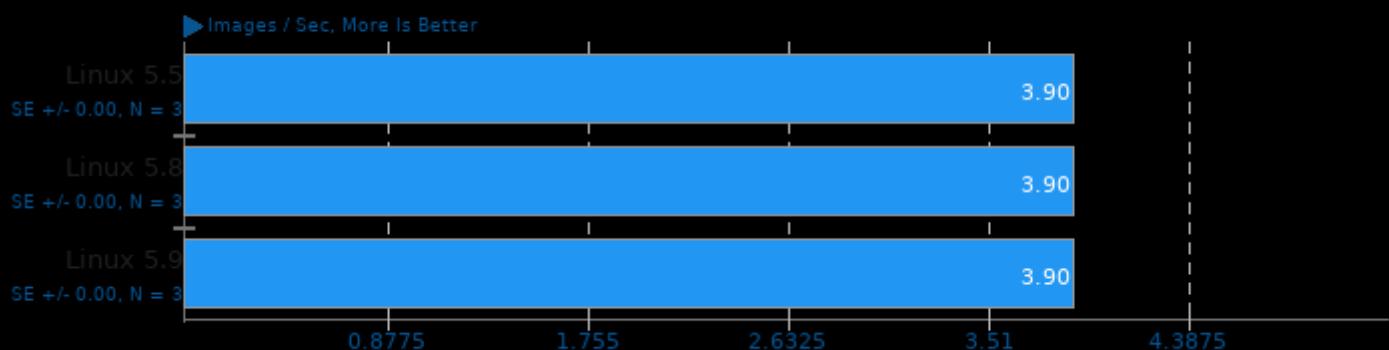
H.264 Video Encoding



1. (CC) gcc options: -ldl -lavformat -lavcodec -lavutil -lswscale -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -fPIC -fomit-frame-pointer -fno-tree-vectorize

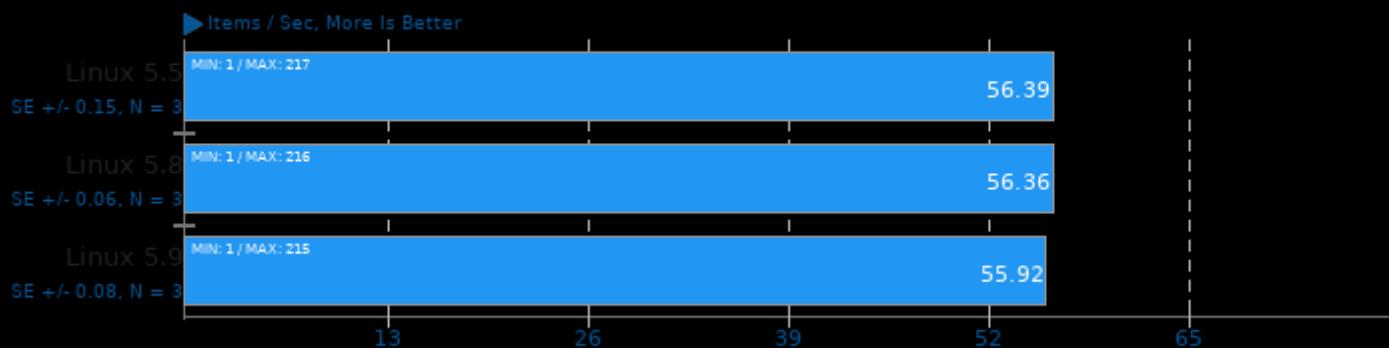
Intel Open Image Denoise 1.2.0

Scene: Memorial



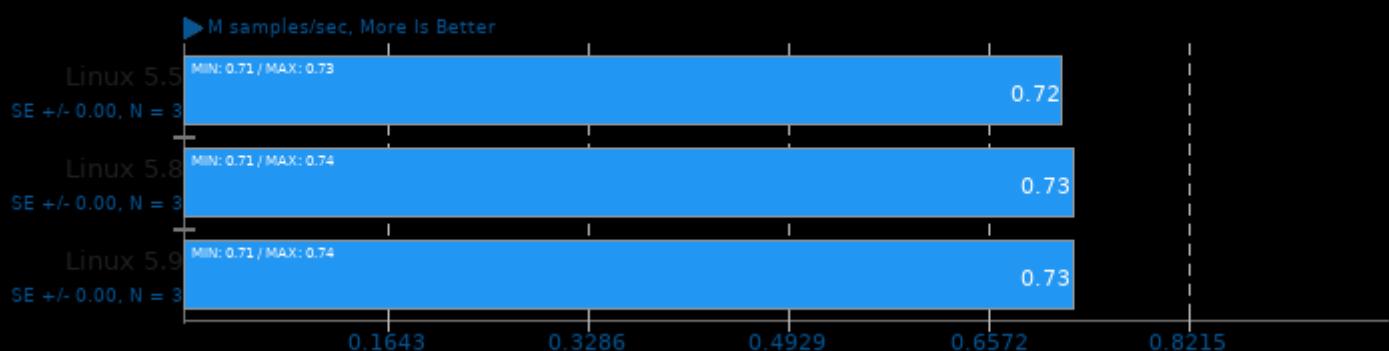
OpenVKL 0.9

Benchmark: vklBenchmark



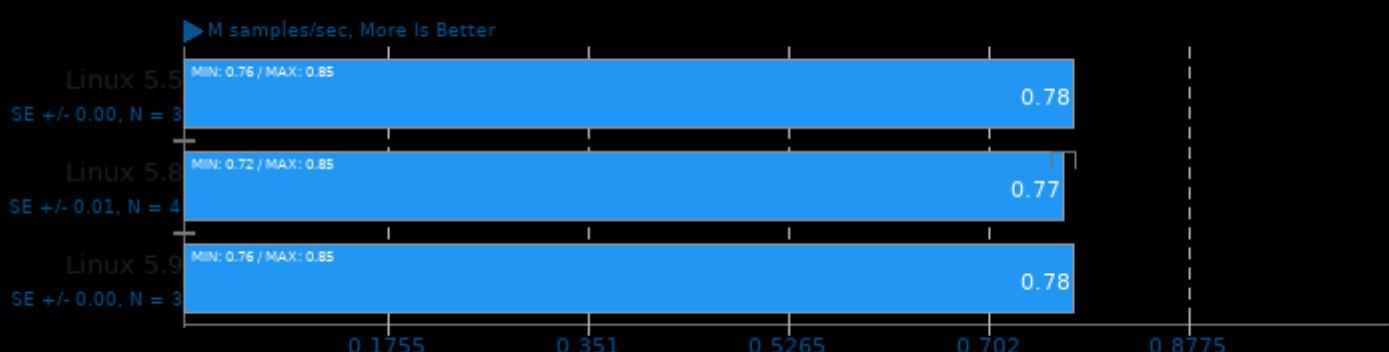
LuxCoreRender 2.3

Scene: DLSC



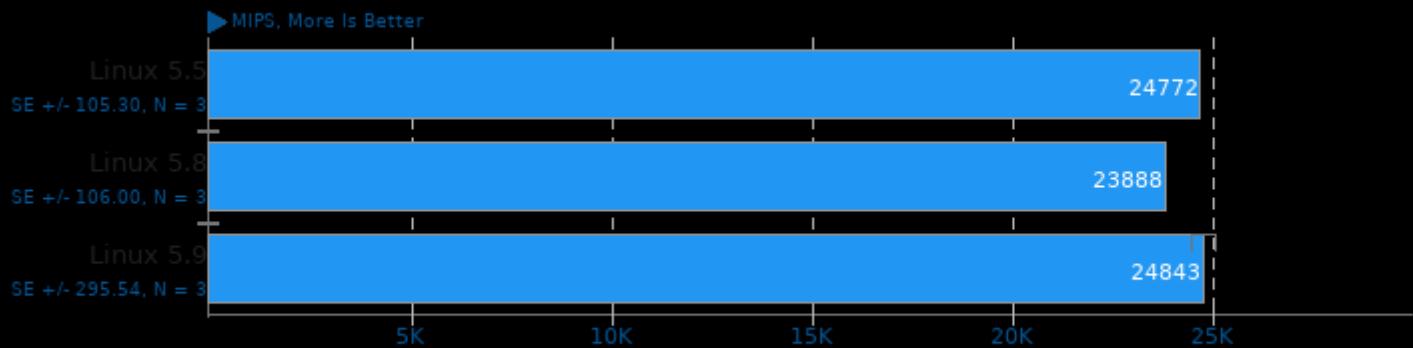
LuxCoreRender 2.3

Scene: Rainbow Colors and Prism



7-Zip Compression 16.02

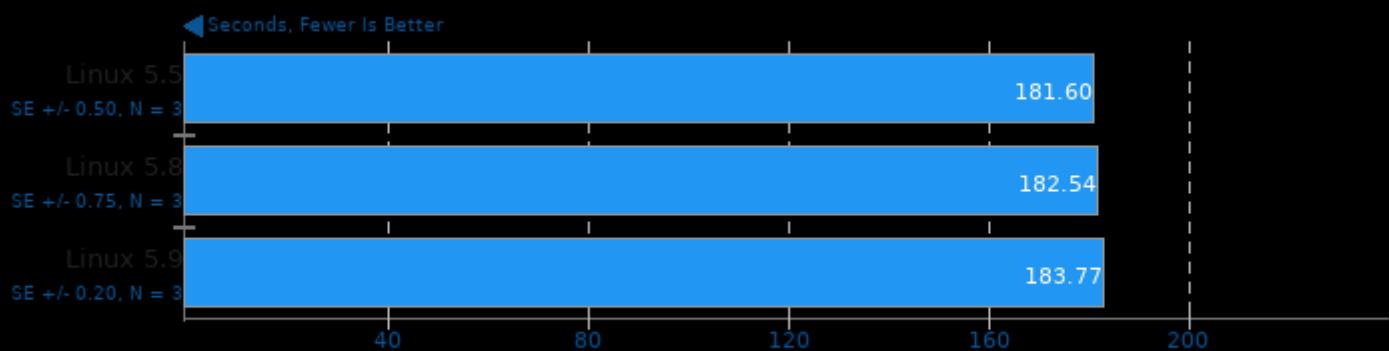
Compress Speed Test



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

libavif avifenc 0.7.3

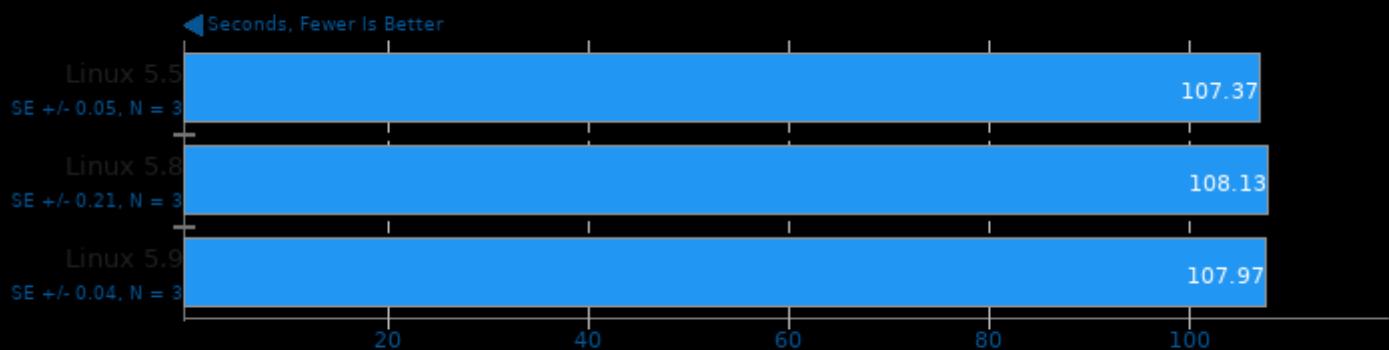
Encoder Speed: 0



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

libavif avifenc 0.7.3

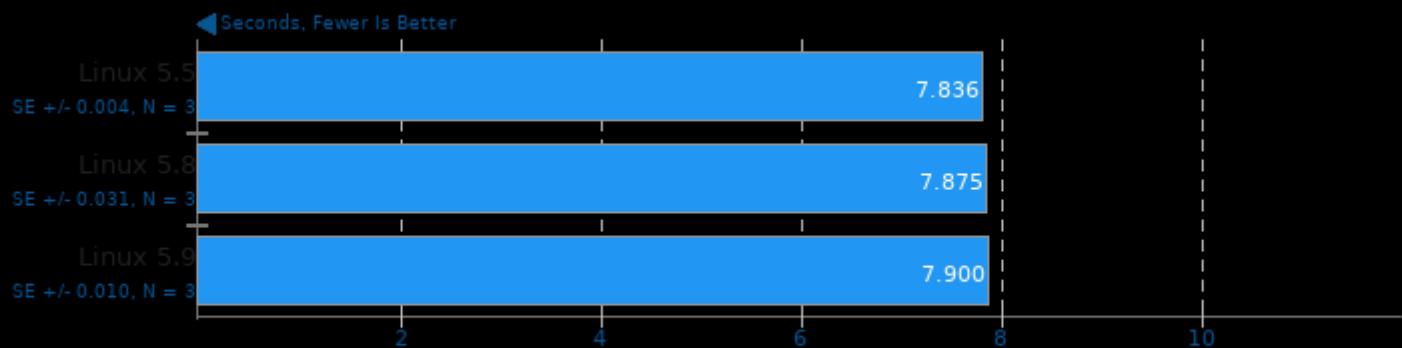
Encoder Speed: 2



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

libavif avifenc 0.7.3

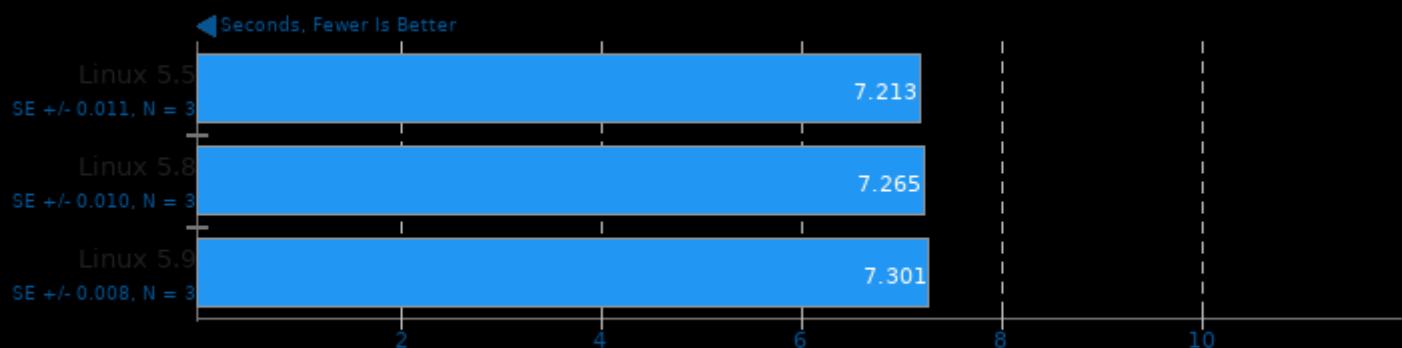
Encoder Speed: 8



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

libavif avifenc 0.7.3

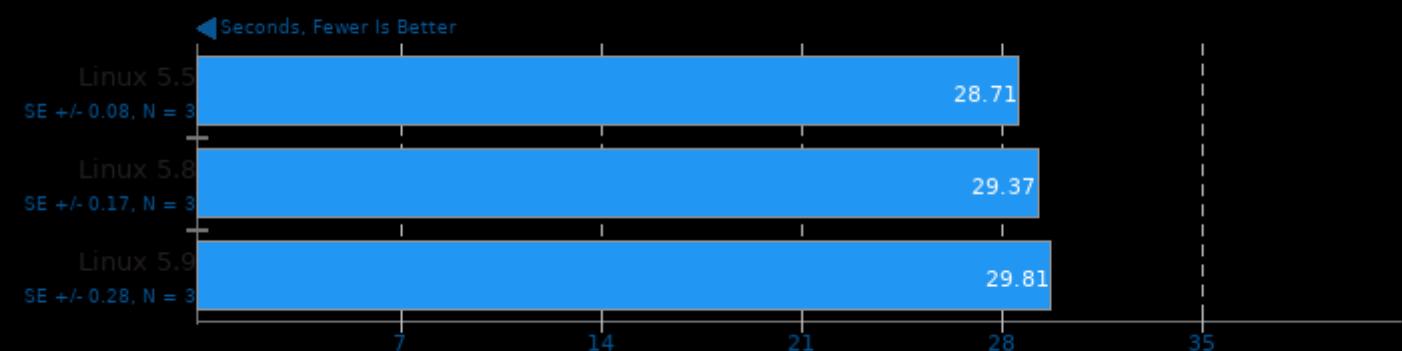
Encoder Speed: 10



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

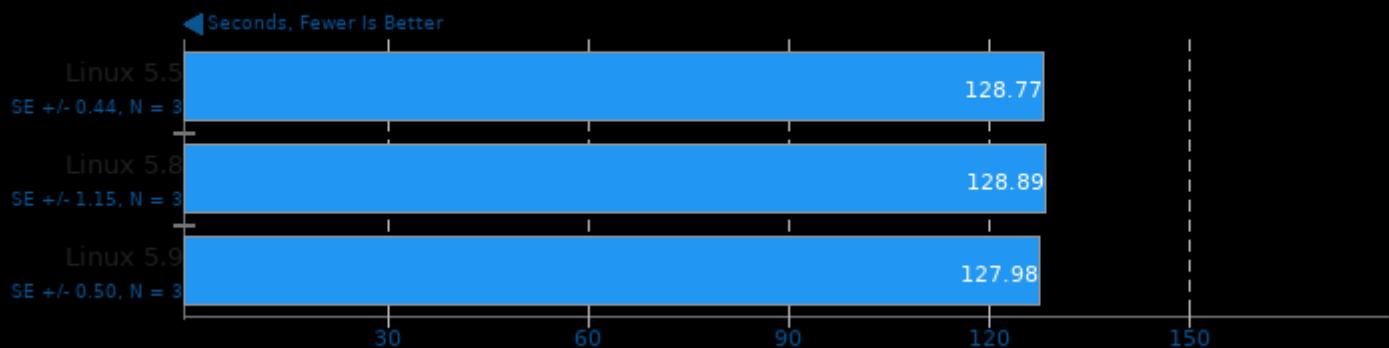
Timed Apache Compilation 2.4.41

Time To Compile



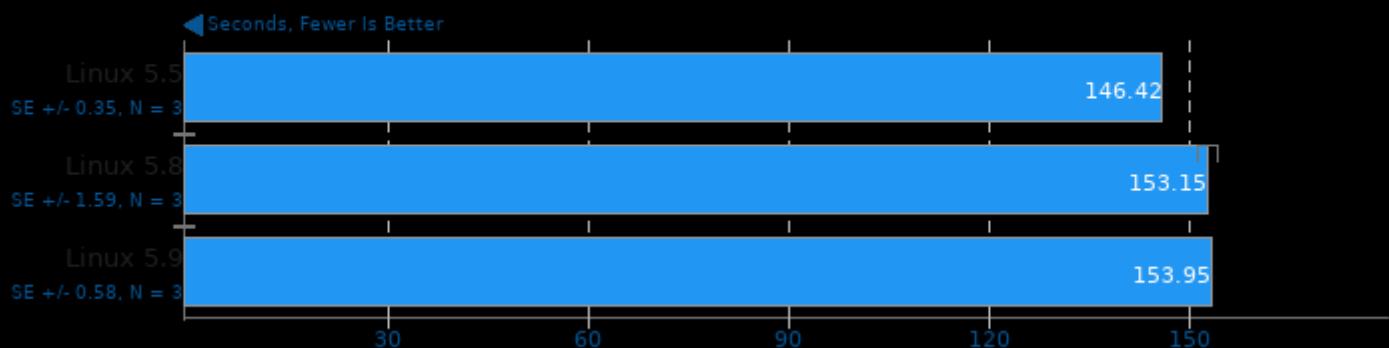
Timed FFmpeg Compilation 4.2.2

Time To Compile



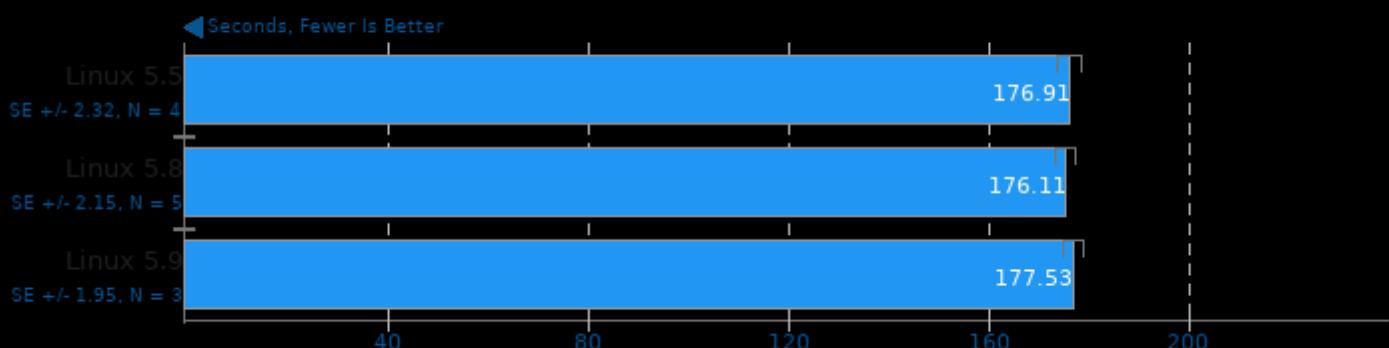
Timed GDB GNU Debugger Compilation 9.1

Time To Compile



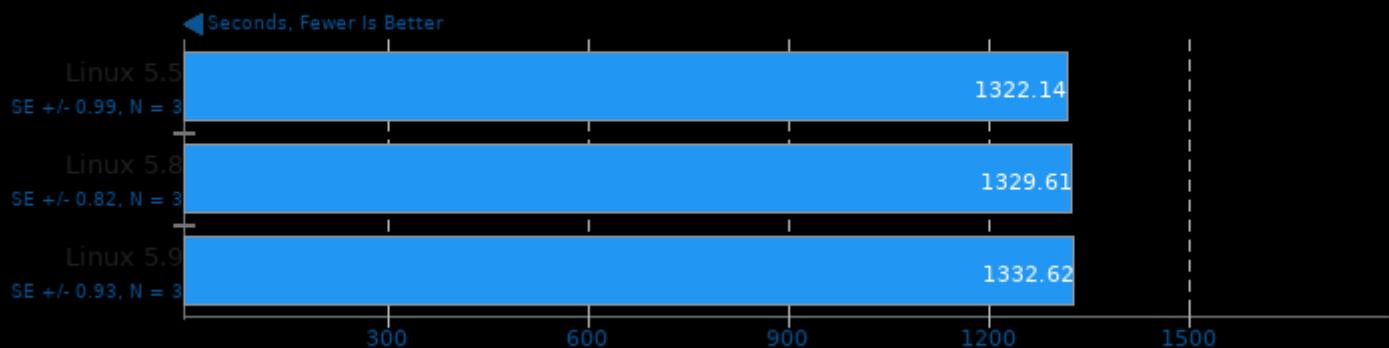
Timed Linux Kernel Compilation 5.4

Time To Compile



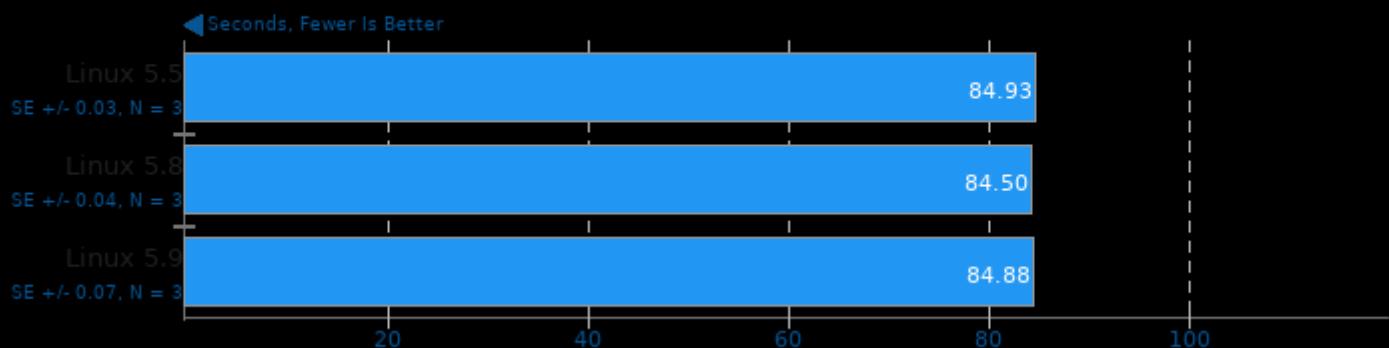
Timed LLVM Compilation 10.0

Time To Compile



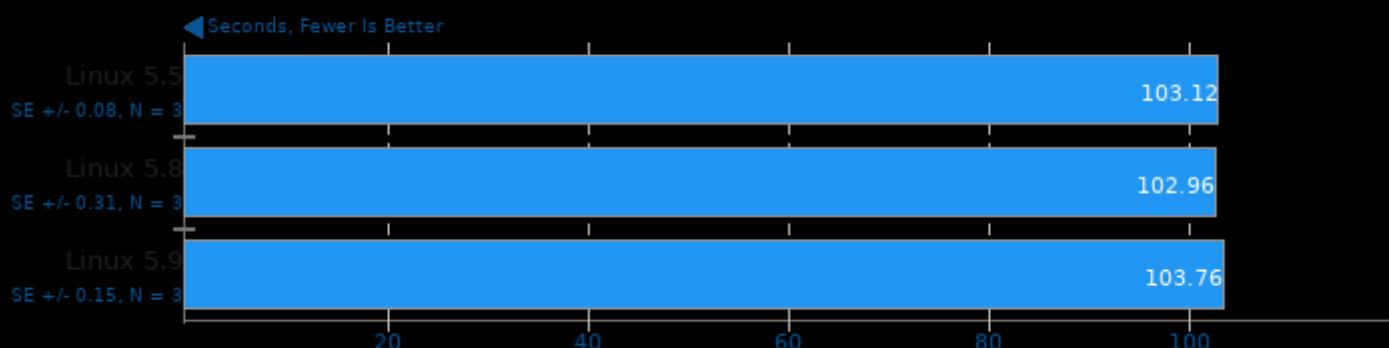
Timed MPlayer Compilation 1.4

Time To Compile



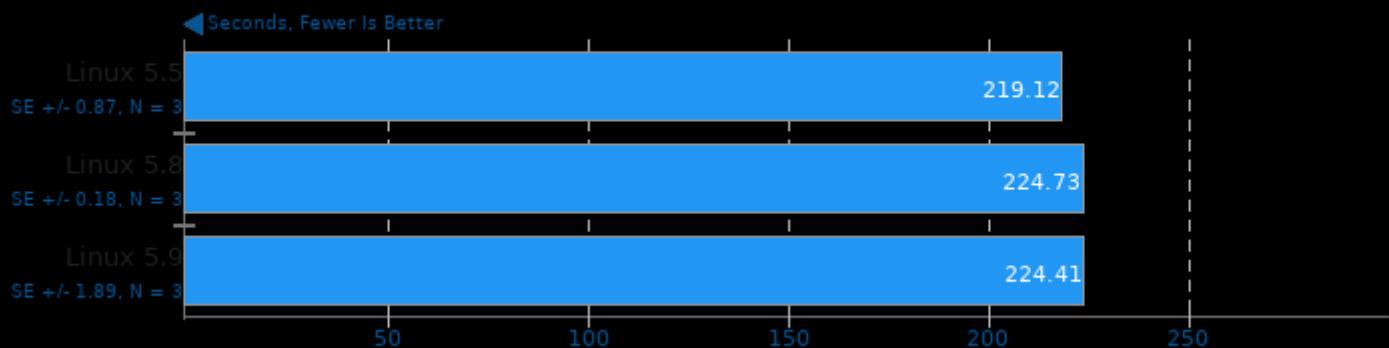
Timed PHP Compilation 7.4.2

Time To Compile



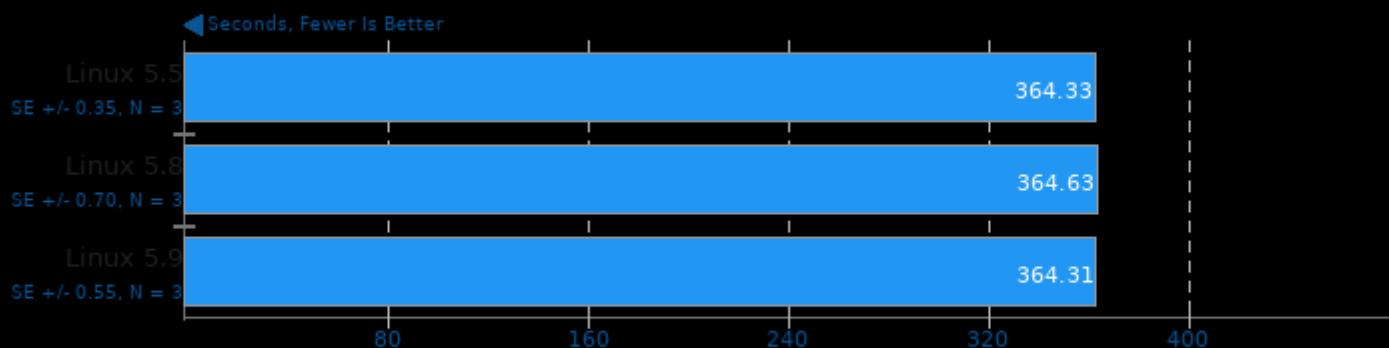
Build2 0.12

Time To Compile



YafaRay 3.4.1

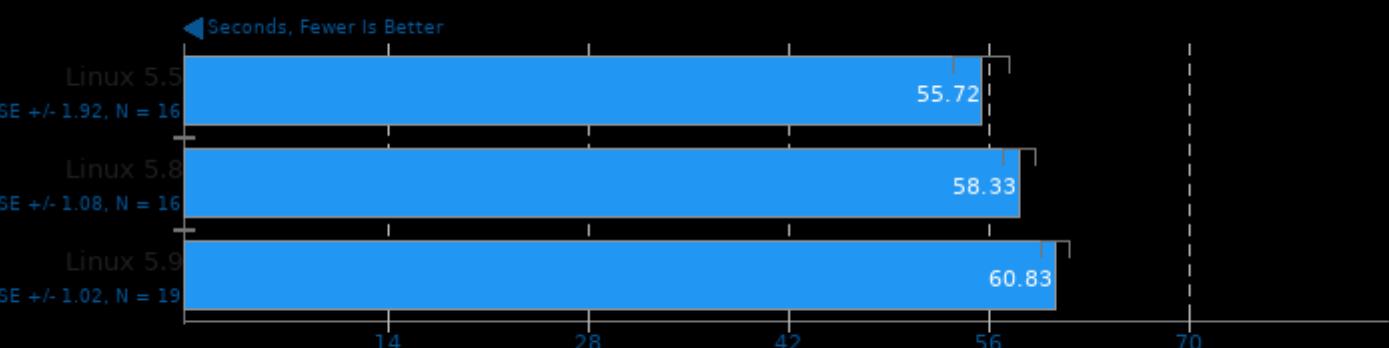
Total Time For Sample Scene



1. (CXX) g++ options: -std=c++11 -O3 -ffast-math -rdynamic -ldl -lmath -lm -lfex -lHalf -lz -lxmlThread -lxml2 -freetype -lboost_system -lboost_filesystem

eSpeak-NG Speech Engine 20200907

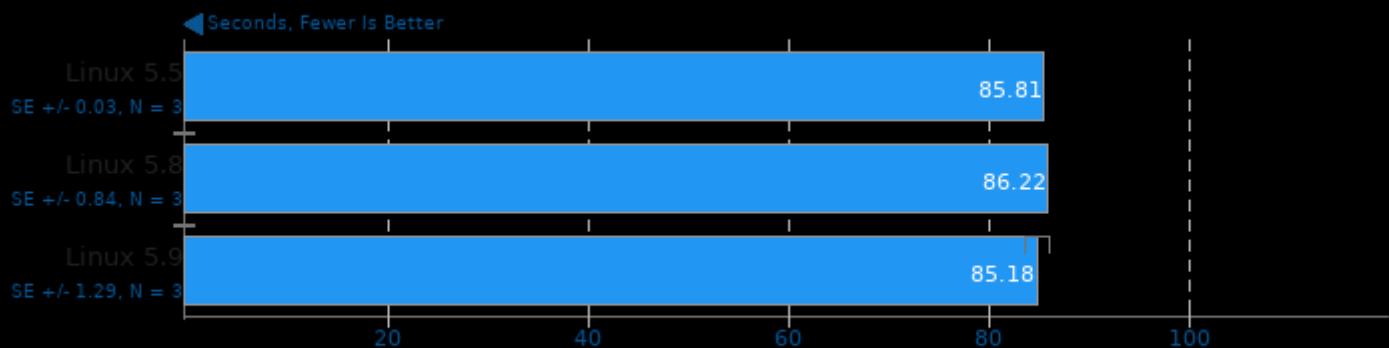
Text-To-Speech Synthesis



1. (CC) gcc options: -O2 -std=c99

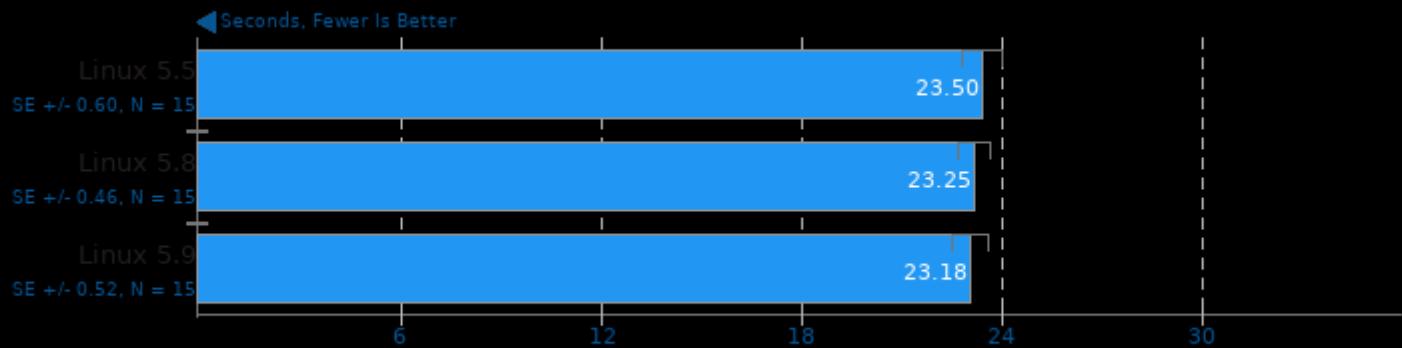
Montage Astronomical Image Mosaic Engine 6.0

Mosaic of M17, K band, 1.5 deg x 1.5 deg



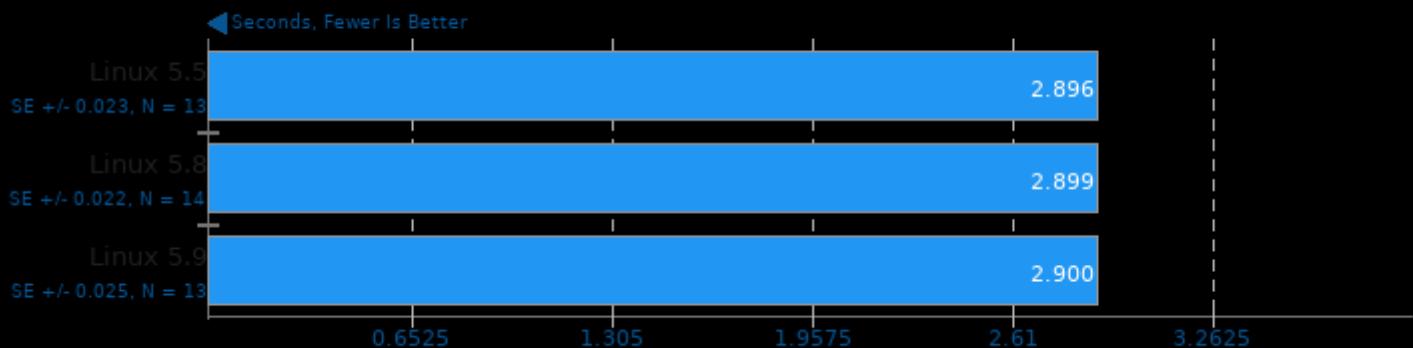
1. (CC) gcc options: -std=gnu99 -lcfitsio -lm -O2

RNNoise 2020-06-28



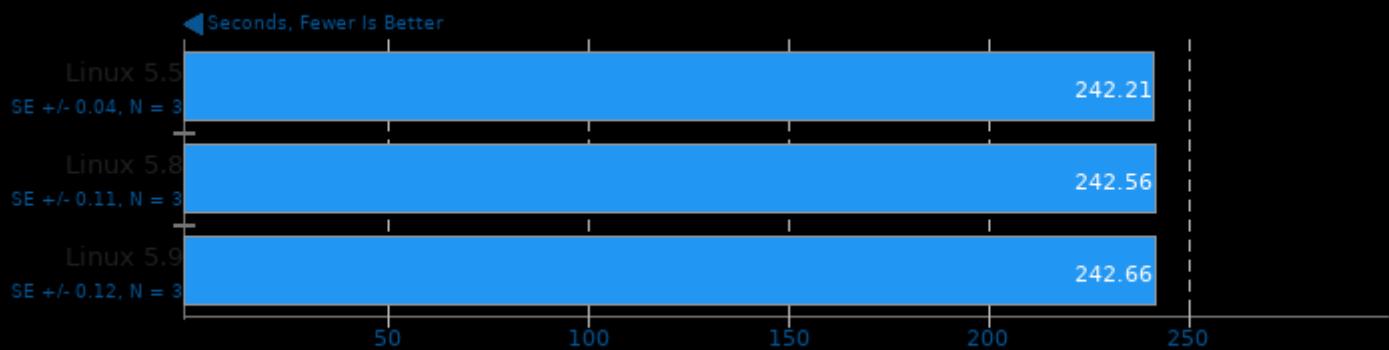
1. (CC) gcc options: -O2 -pedantic -fvisibility=hidden

System GZIP Decompression



Tachyon 0.99b6

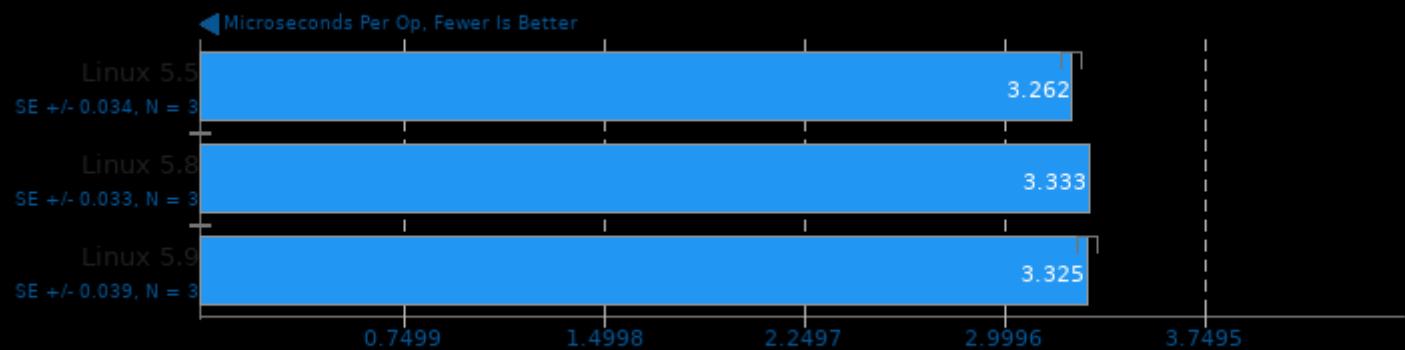
Total Time



1. (CC) gcc options: -m64 -O3 -fomit-frame-pointer -ffast-math -ltachyon -lm -lpthread

LevelDB 1.22

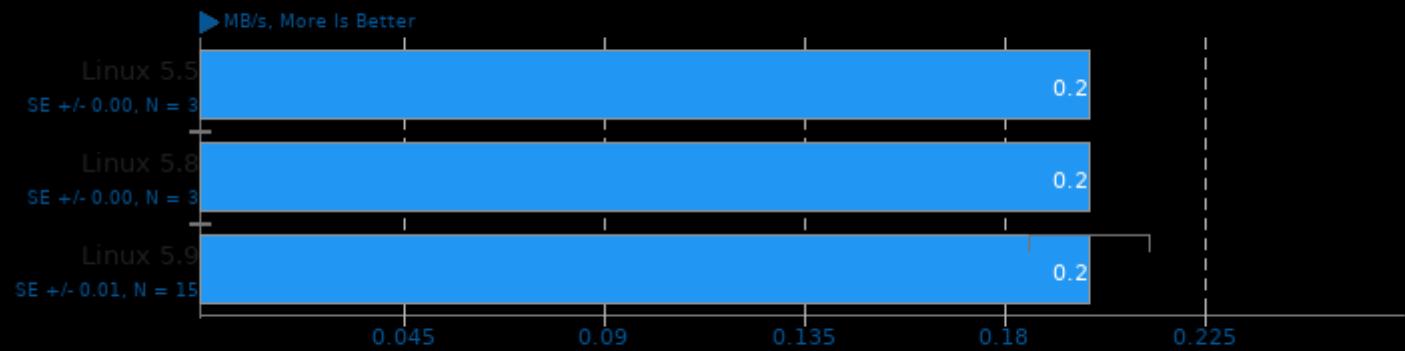
Benchmark: Hot Read



1. (CXX) g++ options: -O3 -lsnappy -lpthread

LevelDB 1.22

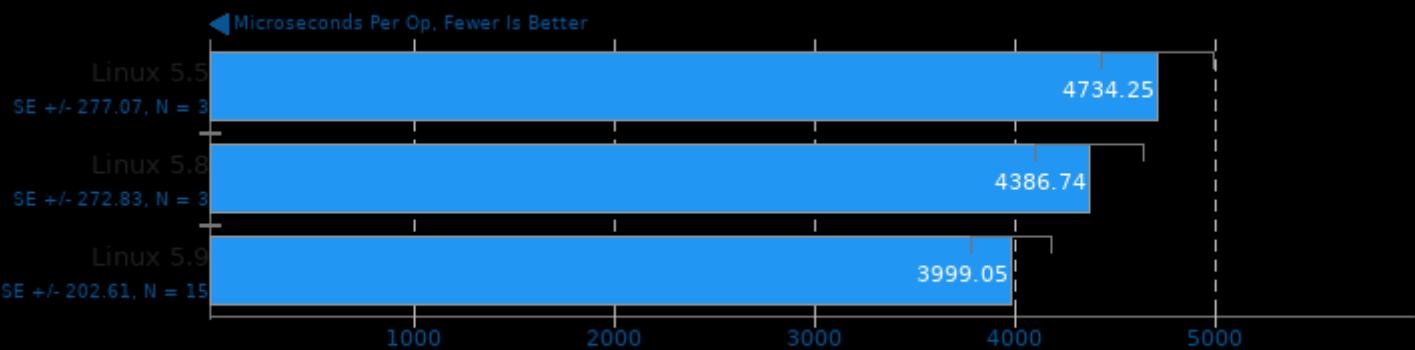
Benchmark: Fill Sync



1. (CXX) g++ options: -O3 -lsnappy -lpthread

LevelDB 1.22

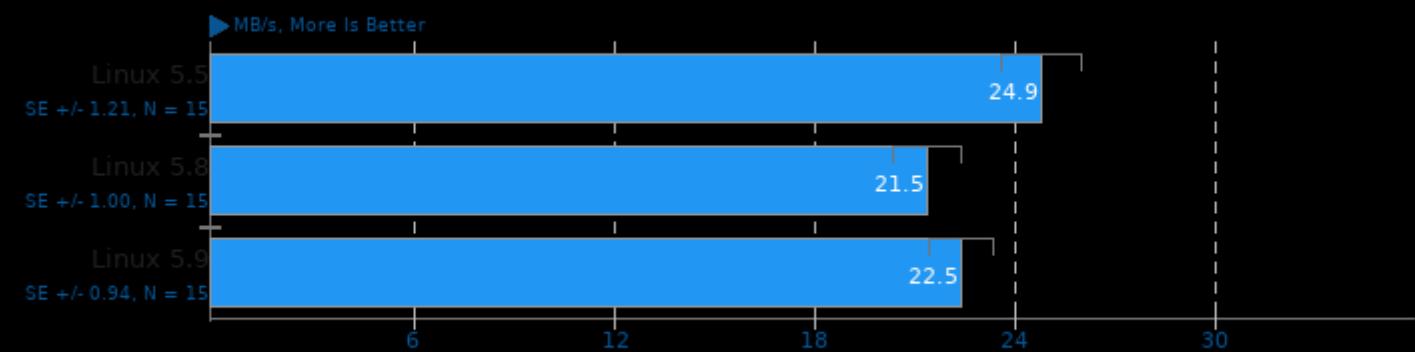
Benchmark: Fill Sync



1. (CXX) g++ options: -O3 -lsnappy -lpthread

LevelDB 1.22

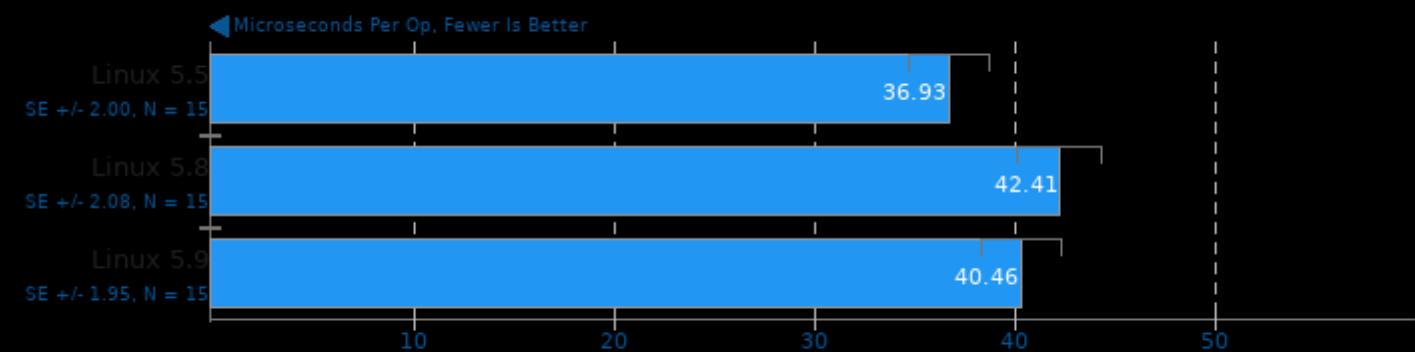
Benchmark: Overwrite



1. (CXX) g++ options: -O3 -lsnappy -lpthread

LevelDB 1.22

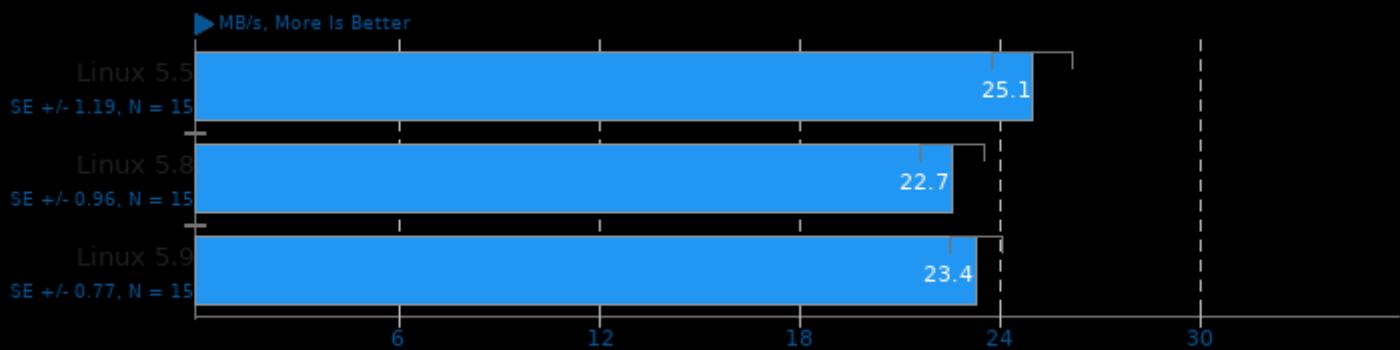
Benchmark: Overwrite



1. (CXX) g++ options: -O3 -lsnappy -lpthread

LevelDB 1.22

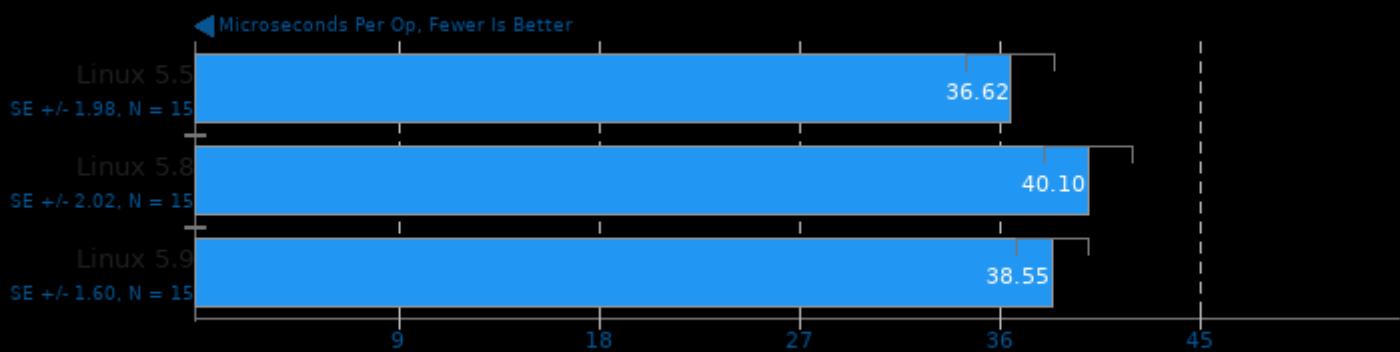
Benchmark: Random Fill



1. (CXX) g++ options: -O3 -lsnappy -lpthread

LevelDB 1.22

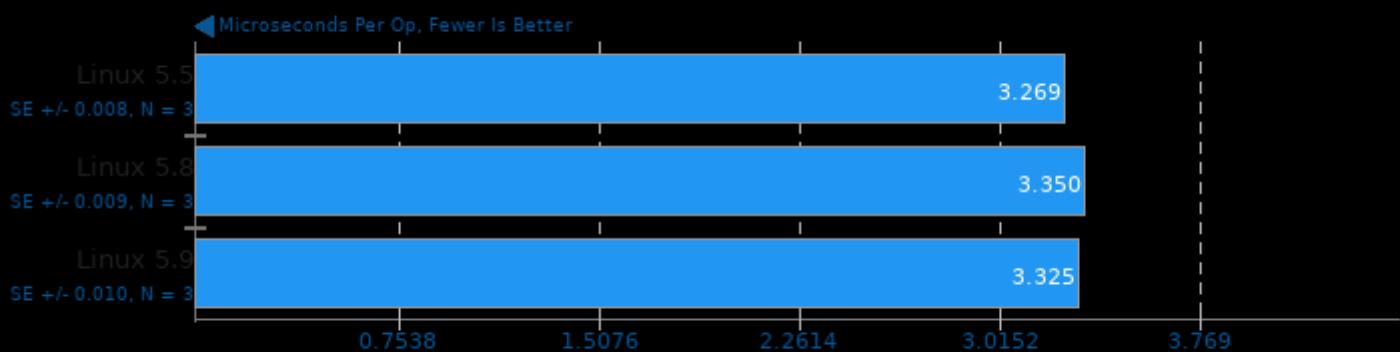
Benchmark: Random Fill



1. (CXX) g++ options: -O3 -lsnappy -lpthread

LevelDB 1.22

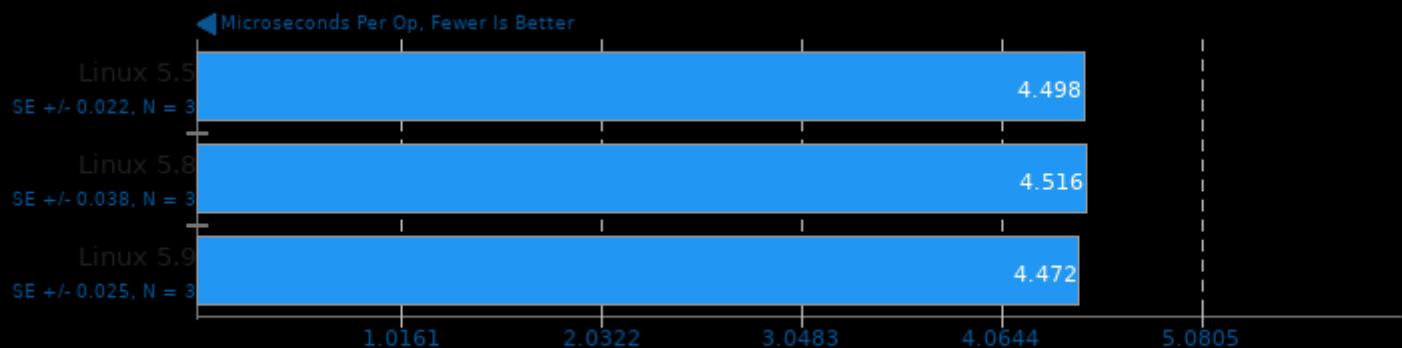
Benchmark: Random Read



1. (CXX) g++ options: -O3 -lsnappy -lpthread

LevelDB 1.22

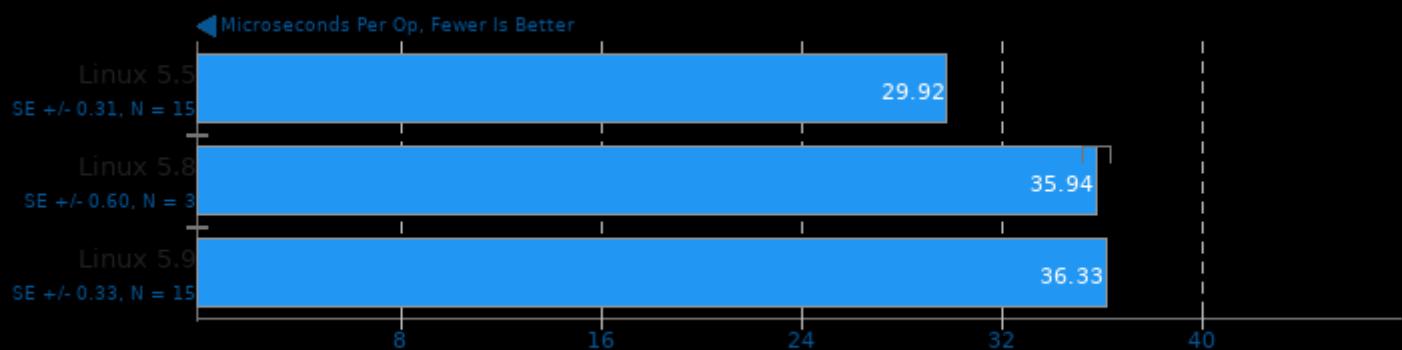
Benchmark: Seek Random



1. (CXX) g++ options: -O3 -lsnappy -lpthread

LevelDB 1.22

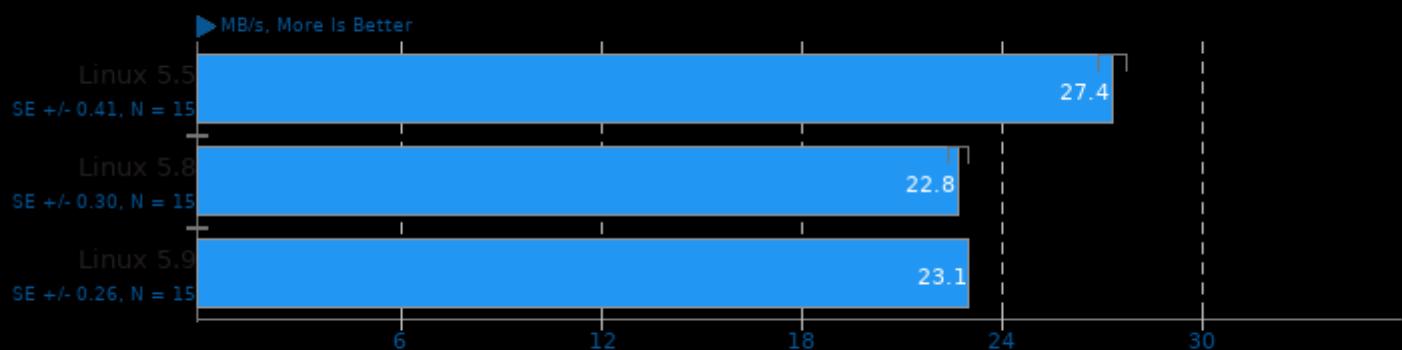
Benchmark: Random Delete



1. (CXX) g++ options: -O3 -lsnappy -lpthread

LevelDB 1.22

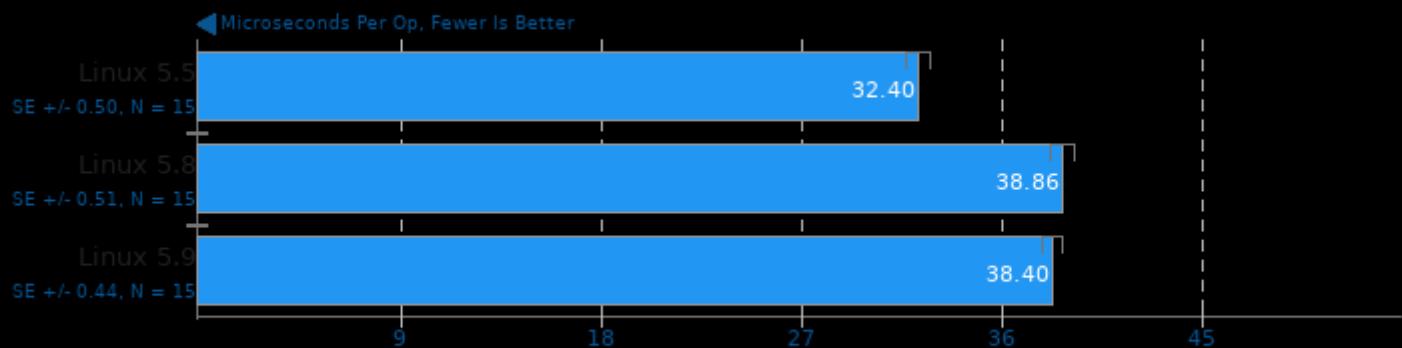
Benchmark: Sequential Fill



1. (CXX) g++ options: -O3 -lsnappy -lpthread

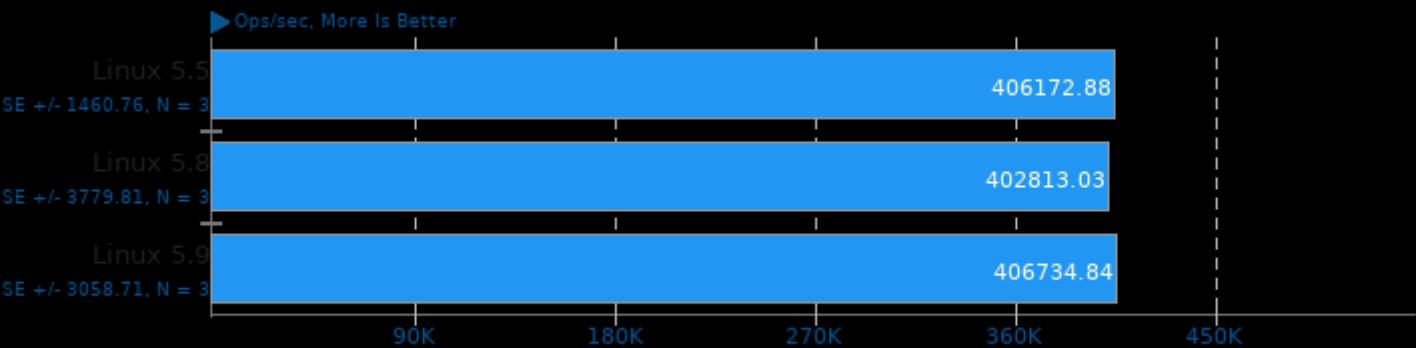
LevelDB 1.22

Benchmark: Sequential Fill



1. (CXX) g++ options: -O3 -lsnappy -lpthread

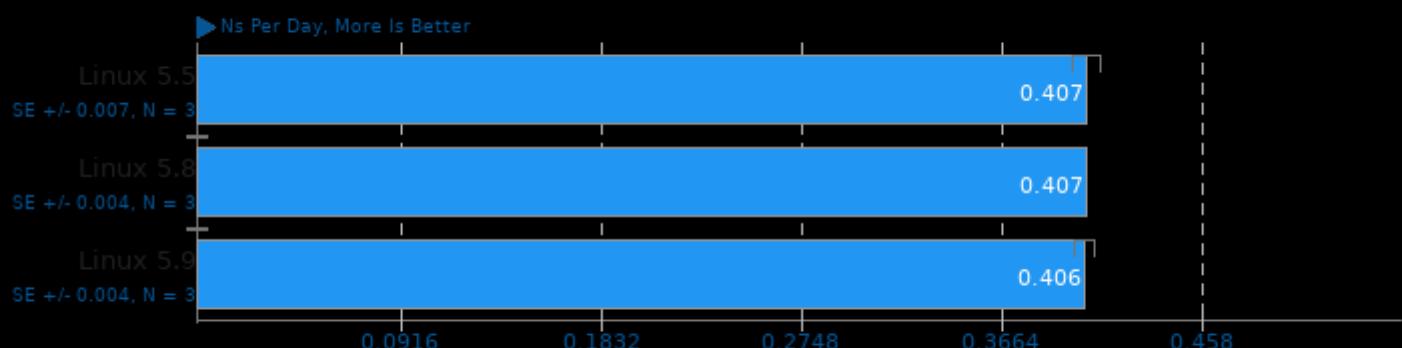
KeyDB 6.0.16



1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcre

GROMACS 2020.3

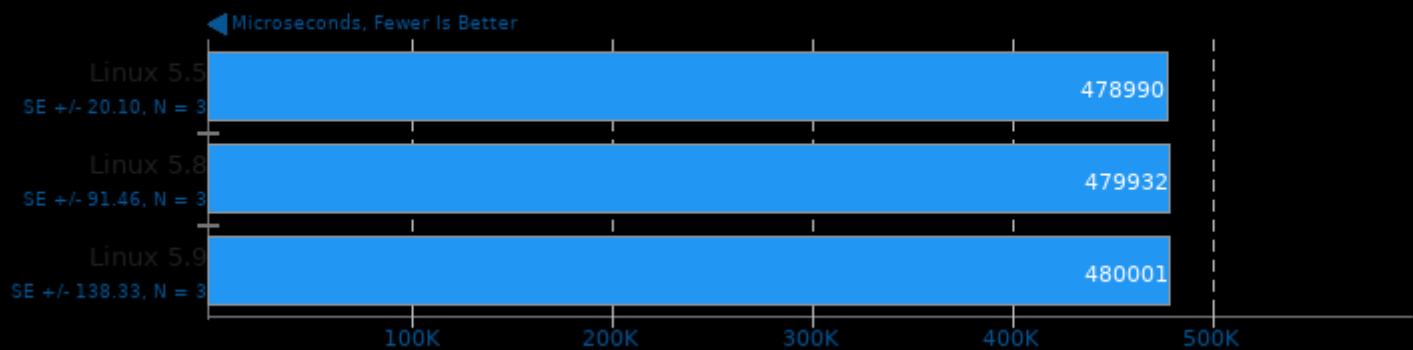
Water Benchmark



1. (CXX) g++ options: -O3 -pthread -Irt -lpthread -lm

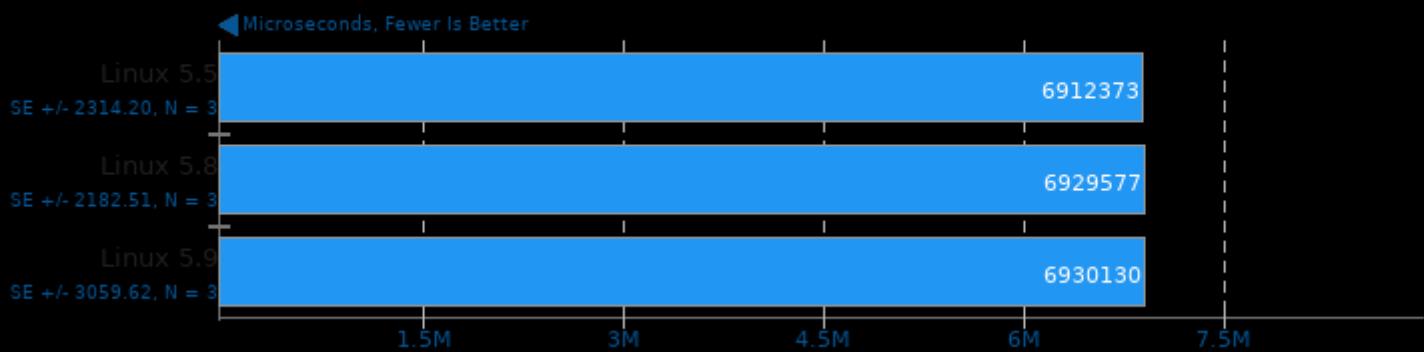
TensorFlow Lite 2020-08-23

Model: SqueezeNet



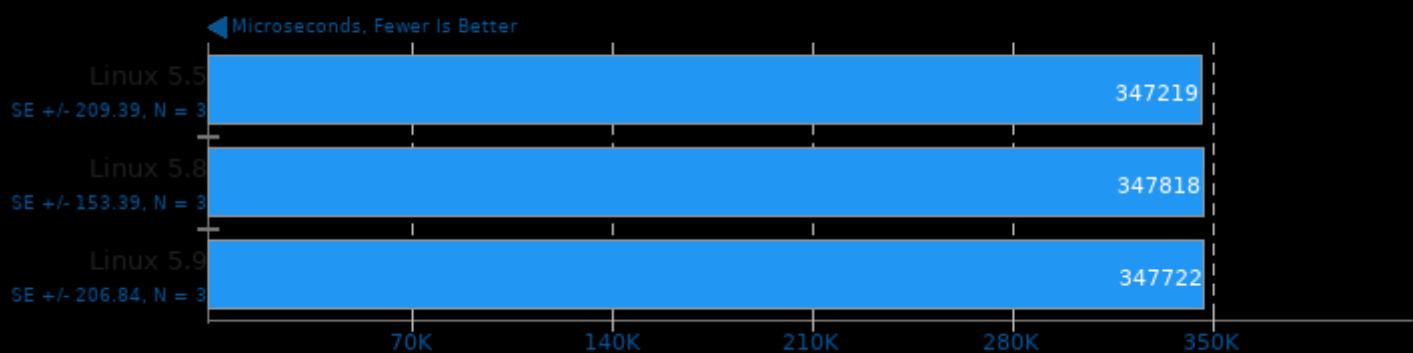
TensorFlow Lite 2020-08-23

Model: Inception V4



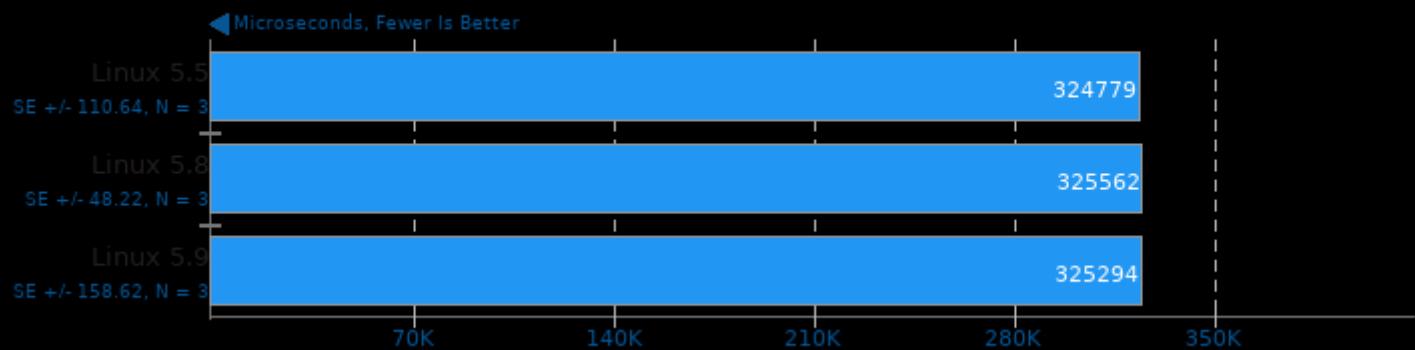
TensorFlow Lite 2020-08-23

Model: NASNet Mobile



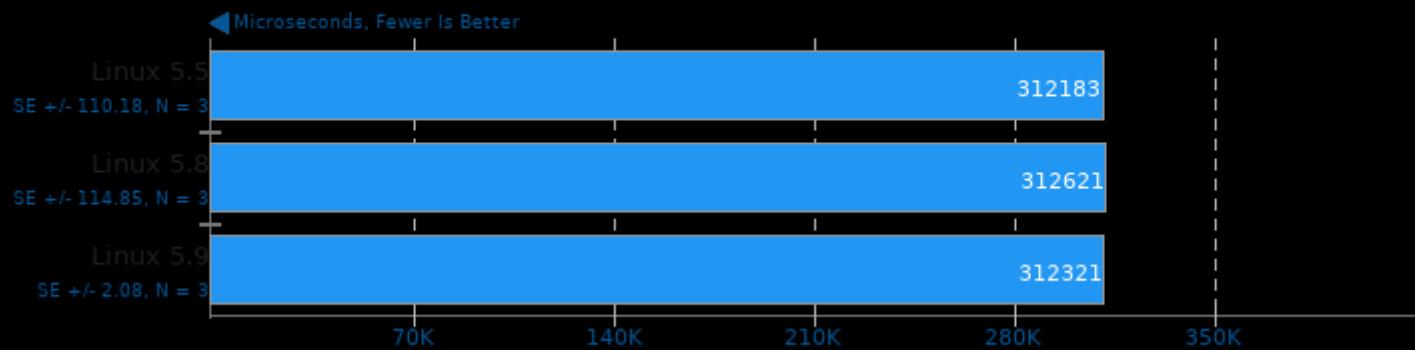
TensorFlow Lite 2020-08-23

Model: Mobilenet Float



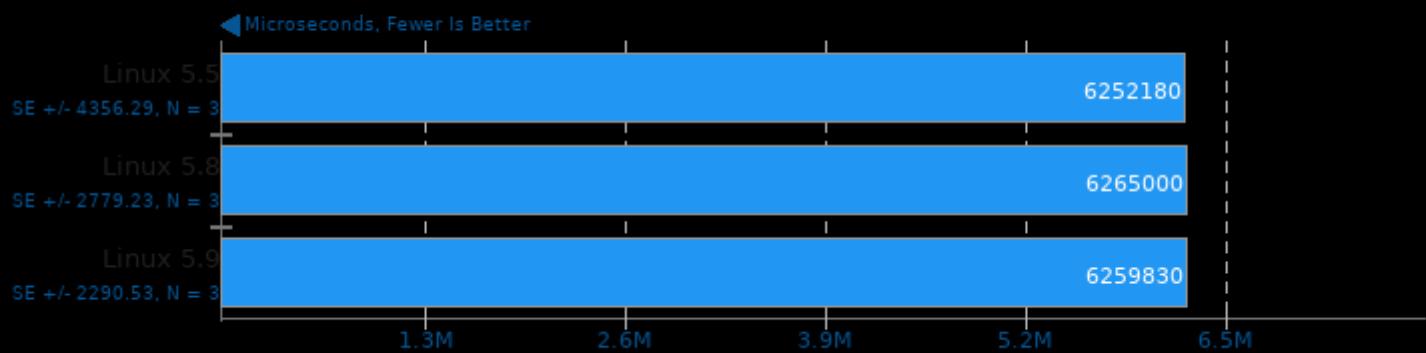
TensorFlow Lite 2020-08-23

Model: Mobilenet Quant



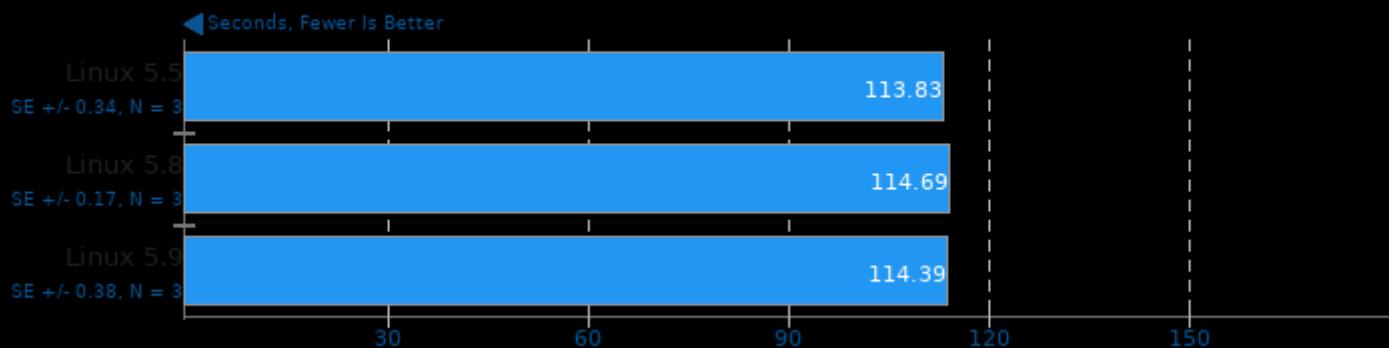
TensorFlow Lite 2020-08-23

Model: Inception ResNet V2



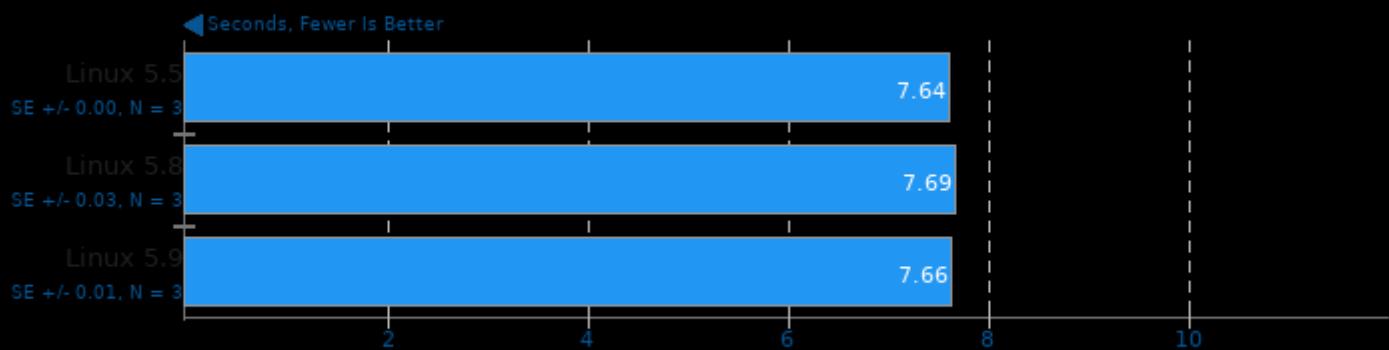
Tensorflow

Build: Cifar10



ASTC Encoder 2.0

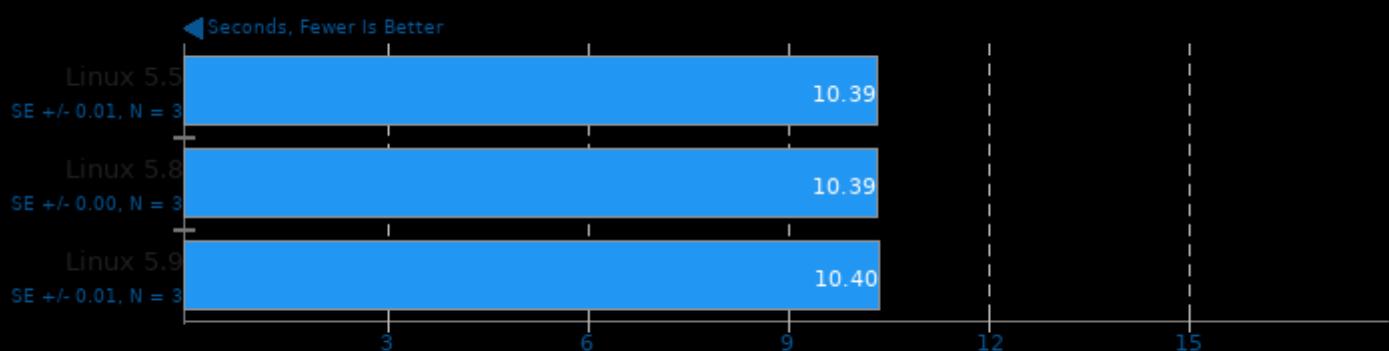
Preset: Fast



1. (CXX) g++ options: -std=c++14 -fvisibility=hidden -O3 -fno-math-errno -mfpmath=sse -mavx2 -mpopcnt -lpthread

ASTC Encoder 2.0

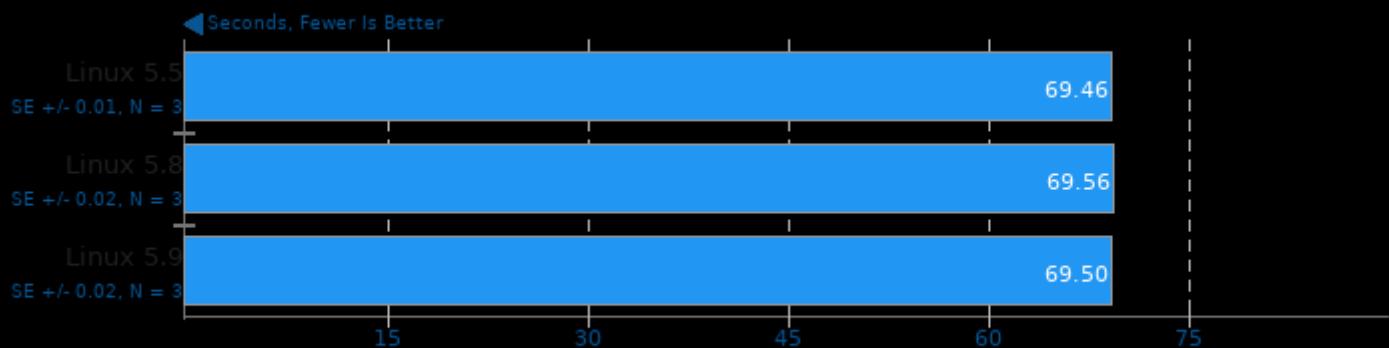
Preset: Medium



1. (CXX) g++ options: -std=c++14 -fvisibility=hidden -O3 -fno-math-errno -mfpmath=sse -mavx2 -mpopcnt -lpthread

ASTC Encoder 2.0

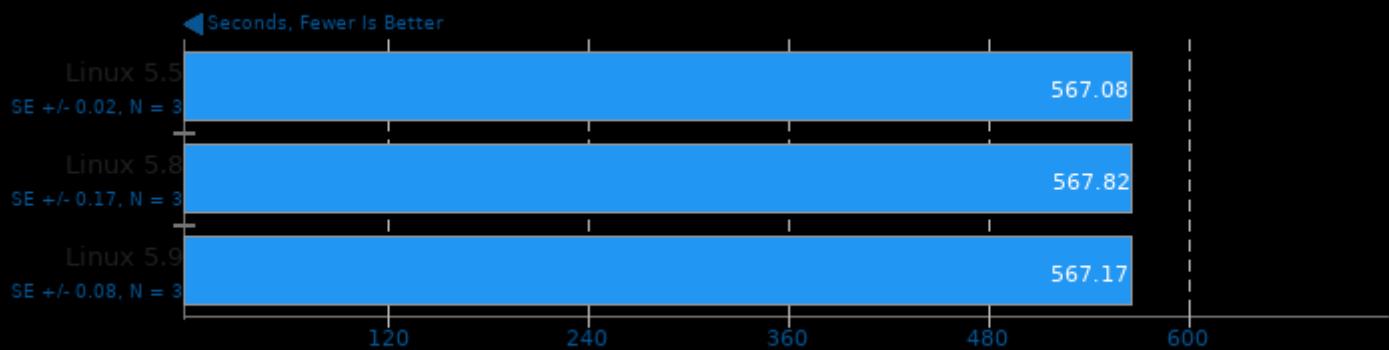
Preset: Thorough



1. (CXX) g++ options: -std=c++14 -fvisibility=hidden -O3 -fno-math-errno -mfpmath=sse -mavx2 -mpopcnt -lpthread

ASTC Encoder 2.0

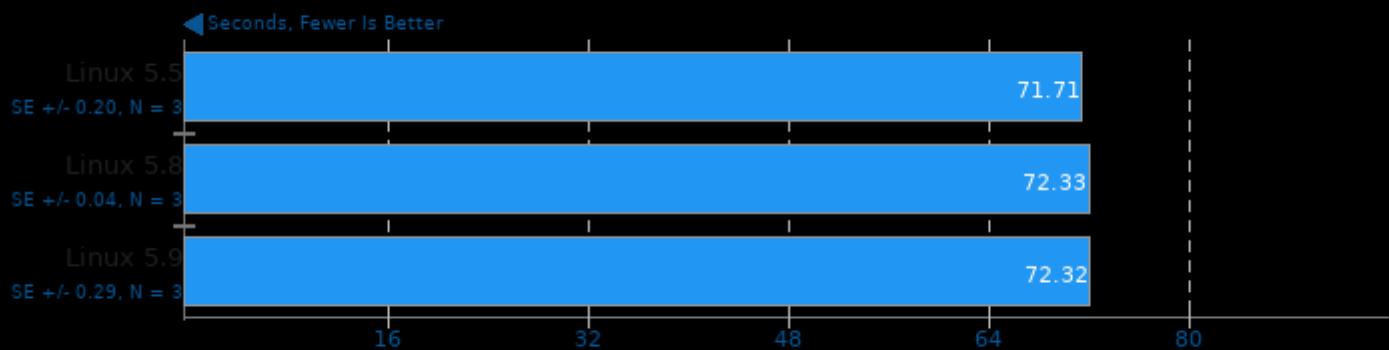
Preset: Exhaustive



1. (CXX) g++ options: -std=c++14 -fvisibility=hidden -O3 -fno-math-errno -mfpmath=sse -mavx2 -mpopcnt -lpthread

Basis Universal 1.12

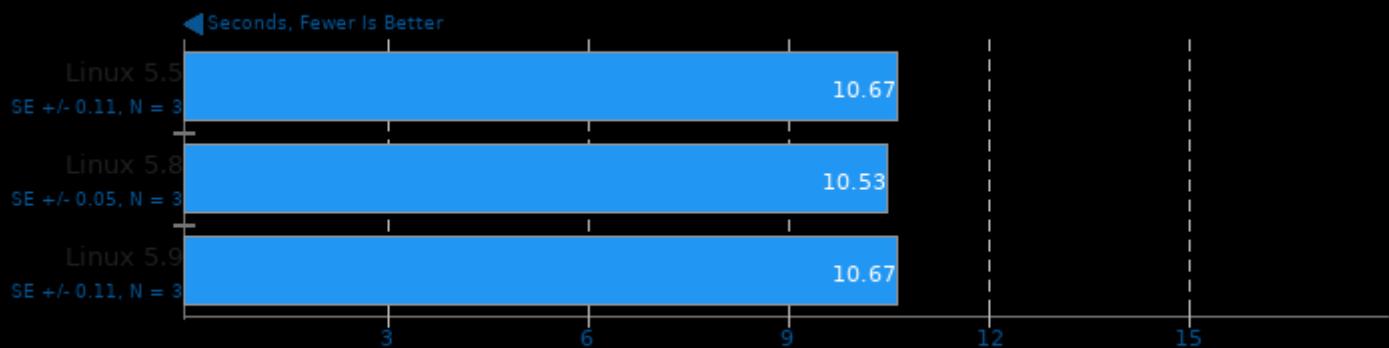
Settings: ETC1S



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

Basis Universal 1.12

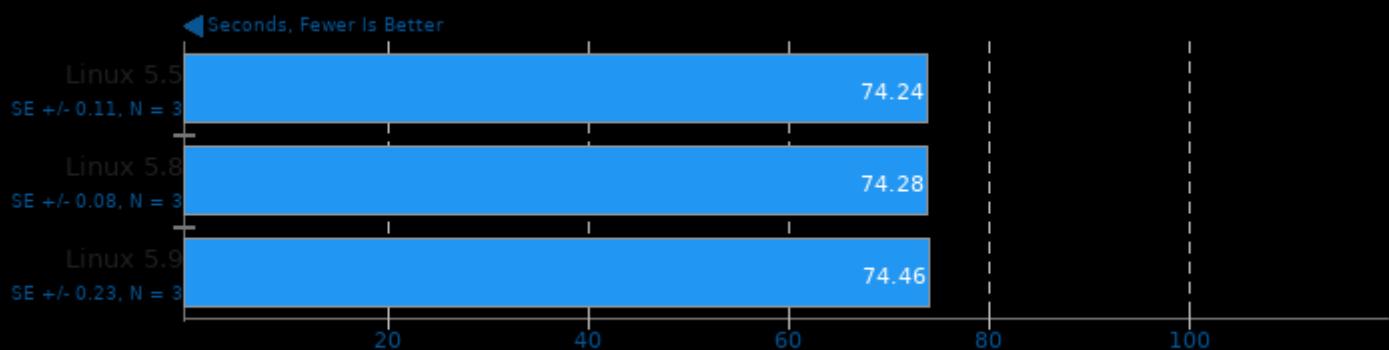
Settings: UASTC Level 0



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

Basis Universal 1.12

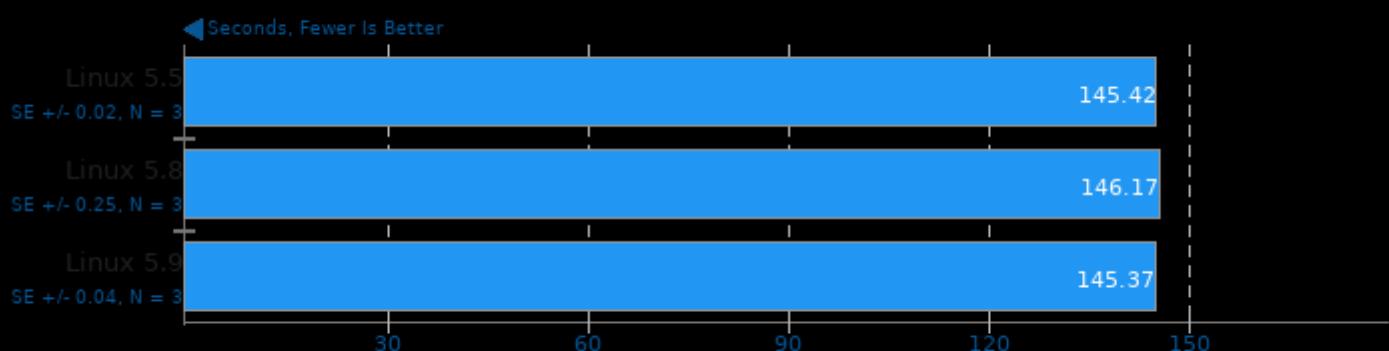
Settings: UASTC Level 2



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

Basis Universal 1.12

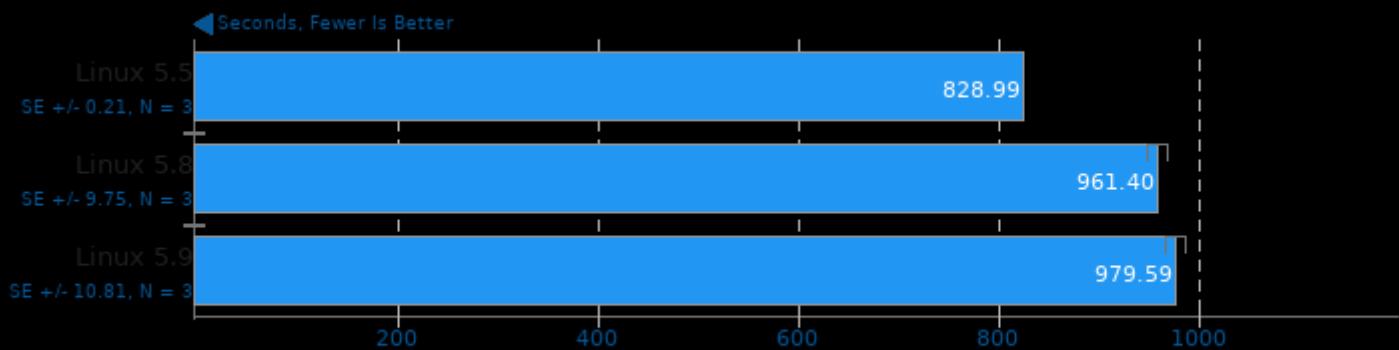
Settings: UASTC Level 3



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

Basis Universal 1.12

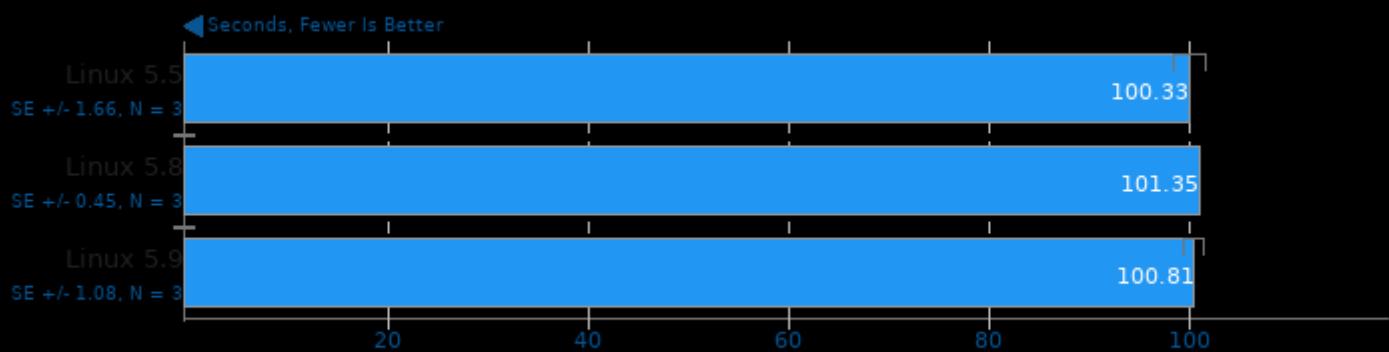
Settings: UASTC Level 2 + RDO Post-Processing



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

G'MIC

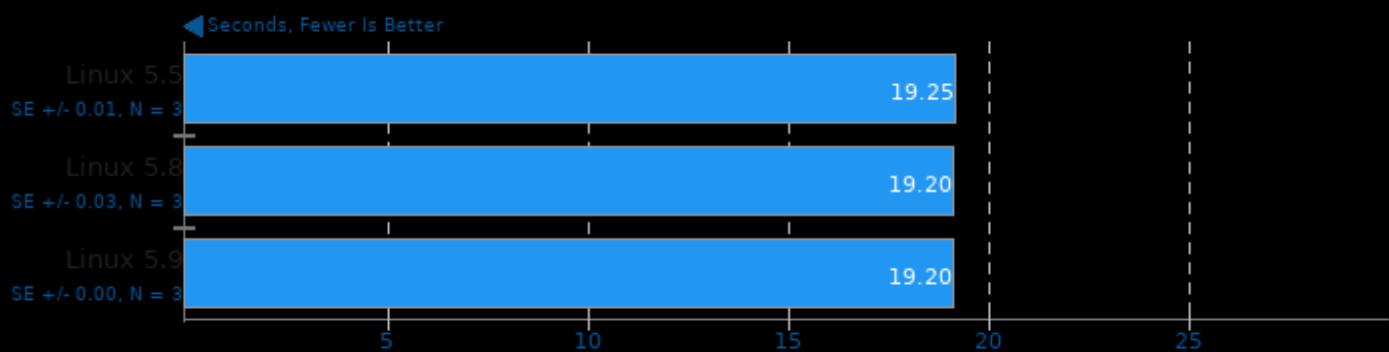
Test: 2D Function Plotting, 1000 Times



1. Version 2.4.5, Copyright (c) 2008-2019, David Tschumperle.

G'MIC

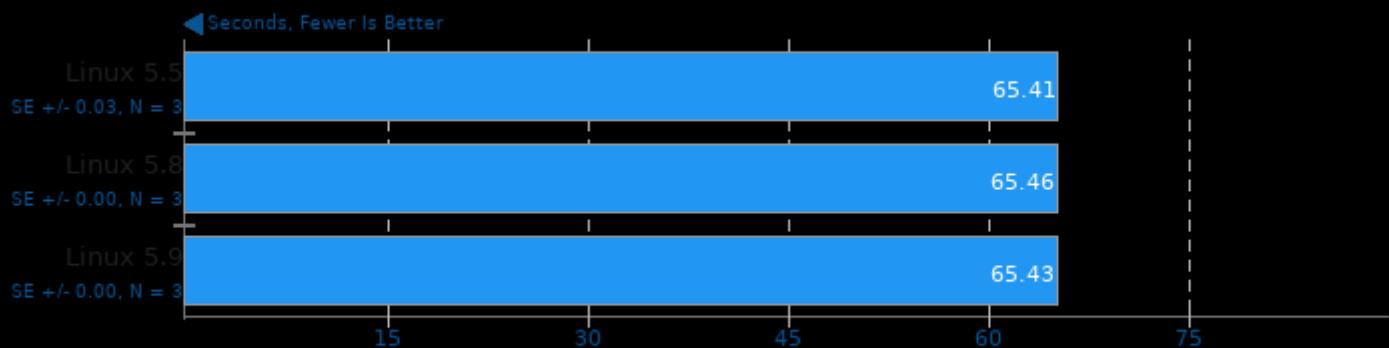
Test: Plotting Isosurface Of A 3D Volume, 1000 Times



1. Version 2.4.5, Copyright (c) 2008-2019, David Tschumperle.

G'MIC

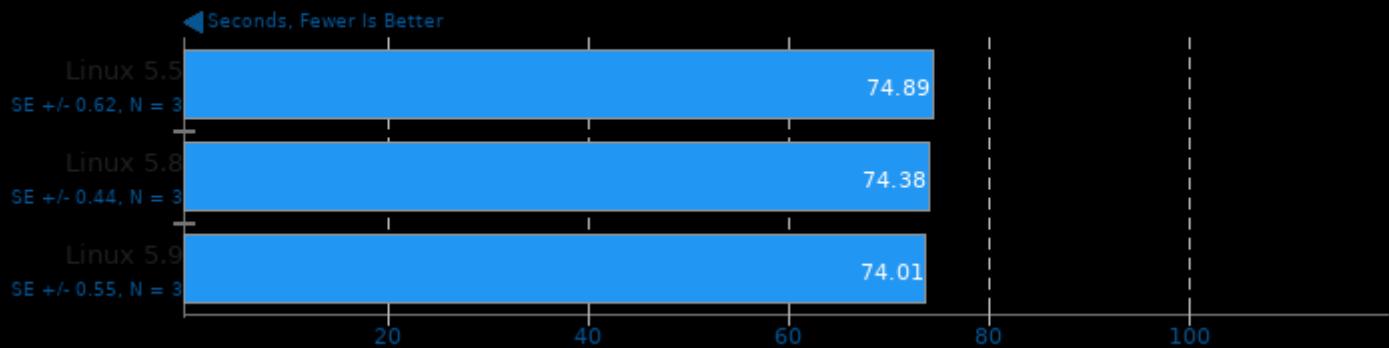
Test: 3D Elevated Function In Random Colors, 100 Times



1. Version 2.4.5, Copyright (c) 2008-2019, David Tschumperle.

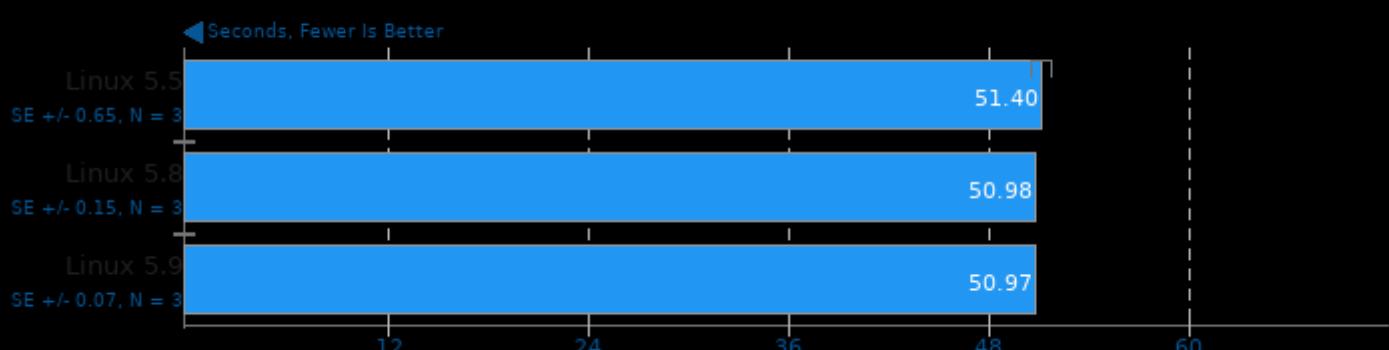
Hugin

Panorama Photo Assistant + Stitching Time

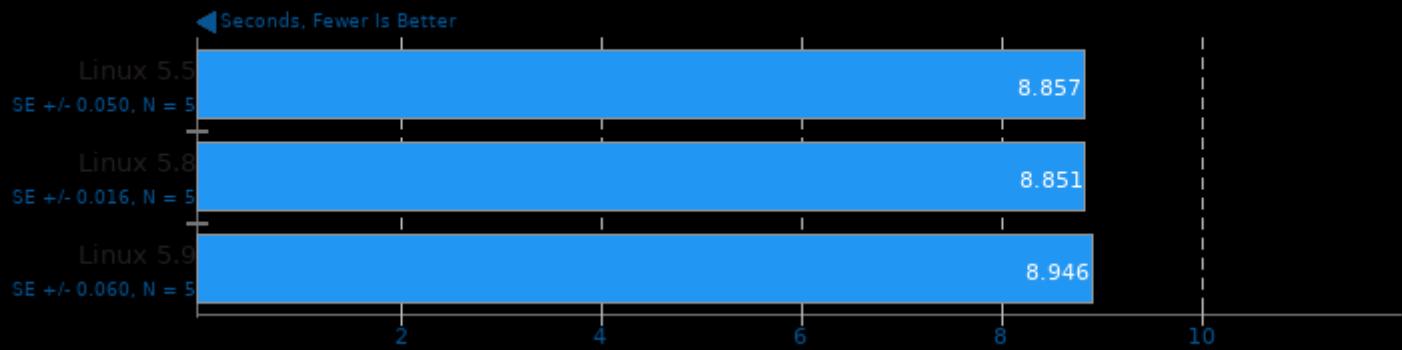


OCRMypdf 9.0.3+dfsg

Processing 60 Page PDF Document

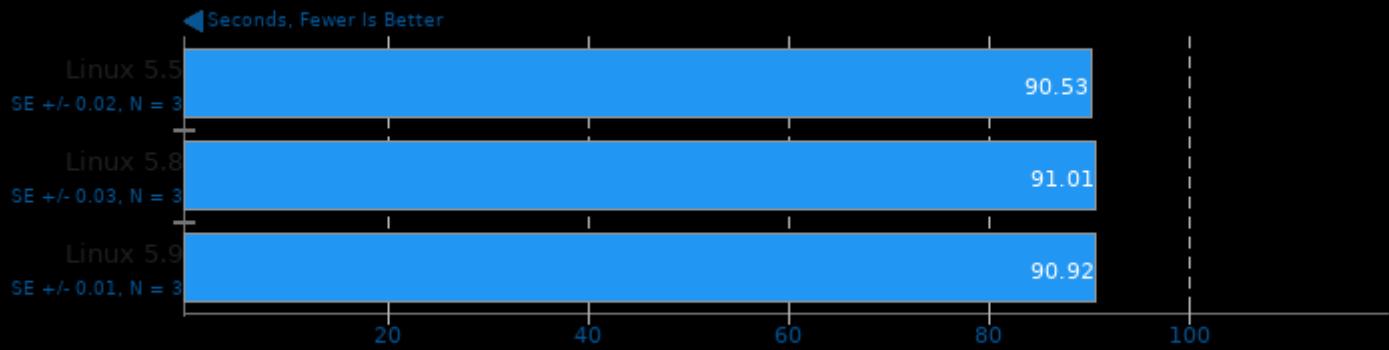


GNU Octave Benchmark 4.4.1



RawTherapee

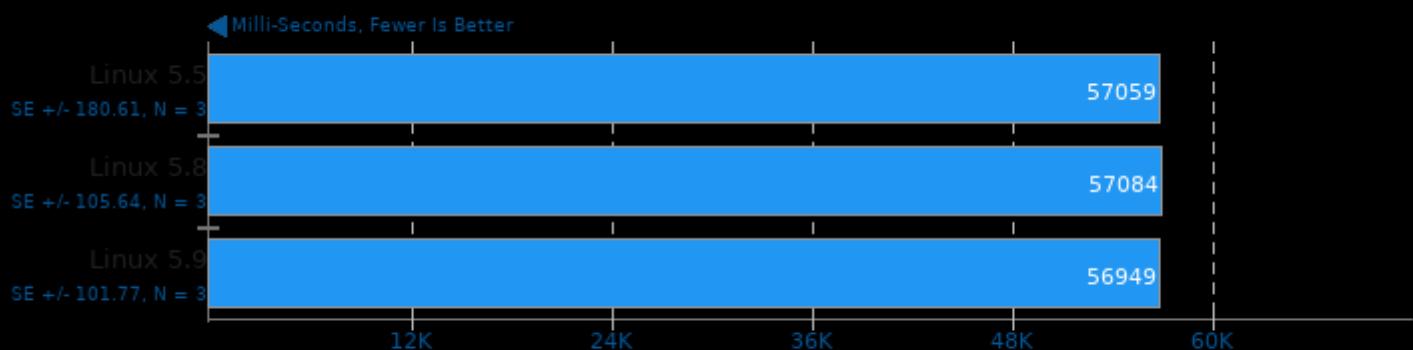
Total Benchmark Time



1. RawTherapee, version 5.6, command line.

Caffe 2020-02-13

Model: AlexNet - Acceleration: CPU - Iterations: 100

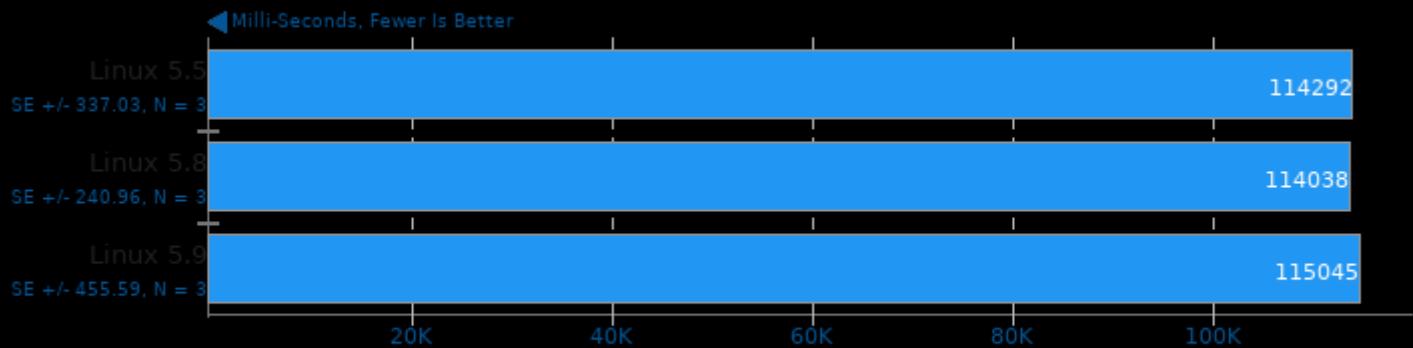


1. (CXX) g++ options: -fPIC -O3 -rdynamic -lboost_system -lboost_thread -lboost_filesystem -lboost_chrono -lboost_date_time -lboost_atomic -llog -lgfl

Core i7 4790K Haswell Intel Linux

Caffe 2020-02-13

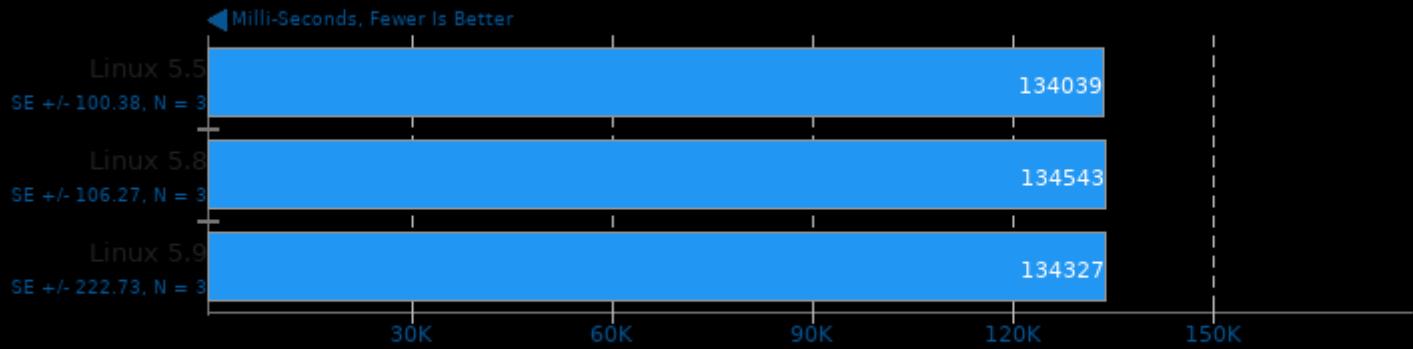
Model: AlexNet - Acceleration: CPU - Iterations: 200



1. (CXX) g++ options: -fPIC -O3 -rdynamic -lboost_system -lboost_thread -lboost_filesystem -lboost_chrono -lboost_date_time -lboost_atomic -lglog -lgfl

Caffe 2020-02-13

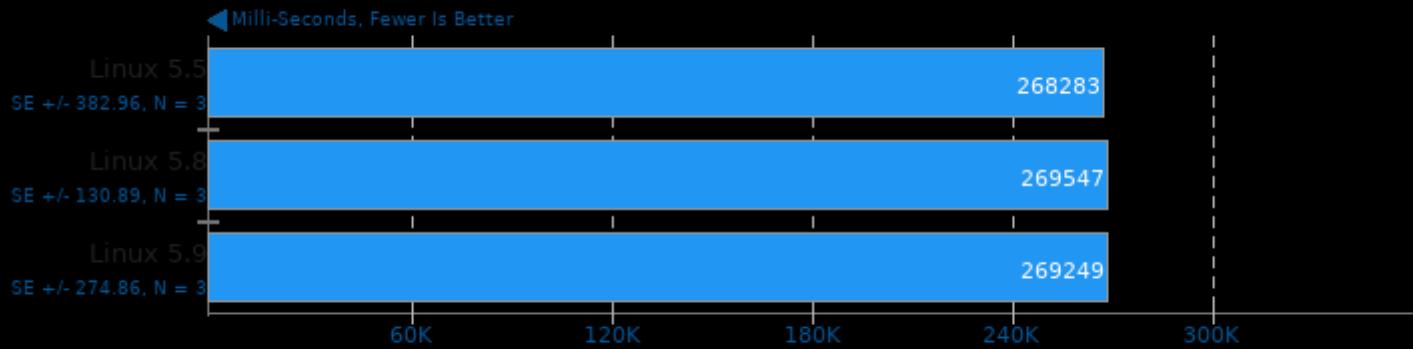
Model: GoogleNet - Acceleration: CPU - Iterations: 100



1. (CXX) g++ options: -fPIC -O3 -rdynamic -lboost_system -lboost_thread -lboost_filesystem -lboost_chrono -lboost_date_time -lboost_atomic -lglog -lgfl

Caffe 2020-02-13

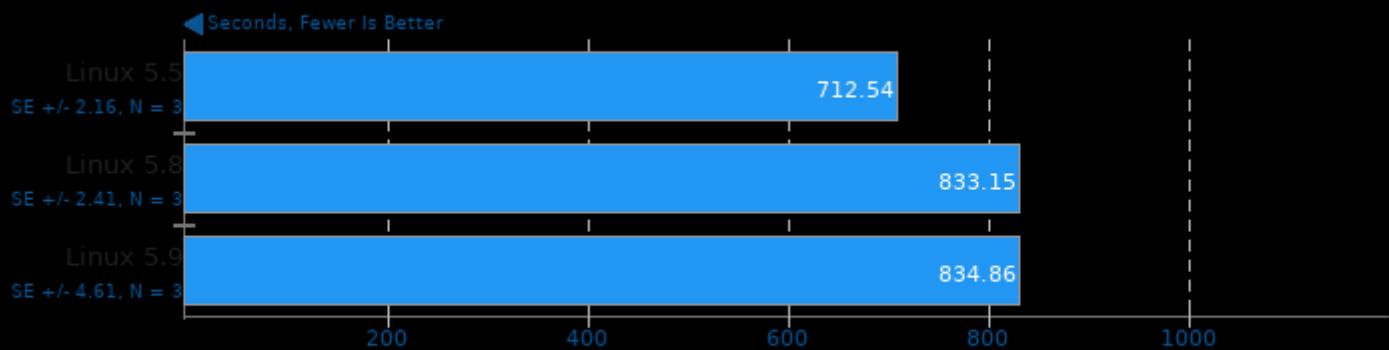
Model: GoogleNet - Acceleration: CPU - Iterations: 200



1. (CXX) g++ options: -fPIC -O3 -rdynamic -lboost_system -lboost_thread -lboost_filesystem -lboost_chrono -lboost_date_time -lboost_atomic -lglog -lgfl

GPAW 20.1

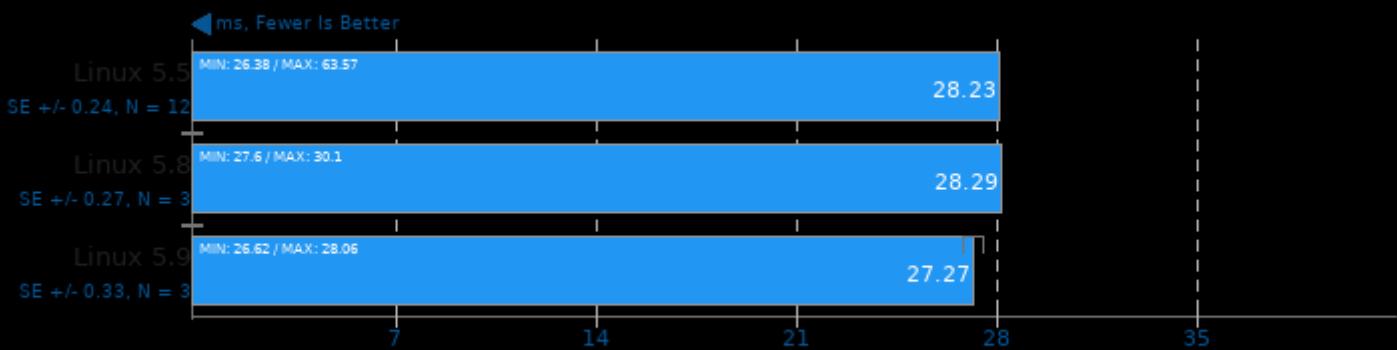
Input: Carbon Nanotube



1. (CC) gcc options: -pthread -shared -lxc -lblas -lmpi

NCNN 20200916

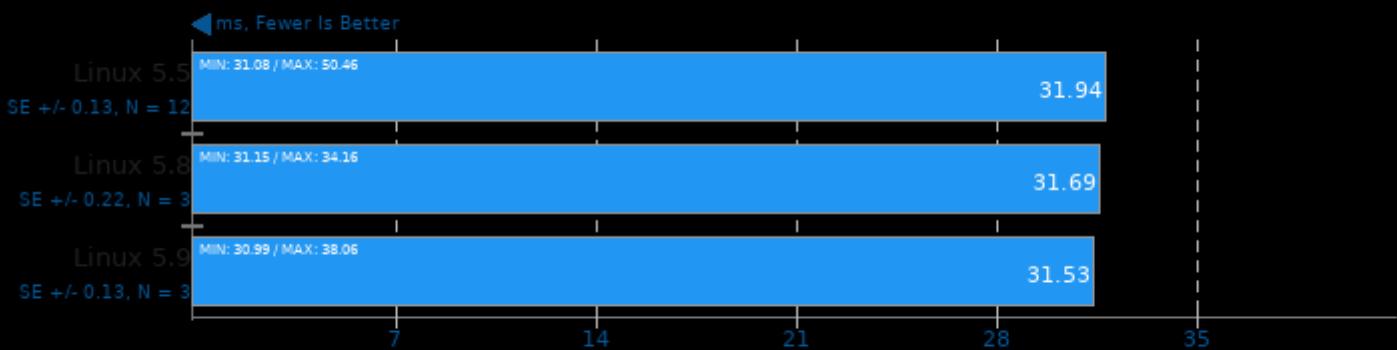
Target: CPU - Model: squeezenet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

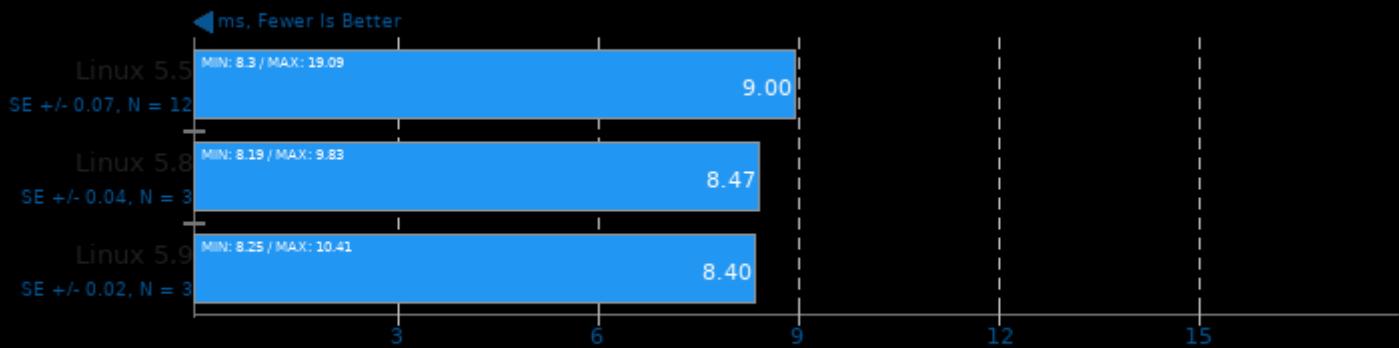
Target: CPU - Model: mobilenet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

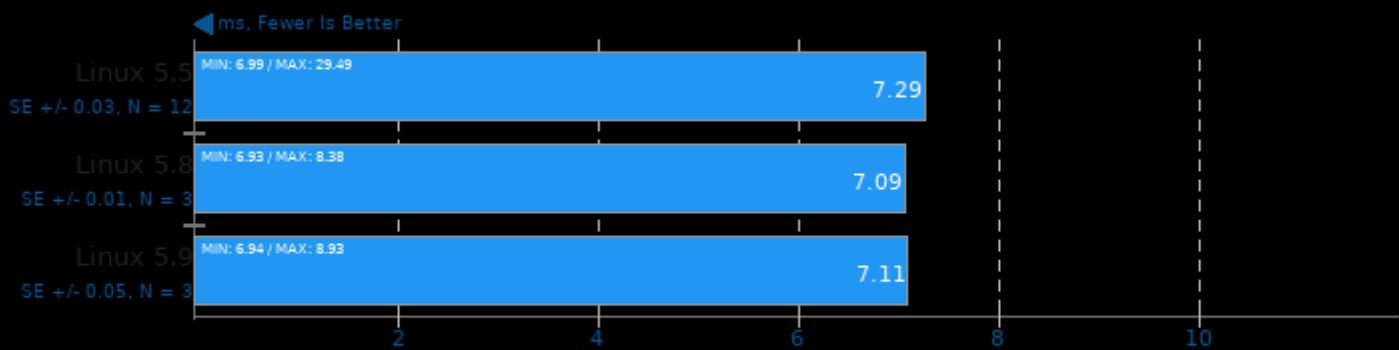
Target: CPU-v2-v2 - Model: mobilenet-v2



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

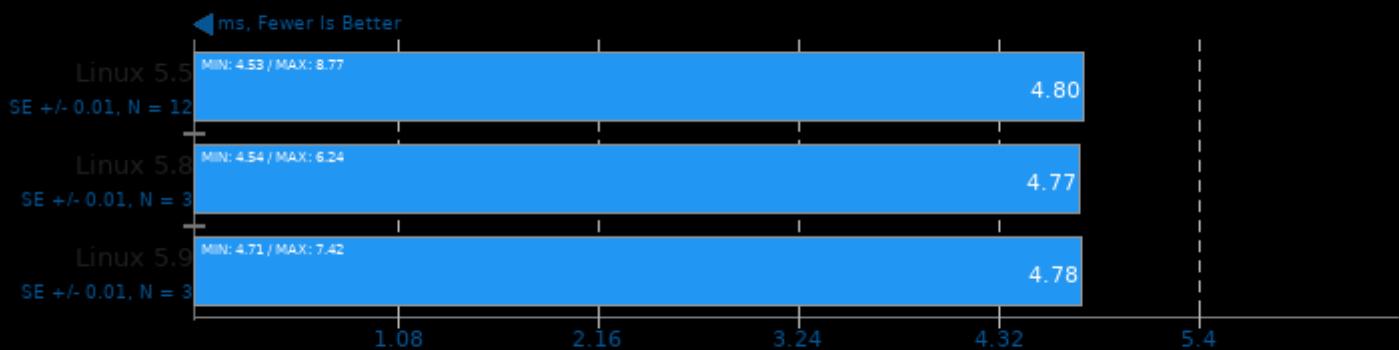
Target: CPU-v3-v3 - Model: mobilenet-v3



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

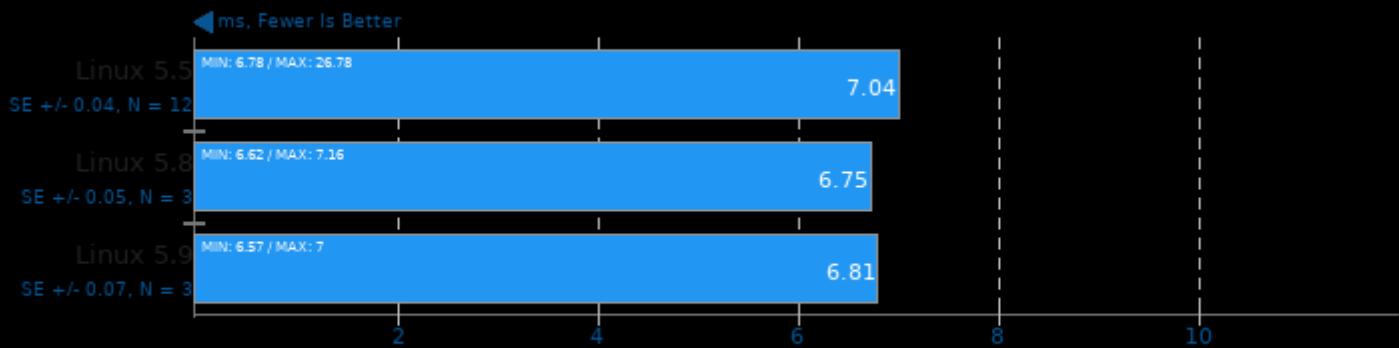
Target: CPU - Model: shufflenet-v2



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

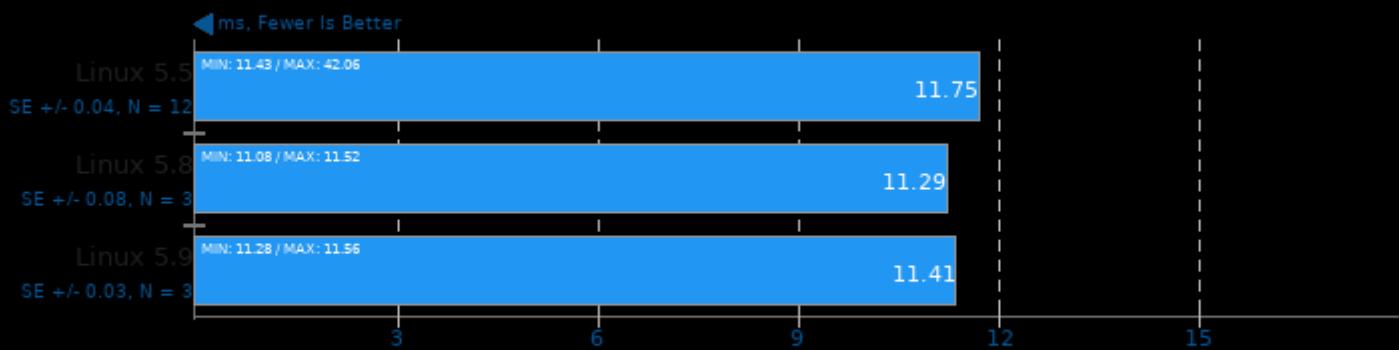
Target: CPU - Model: mnasnet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

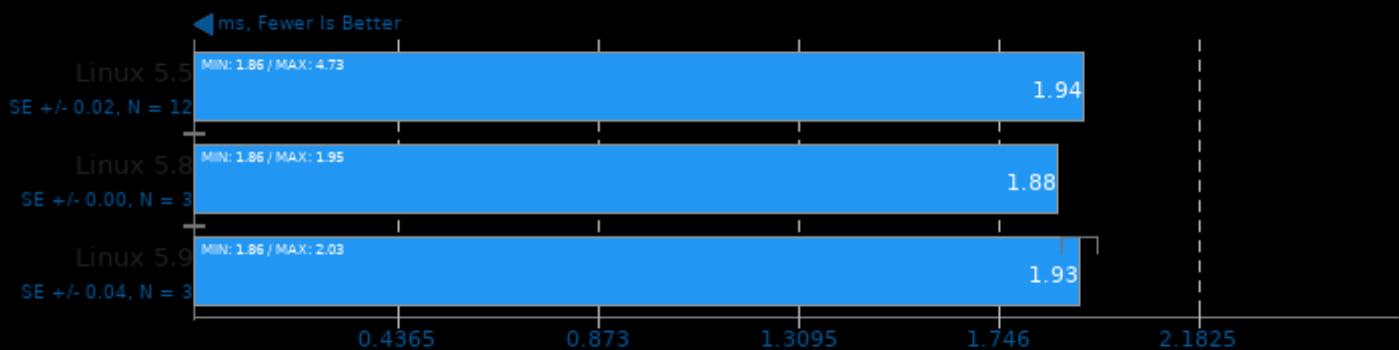
Target: CPU - Model: efficientnet-b0



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

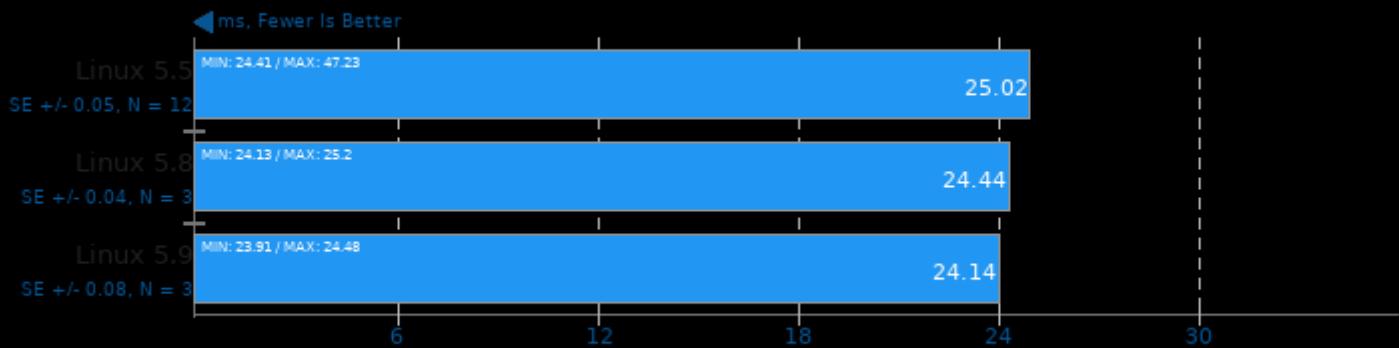
Target: CPU - Model: blazeface



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

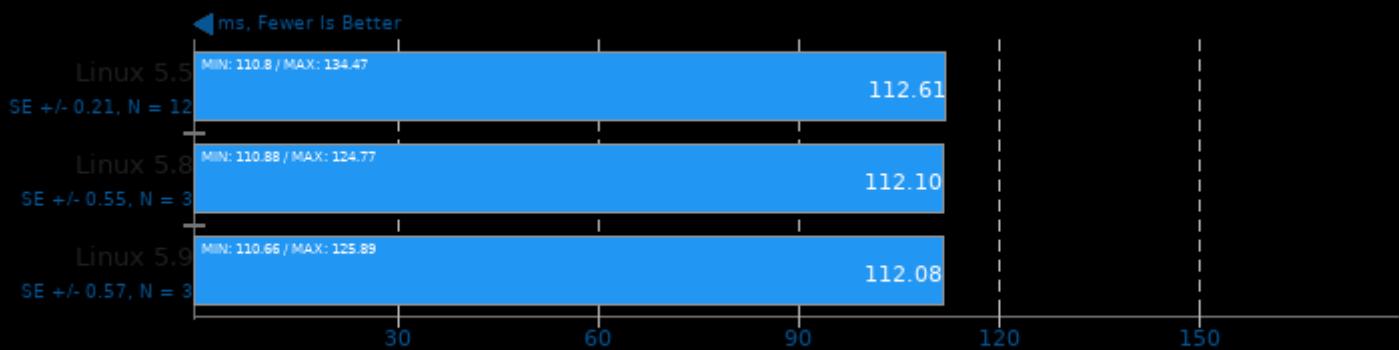
Target: CPU - Model: googlenet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

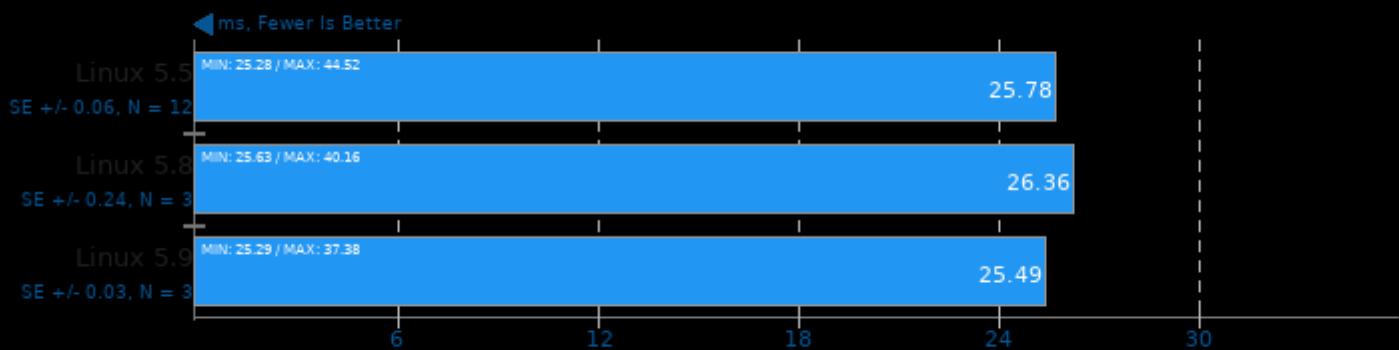
Target: CPU - Model: vgg16



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

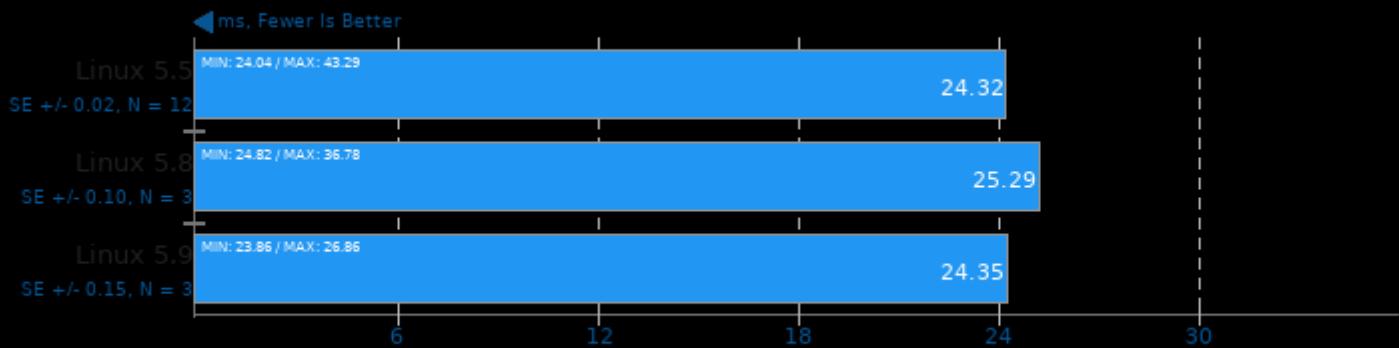
Target: CPU - Model: resnet18



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

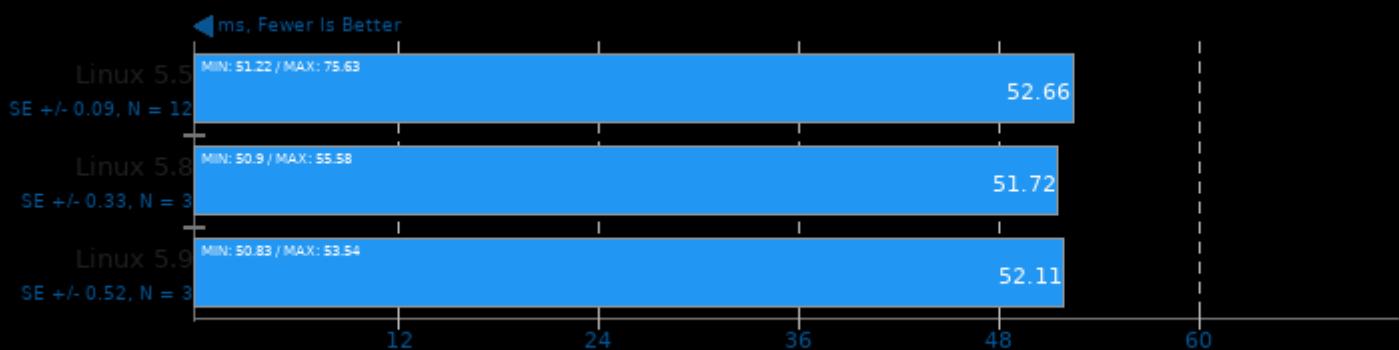
Target: CPU - Model: alexnet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

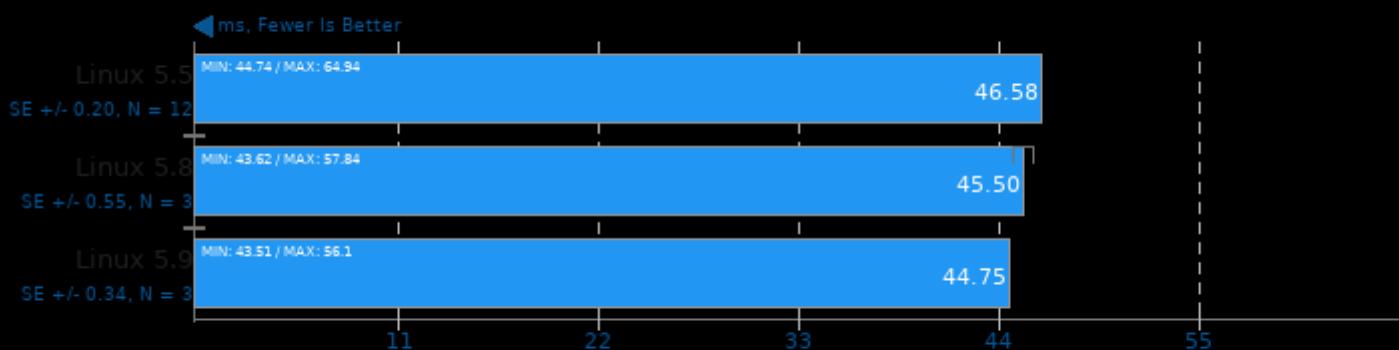
Target: CPU - Model: resnet50



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20200916

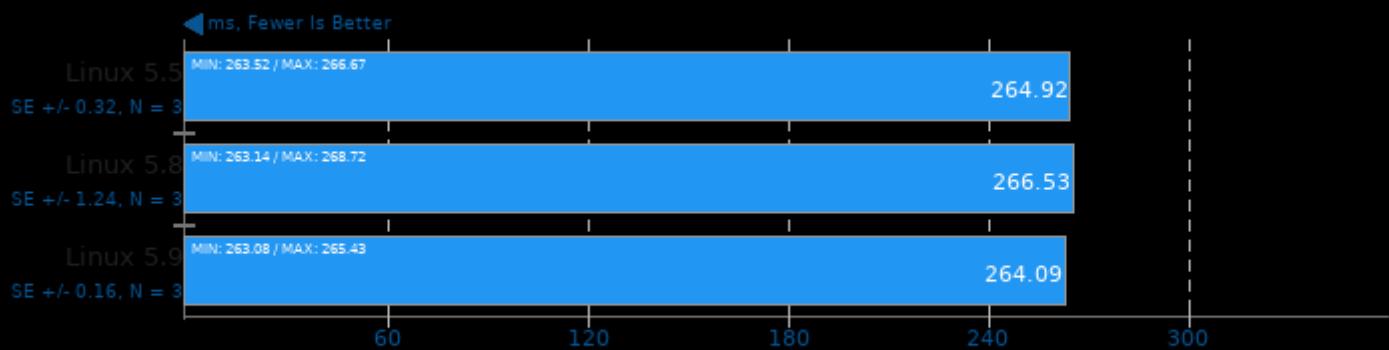
Target: CPU - Model: yolov4-tiny



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

TNN 0.2.3

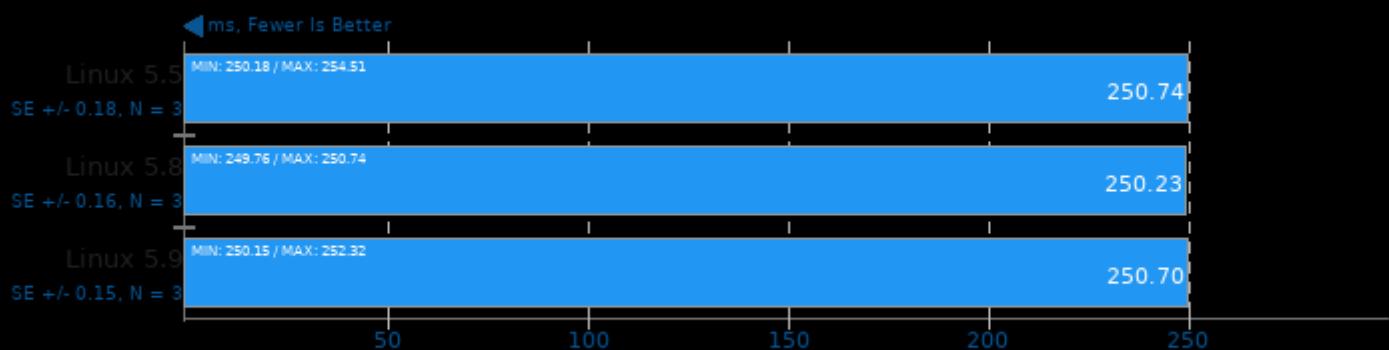
Target: CPU - Model: MobileNet v2



1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -O3 -rdynamic -ldl

TNN 0.2.3

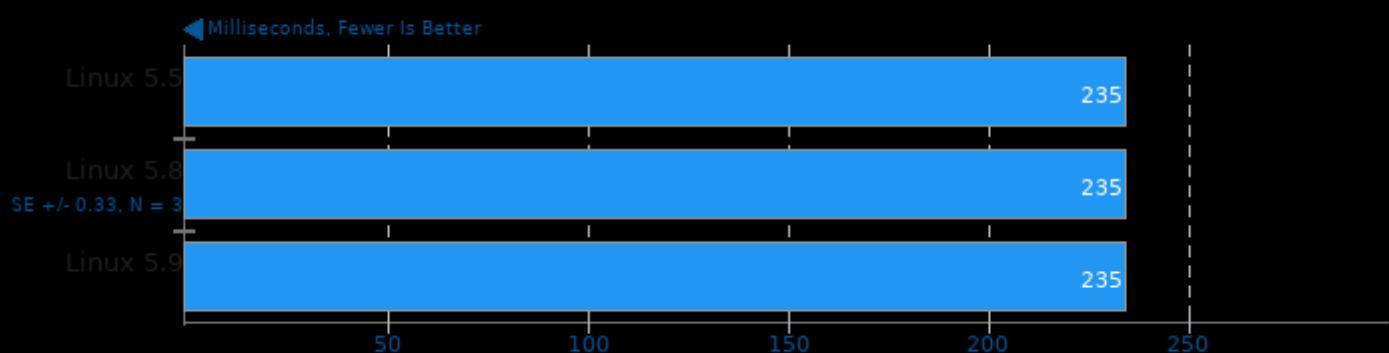
Target: CPU - Model: SqueezeNet v1.1



1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -O3 -rdynamic -ldl

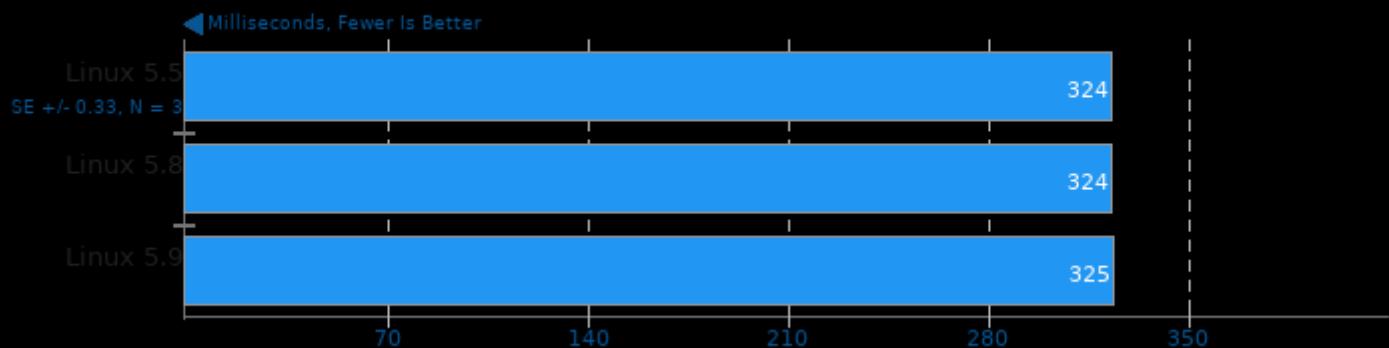
PyPerformance 1.0.0

Benchmark: go



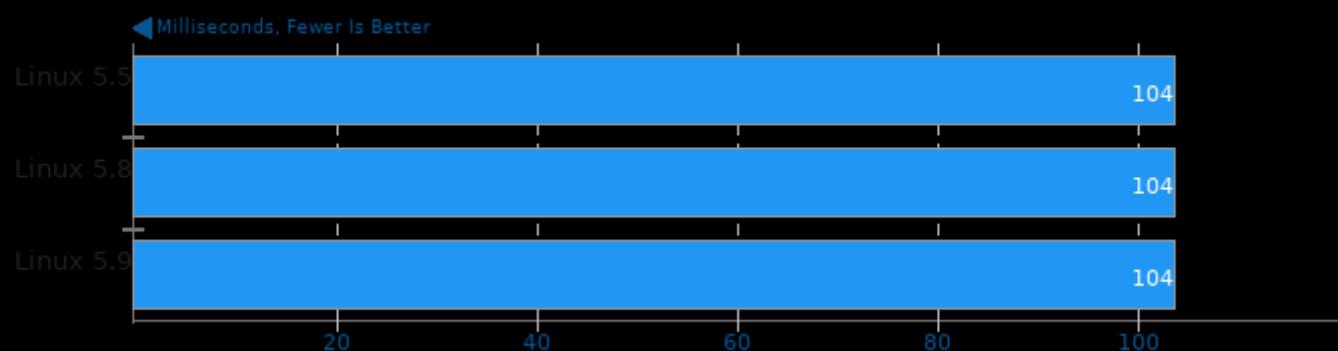
PyPerformance 1.0.0

Benchmark: 2to3



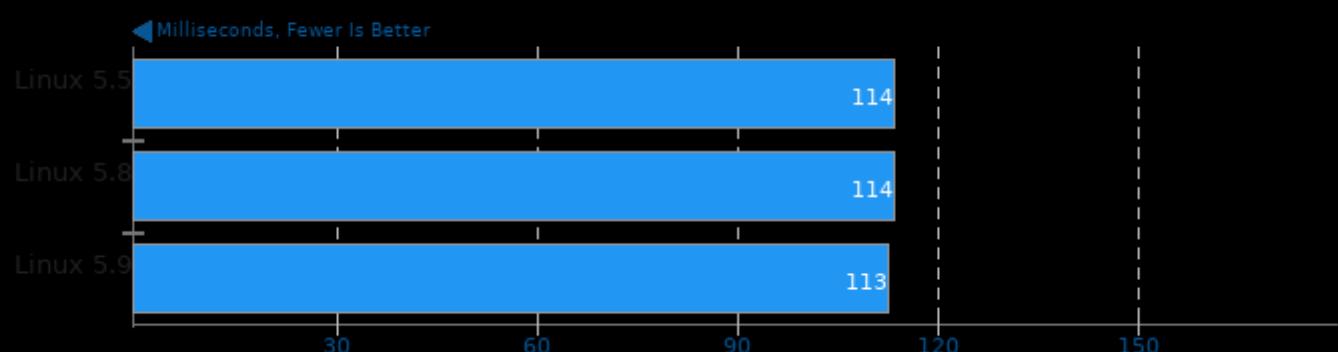
PyPerformance 1.0.0

Benchmark: chaos



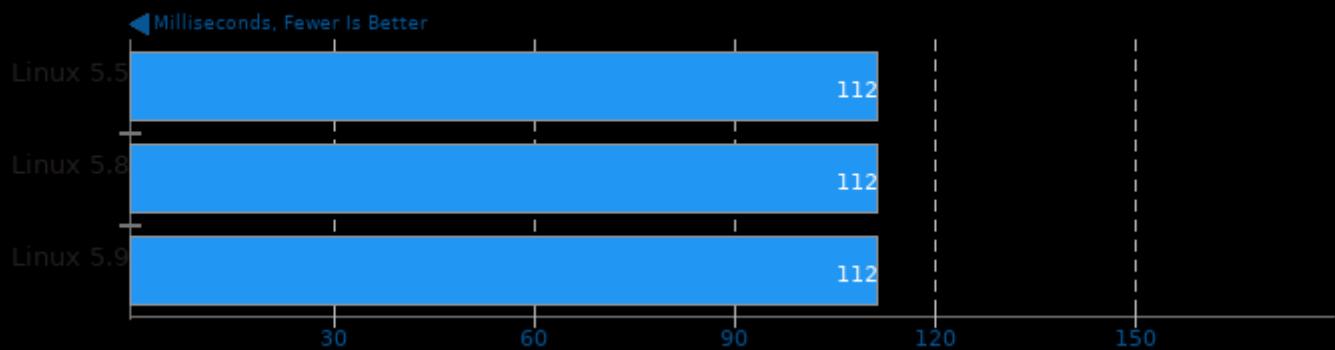
PyPerformance 1.0.0

Benchmark: float



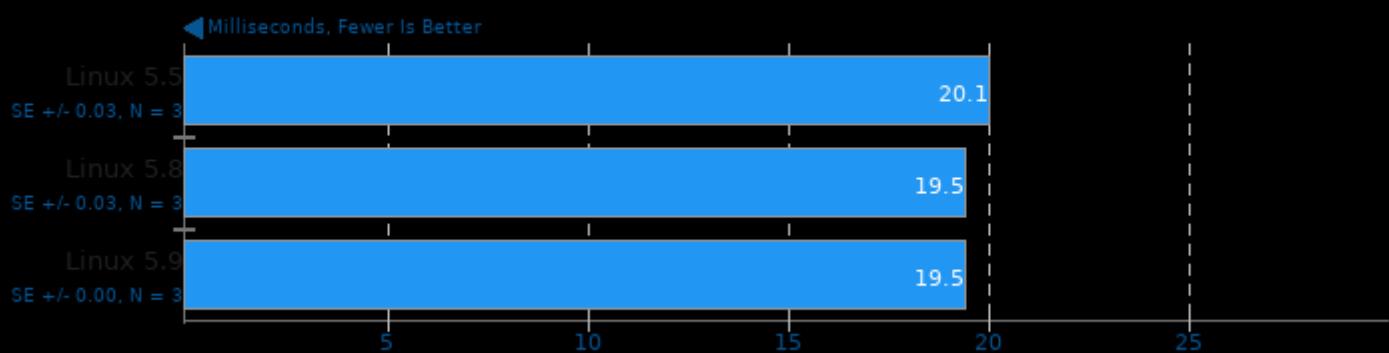
PyPerformance 1.0.0

Benchmark: nbody



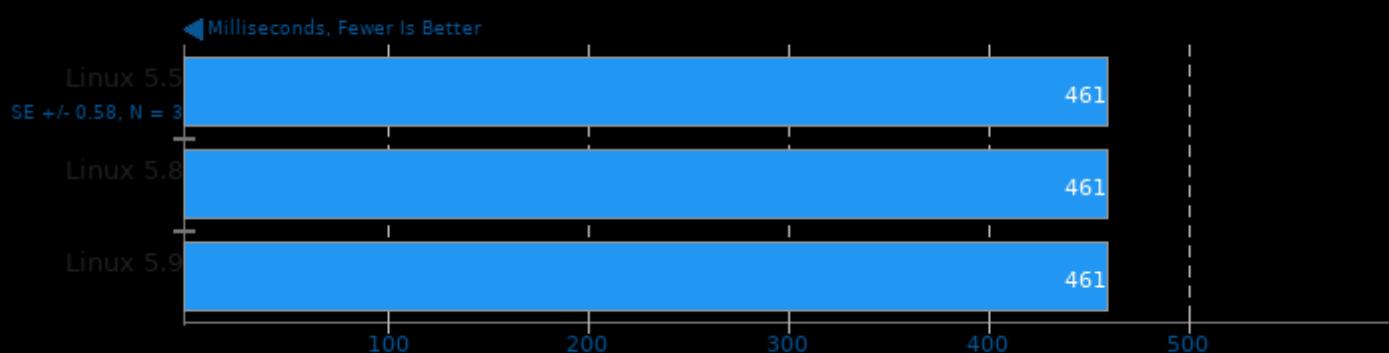
PyPerformance 1.0.0

Benchmark: pathlib



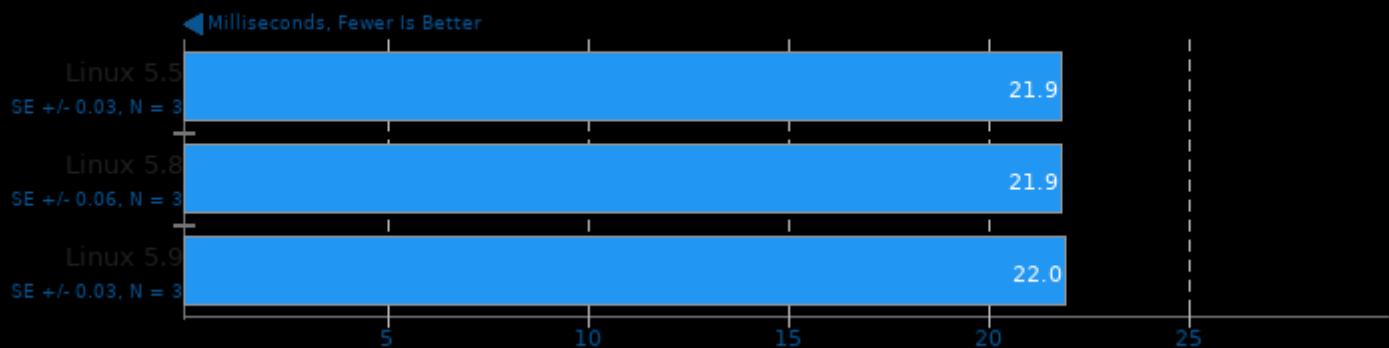
PyPerformance 1.0.0

Benchmark: raytrace



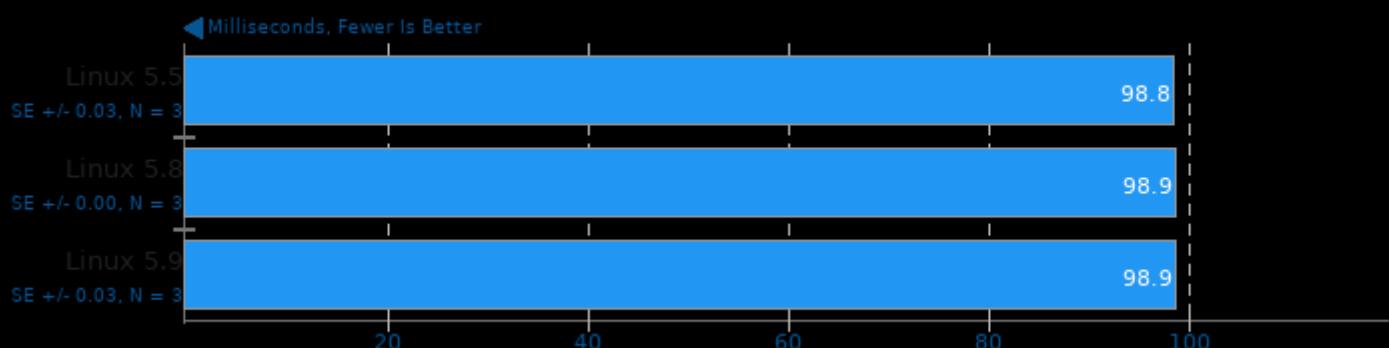
PyPerformance 1.0.0

Benchmark: json_loads



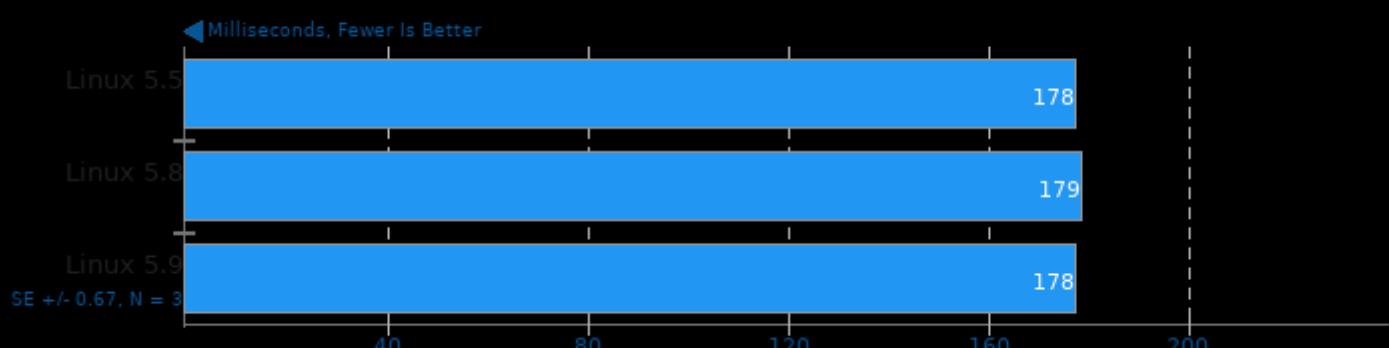
PyPerformance 1.0.0

Benchmark: crypto_pyaes



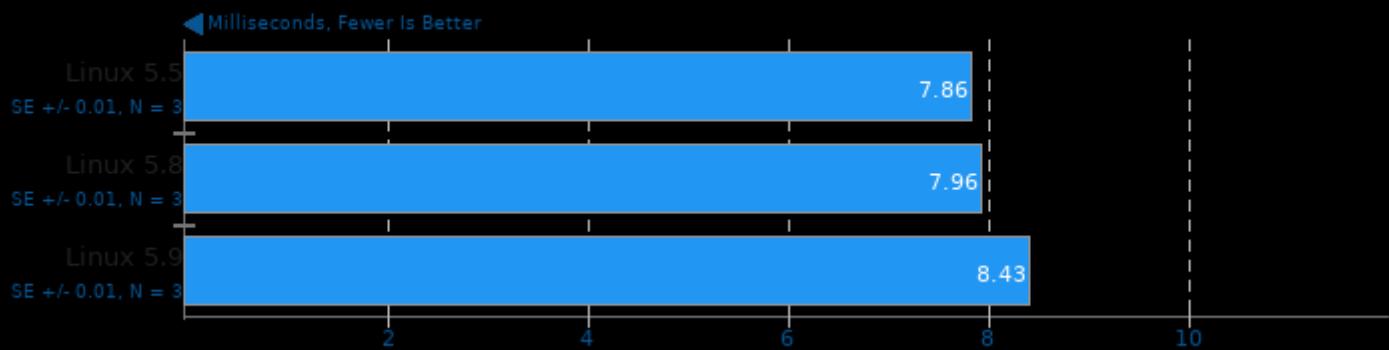
PyPerformance 1.0.0

Benchmark: regex_compile



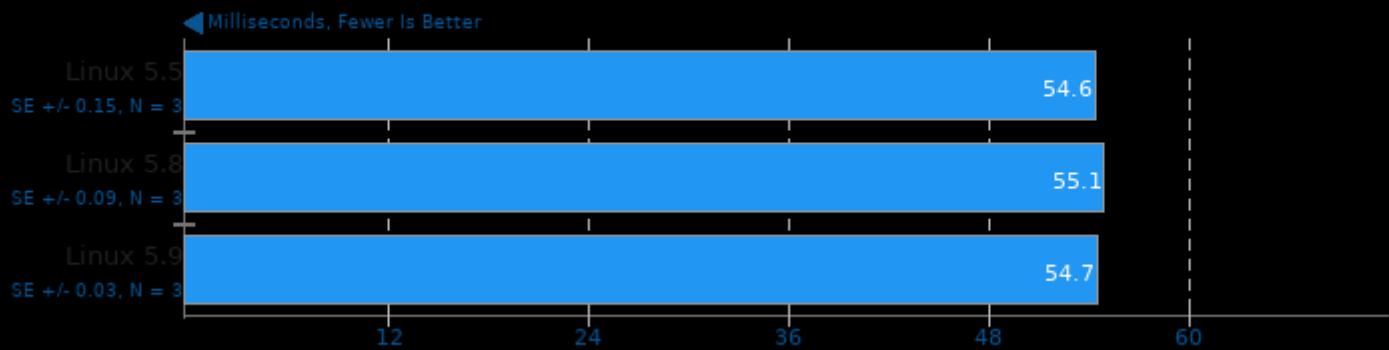
PyPerformance 1.0.0

Benchmark: python_startup



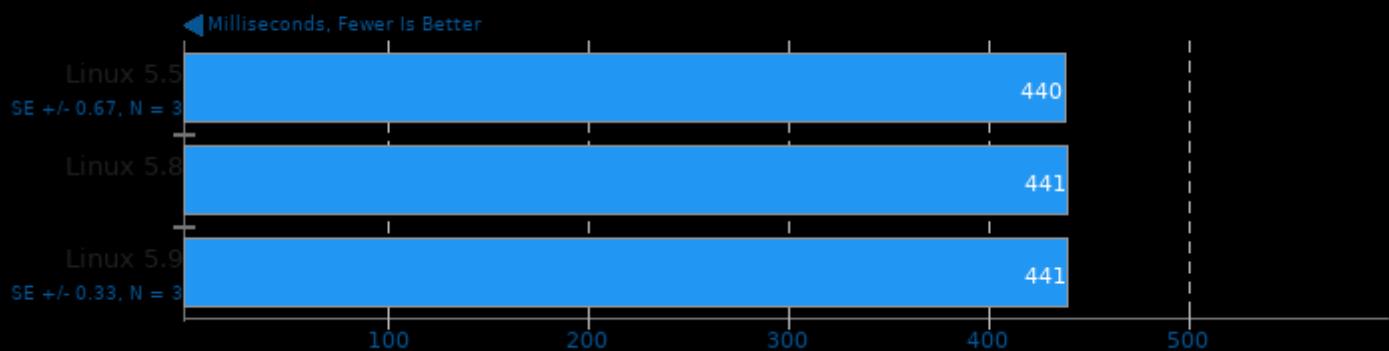
PyPerformance 1.0.0

Benchmark: django_template



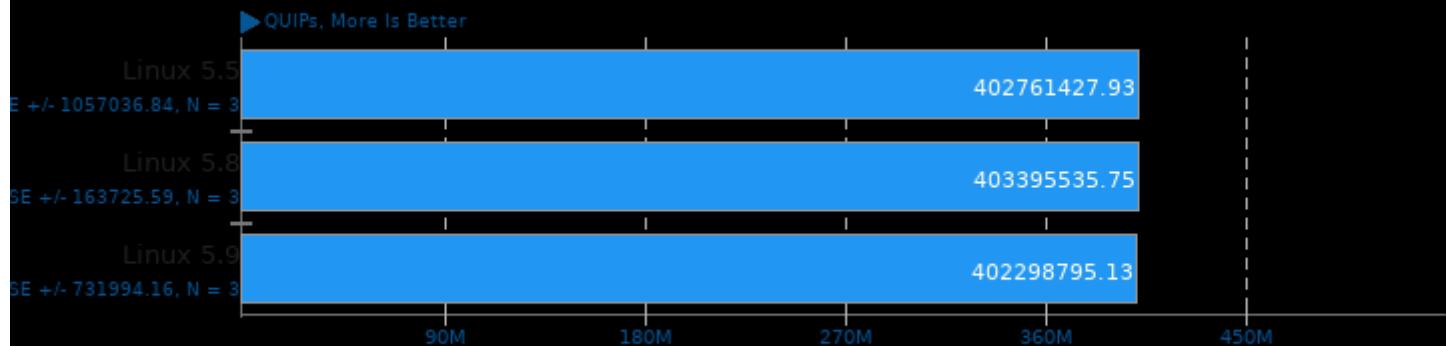
PyPerformance 1.0.0

Benchmark: pickle_pure_python



Hierarchical INTegration 1.0

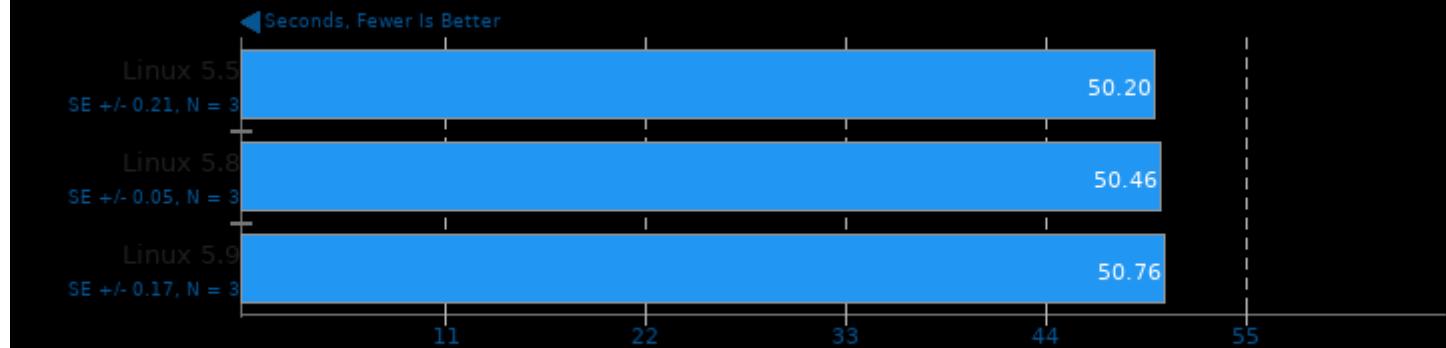
Test: FLOAT



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

Git

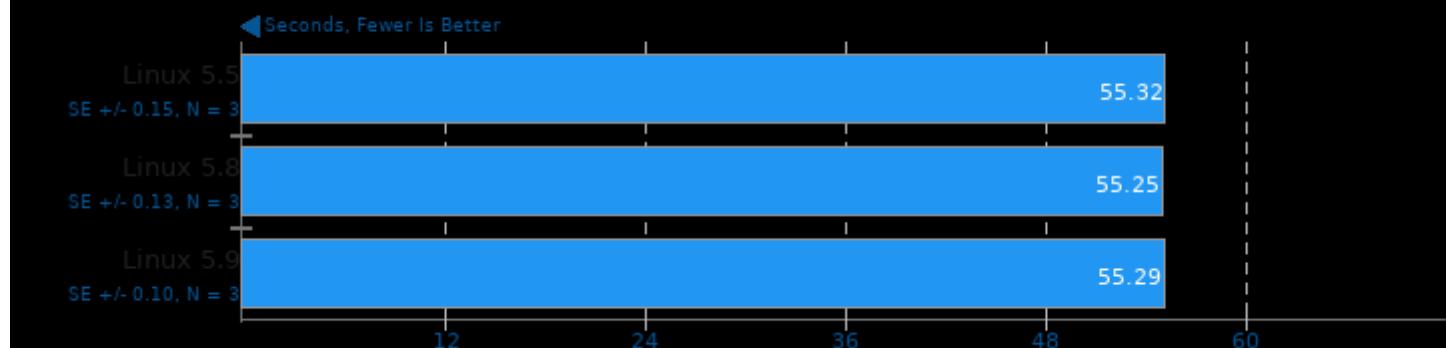
Time To Complete Common Git Commands



1. git version 2.20.1

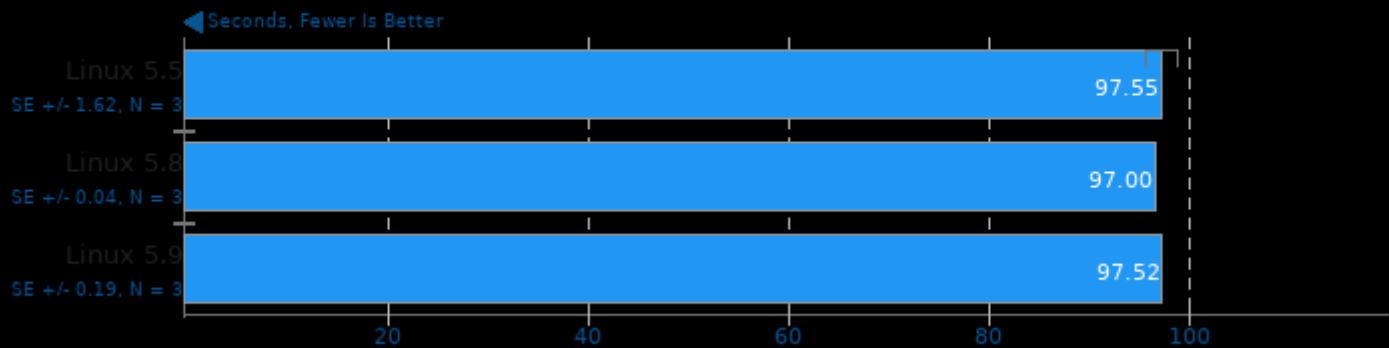
Mlpack Benchmark

Benchmark: scikit_ica



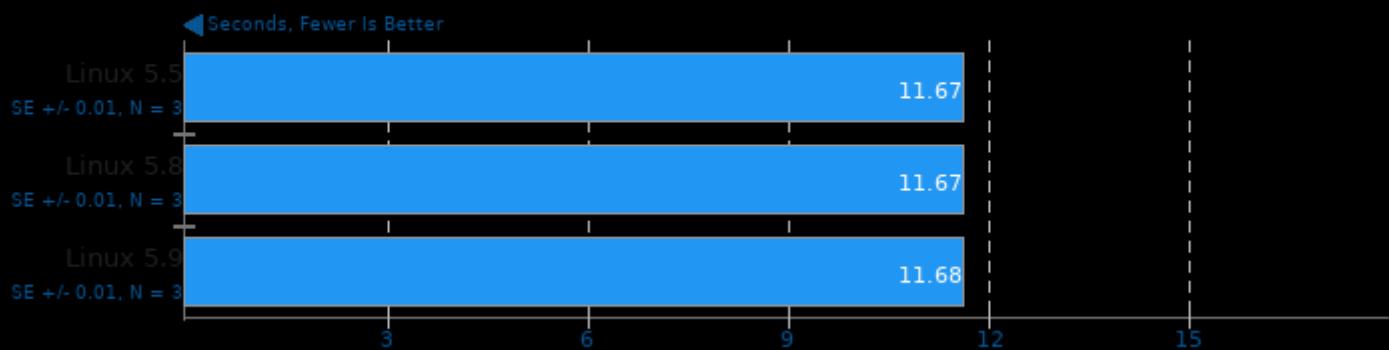
Milpack Benchmark

Benchmark: scikit_qda



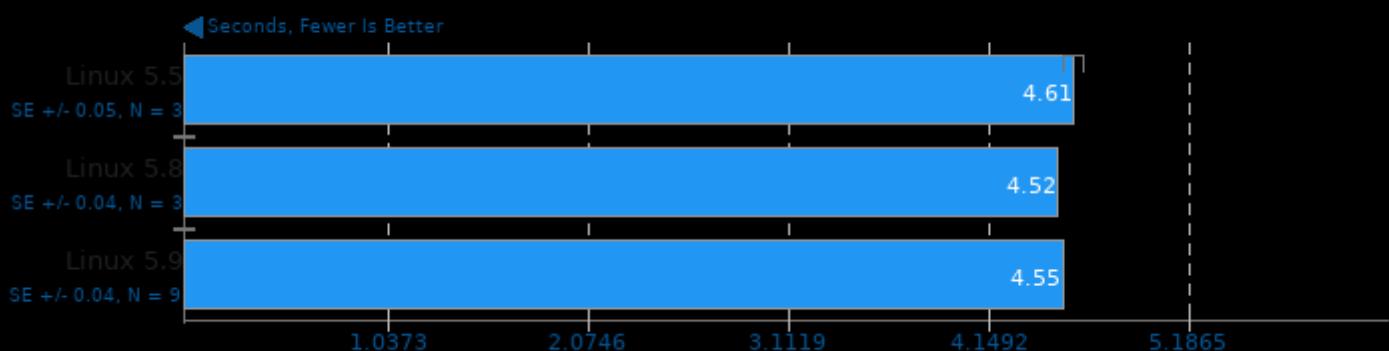
Milpack Benchmark

Benchmark: scikit_svm



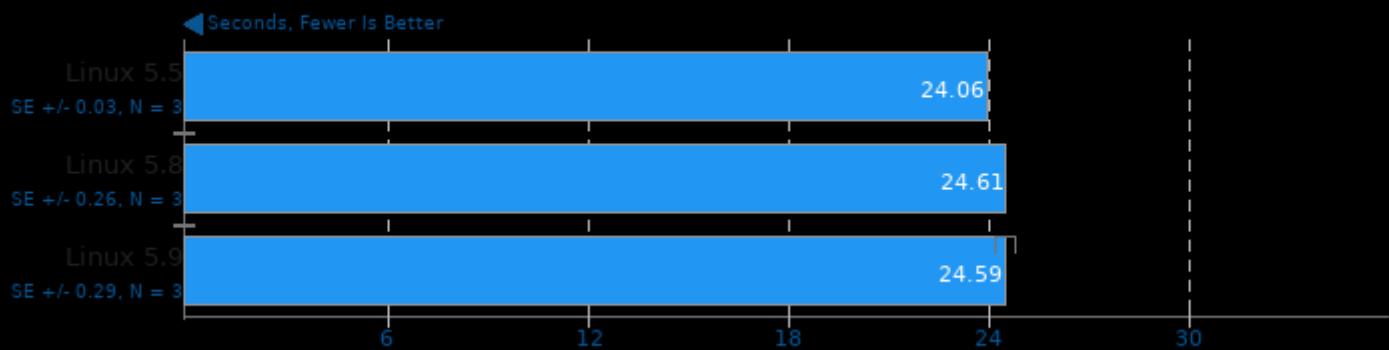
Milpack Benchmark

Benchmark: scikit_linearridge_regression



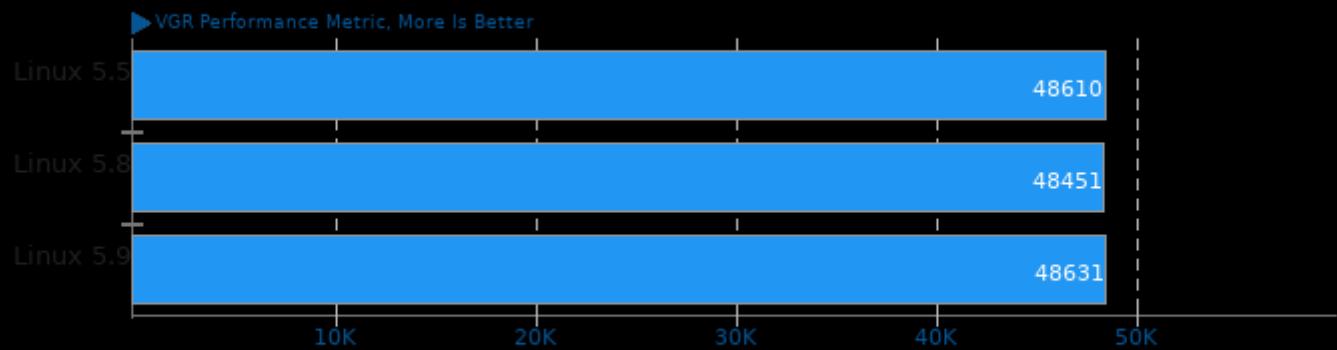
Tesseract OCR 4.1.0

Time To OCR 7 Images



BRL-CAD 7.30.8

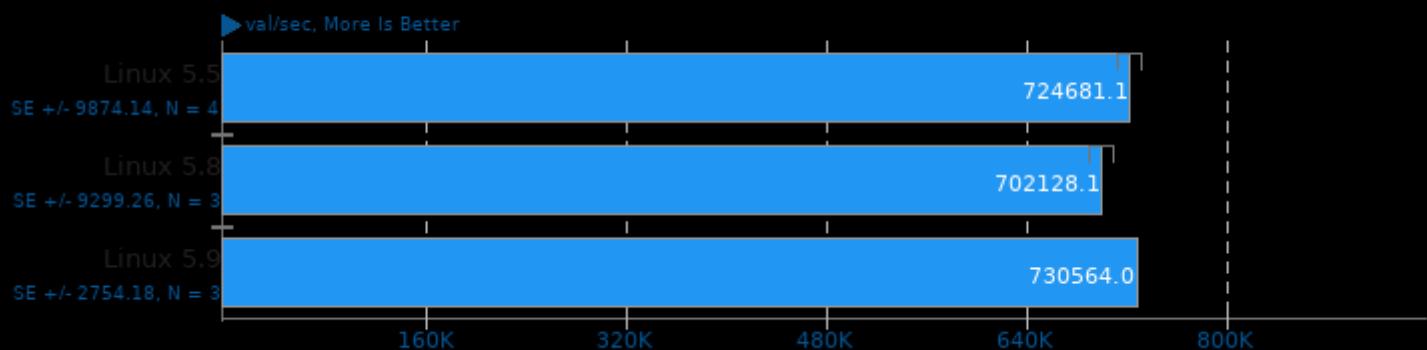
VGR Performance Metric



1. (CXX) g++ options: -std=c++11 -pipe -fno-strict-aliasing -fno-common -fexceptions -ftemplate-depth=128 -m64 -ggdb3 -O3 -fipa-pta -fstrength-reduce

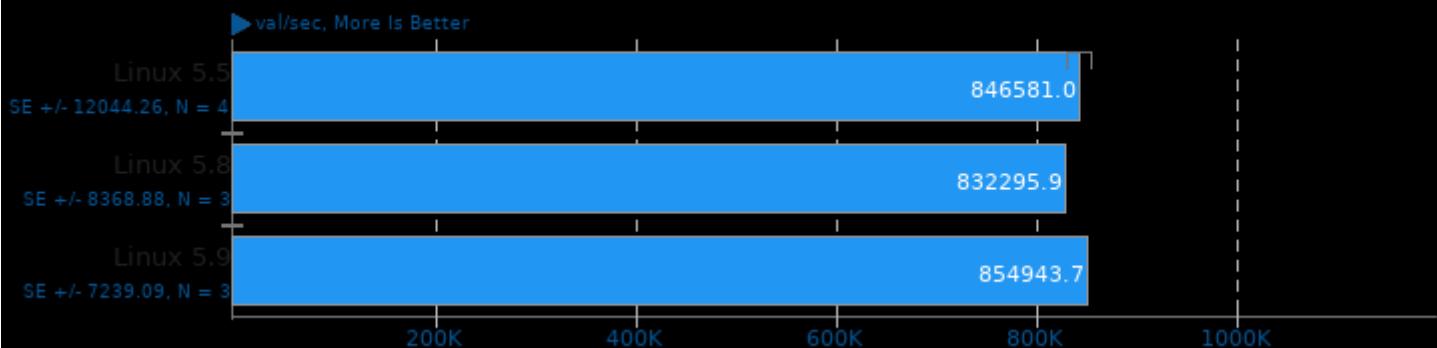
InfluxDB 1.8.2

Concurrent Streams: 4 - Batch Size: 10000 - Tags: 2,5000,1 - Points Per Series: 10000



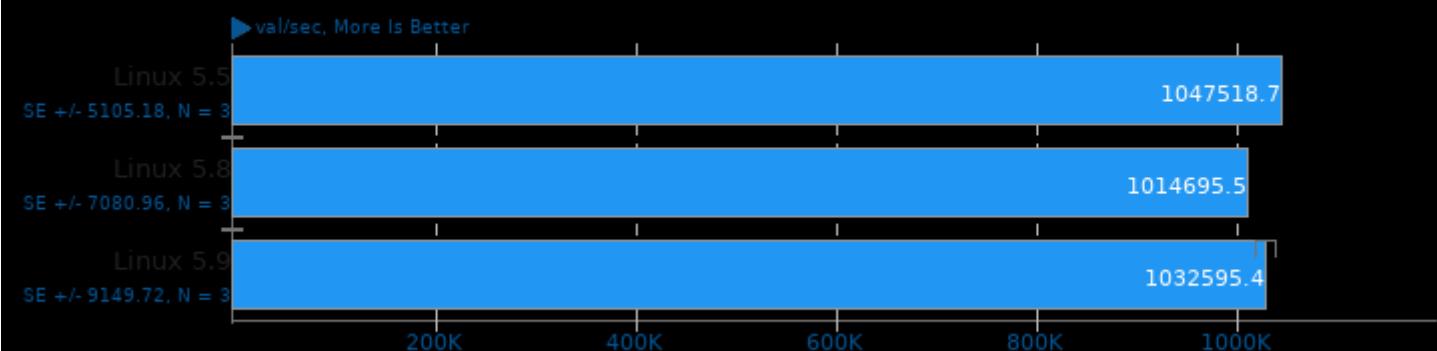
InfluxDB 1.8.2

Concurrent Streams: 64 - Batch Size: 10000 - Tags: 2,5000,1 - Points Per Series: 10000



InfluxDB 1.8.2

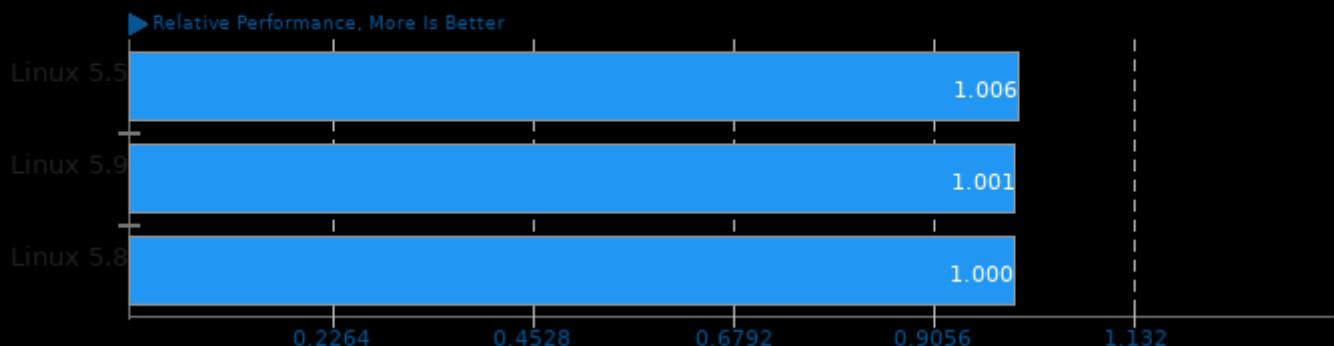
Concurrent Streams: 1024 - Batch Size: 10000 - Tags: 2,5000,1 - Points Per Series: 10000



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

Geometric Mean Of AV1 Tests

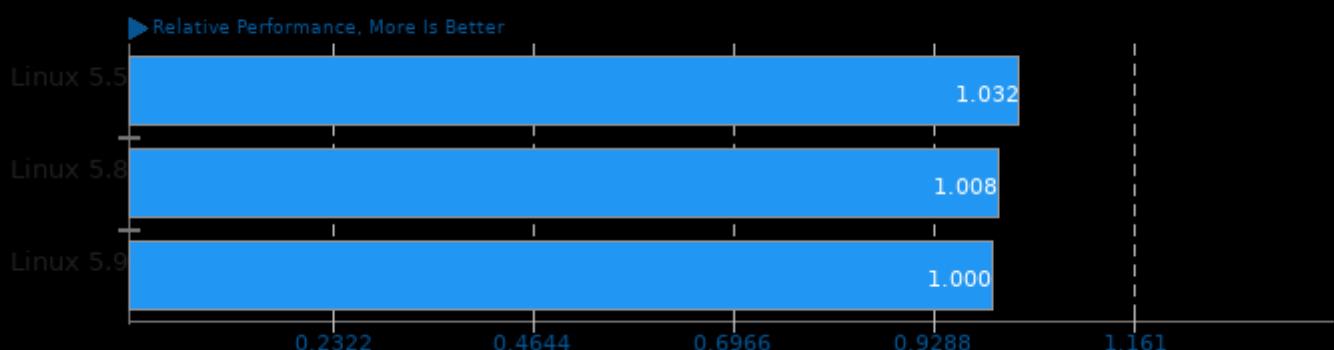
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/dav1d, pts/aom-av1, pts/svt-av1 and pts/avifenc

Geometric Mean Of Bioinformatics Tests

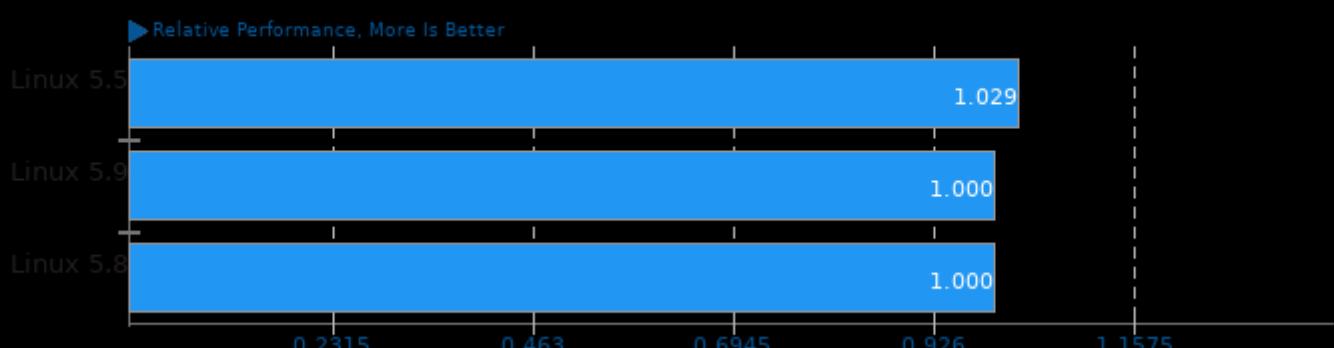
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/hmmer and pts/mafft

Geometric Mean Of BLAS (Basic Linear Algebra Sub-Routine) Tests

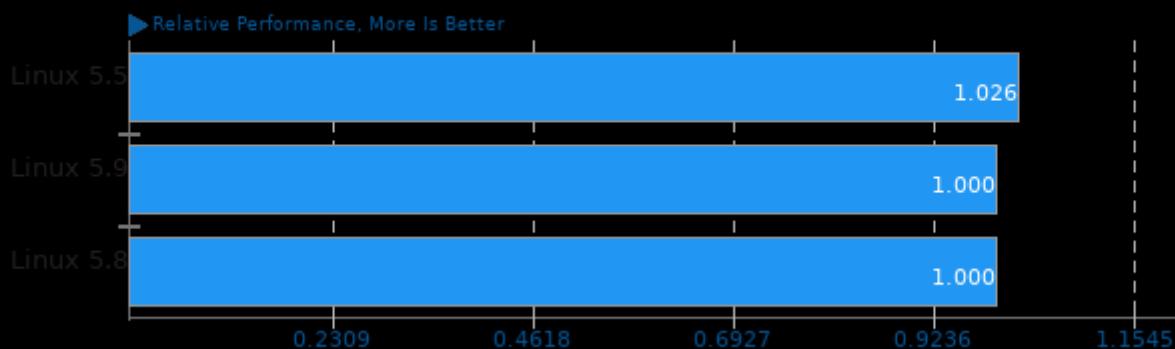
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/arrayfire, pts/caffe and pts/gpaw

Geometric Mean Of C++ Boost Tests

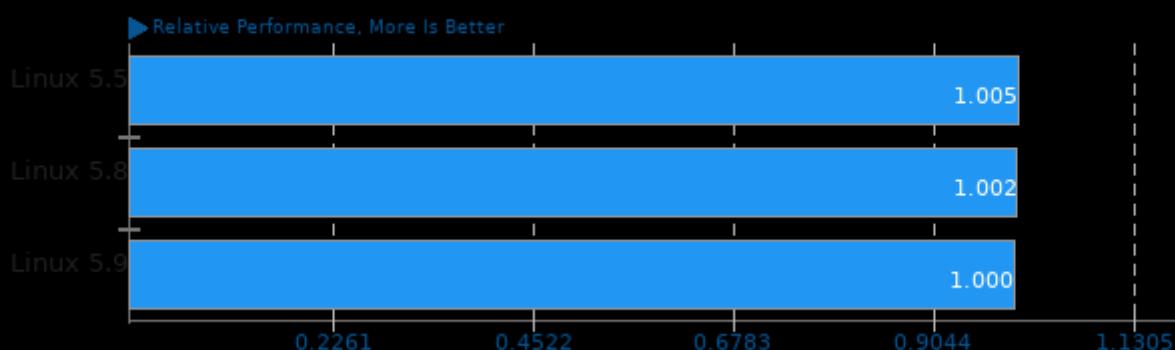
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/arrayfire, pts/yafaray and pts/caffe

Geometric Mean Of Chess Test Suite

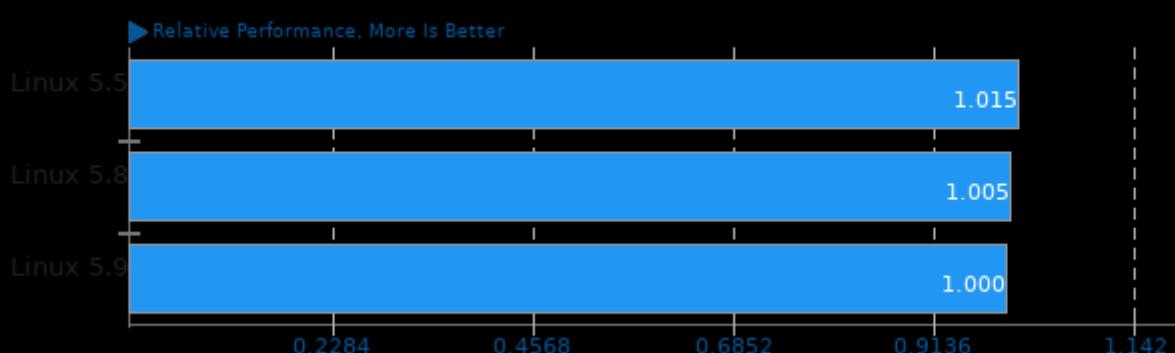
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/crafty and pts/tscp

Geometric Mean Of Timed Code Compilation Tests

Result Composite - Core i7 4790K Haswell Intel Linux

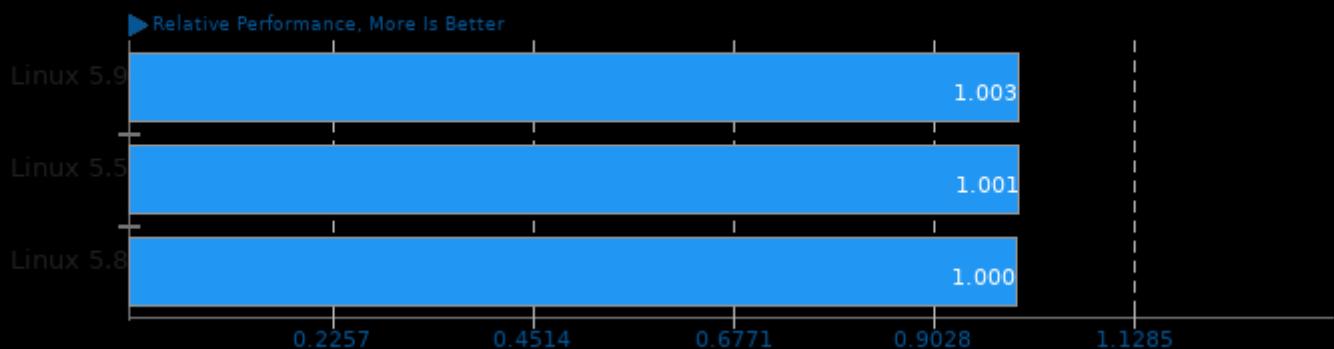


Geometric mean based upon tests: pts/build-apache, pts/build-php, pts/build-linux-kernel, pts/build-gdb, pts/build-llvm, pts/build-ffmpeg, pts/build-mplayer and pts/build2

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Geometric Mean Of Compression Tests

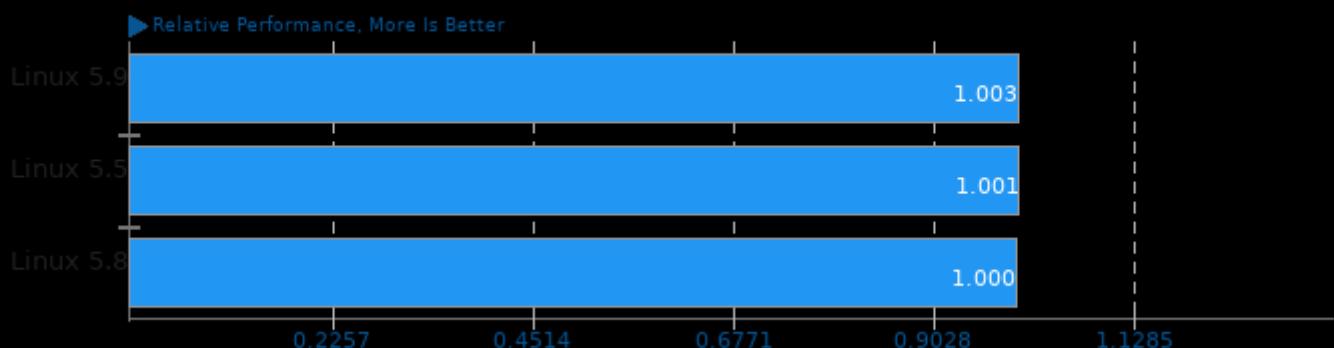
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/compress-7zip, pts/compress-zstd, pts/system-decompress-gzip, pts/lzbench and pts/blosc

Geometric Mean Of Cryptography Tests

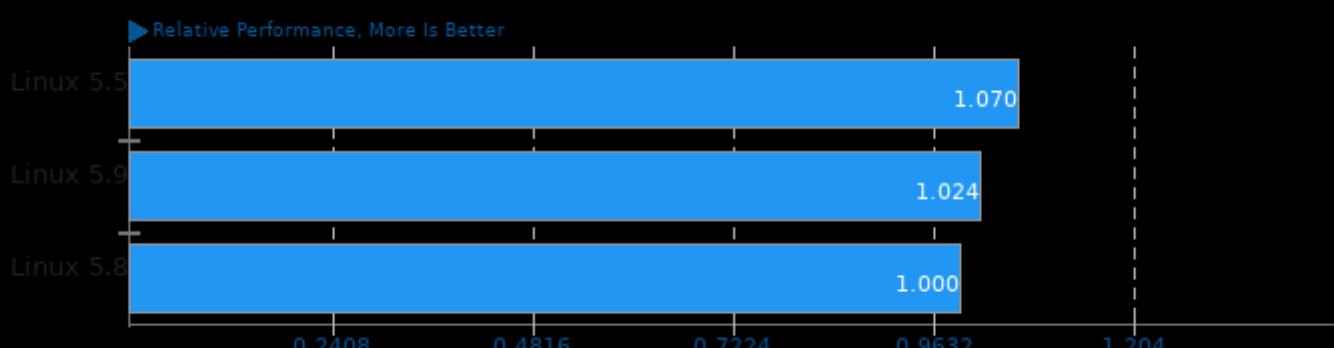
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/john-the-ripper, pts/smhasher and pts/botan

Geometric Mean Of Database Test Suite

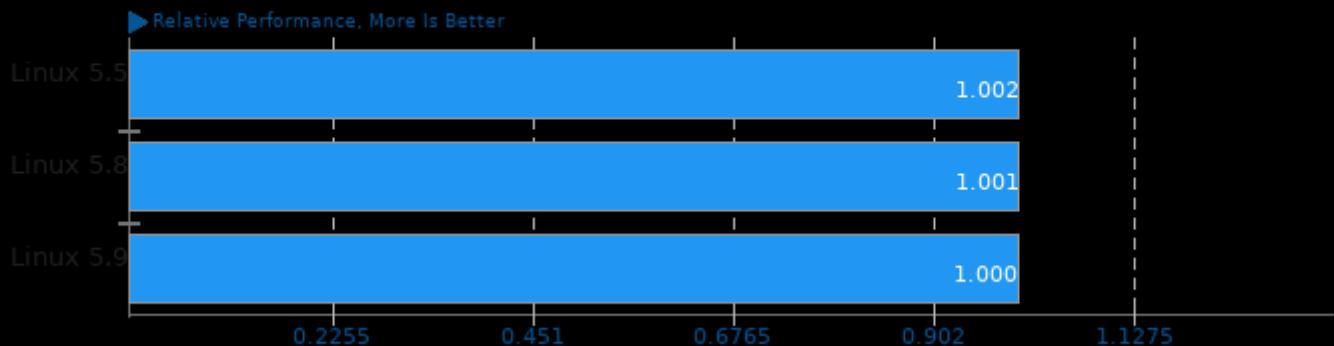
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/keydb, pts/leveldb and pts/influxdb

Geometric Mean Of Encoding Tests

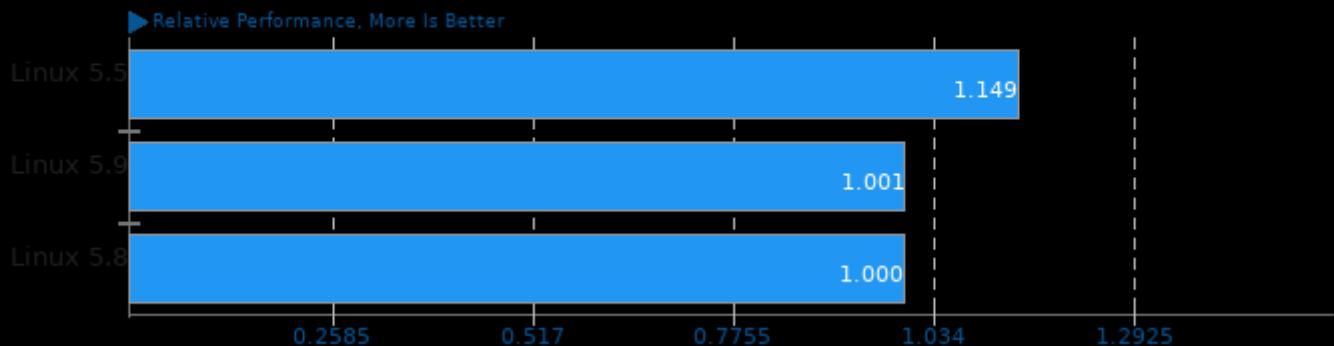
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/svt-vp9, pts/x264, pts/dav1d, pts/aom-av1, pts/svt-av1 and pts/avifenc

Geometric Mean Of Fortran Tests

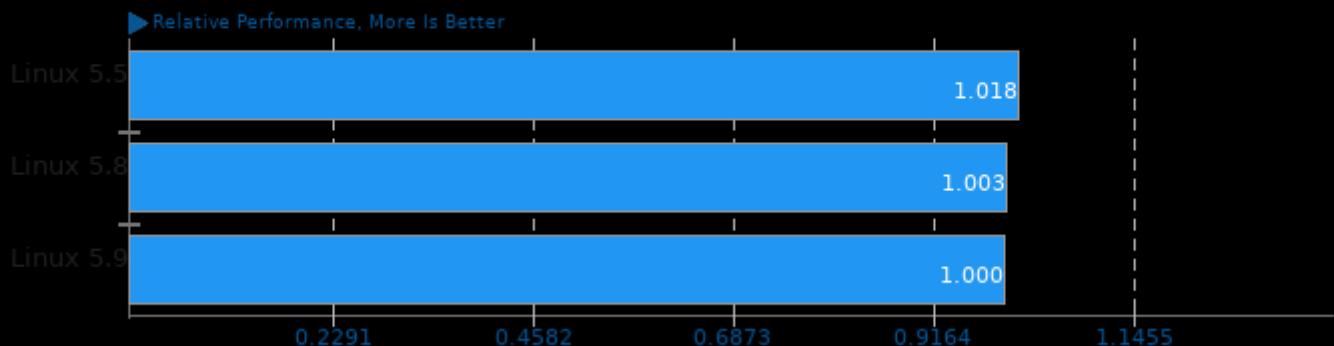
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/dolfin, pts/neat, pts/ffte, pts/incompact3d, pts/mocassin and pts/lammps

Geometric Mean Of Game Development Tests

Result Composite - Core i7 4790K Haswell Intel Linux

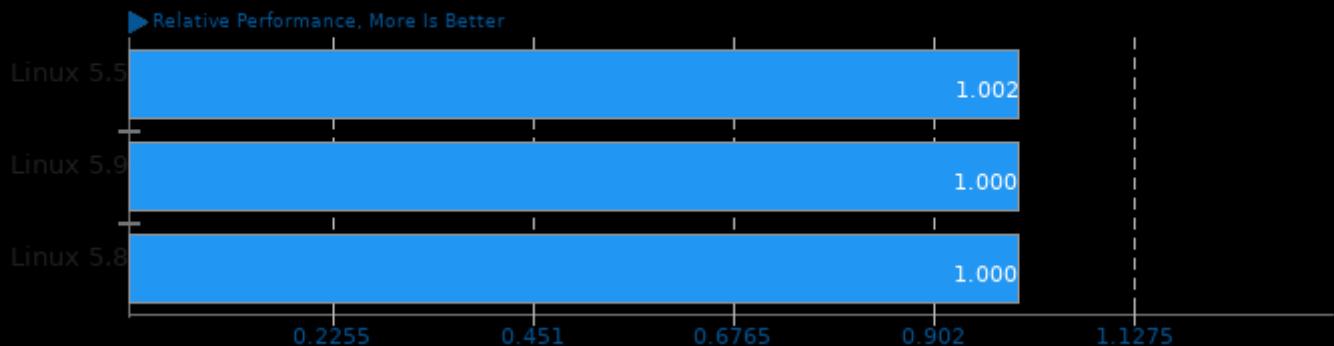


Geometric mean based upon tests: pts/basis, pts/astcenc, pts/oidn and pts/openvkl

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Geometric Mean Of Imaging Tests

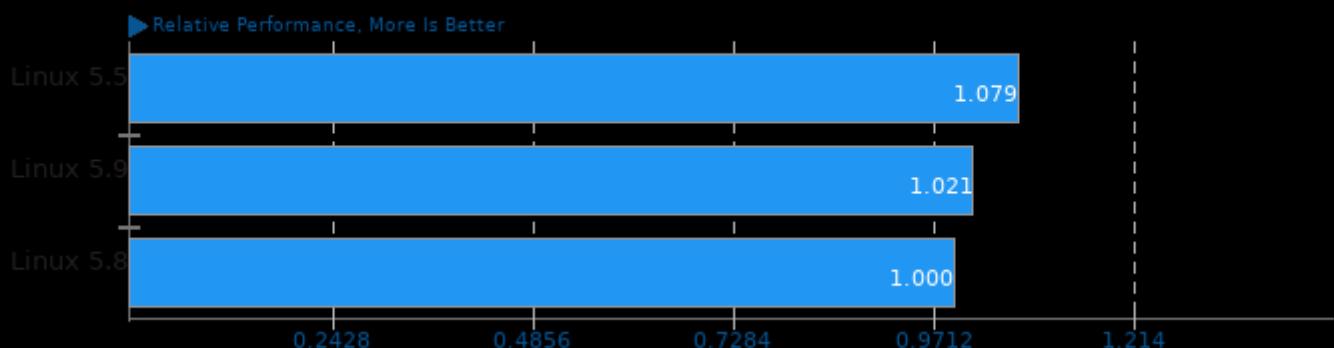
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: system/gmic, pts/libraw, pts/webp, system/rawtherapee, pts/montage, system/hugin and pts/avifenc

Geometric Mean Of Common Kernel Benchmarks Tests

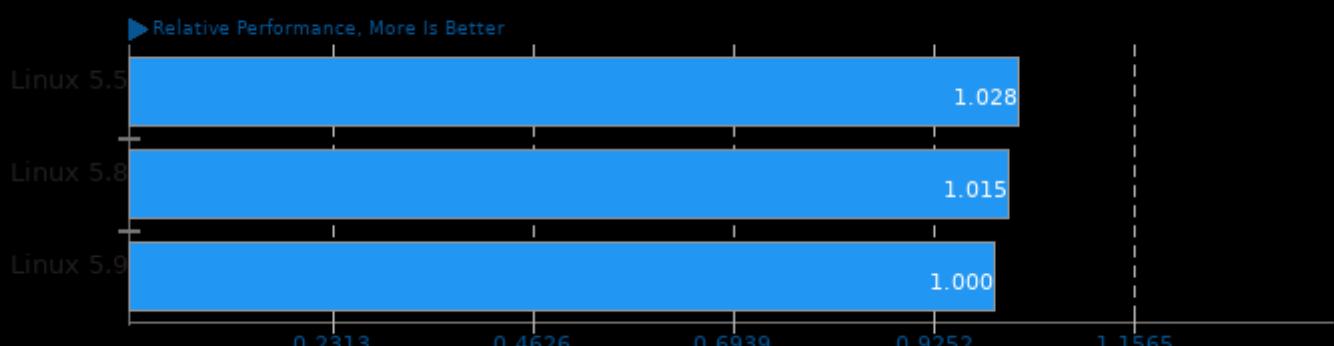
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/postmark and pts/leveldb

Geometric Mean Of Linear Algebra Tests

Result Composite - Core i7 4790K Haswell Intel Linux

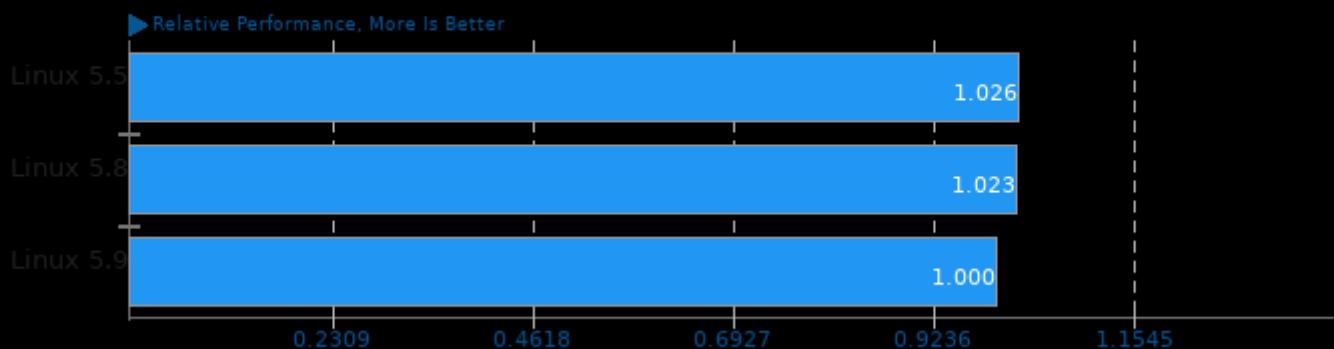


Geometric mean based upon tests: pts/arrayfire and pts/amg

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Geometric Mean Of Machine Learning Tests

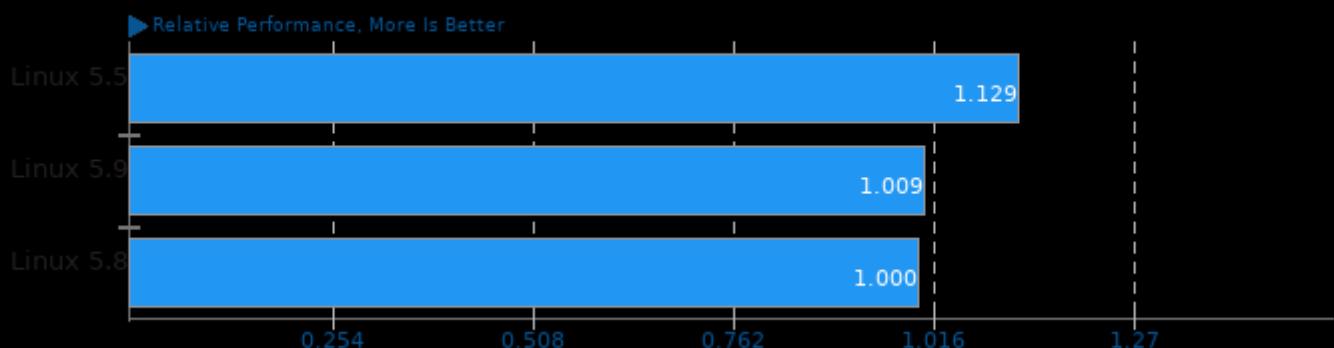
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/ncnn, pts/tnn, pts/caffe, pts/rnnoise, pts/mlpack, pts/tensorflow, pts/tensorflow-lite and pts/onnednn

Geometric Mean Of Molecular Dynamics Tests

Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/namd, pts/gromacs, pts/dolfin, pts/lammps, pts/lulesh and pts/incompact3d

Geometric Mean Of MPI Benchmarks Tests

Result Composite - Core i7 4790K Haswell Intel Linux

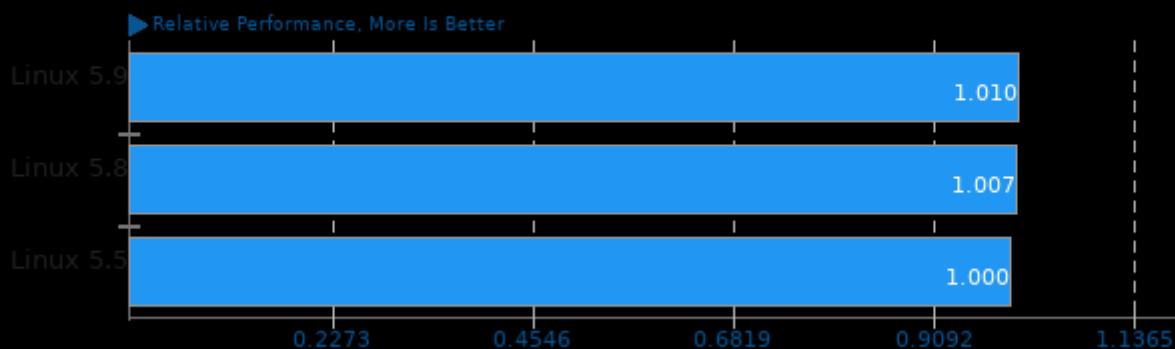


Geometric mean based upon tests: pts/lammps, pts/incompact3d, pts/gpaw, pts/mocassin and pts/gromacs

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Geometric Mean Of NVIDIA GPU Compute Tests

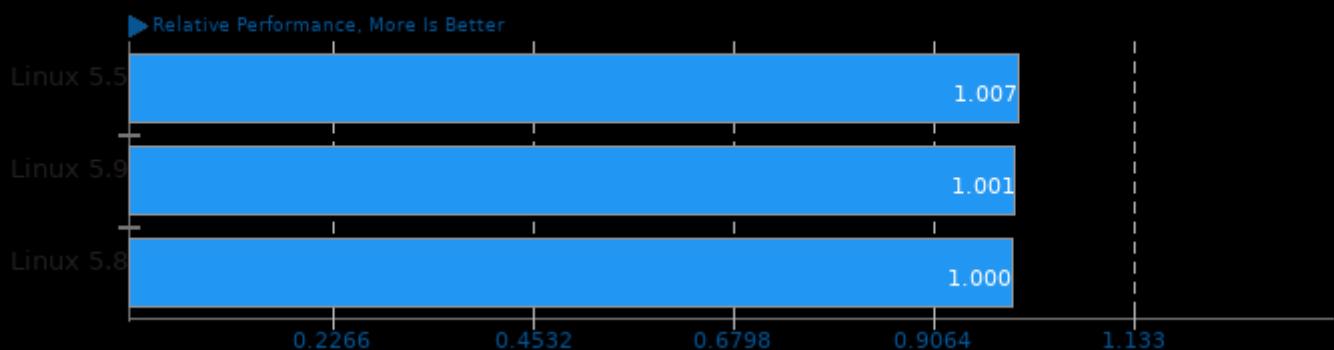
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/gromacs, pts/luxcorerender, pts/arrayfire, pts/caffe and pts/ncnn

Geometric Mean Of OCR Tests

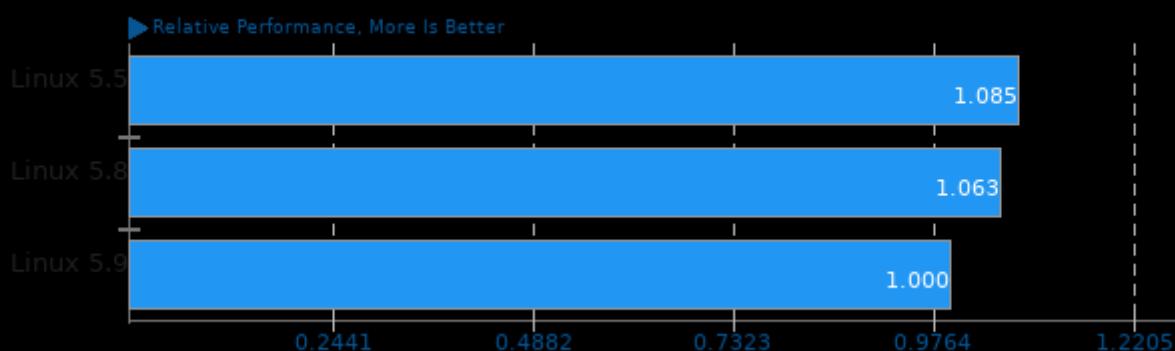
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: system/tesseract-ocr and system/ocrmypdf

Geometric Mean Of Intel oneAPI Tests

Result Composite - Core i7 4790K Haswell Intel Linux

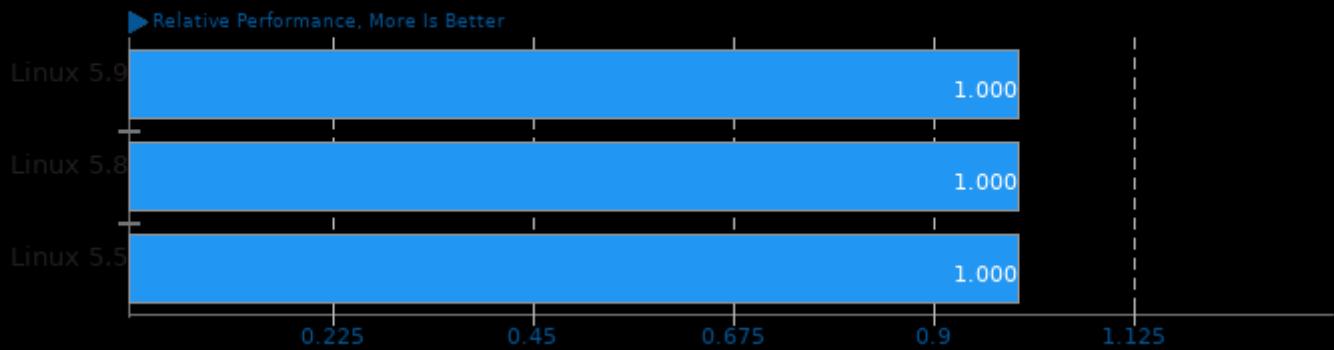


Geometric mean based upon tests: pts/embree, pts/oneden, pts/oidn and pts/openvkl

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Geometric Mean Of OpenCV Tests

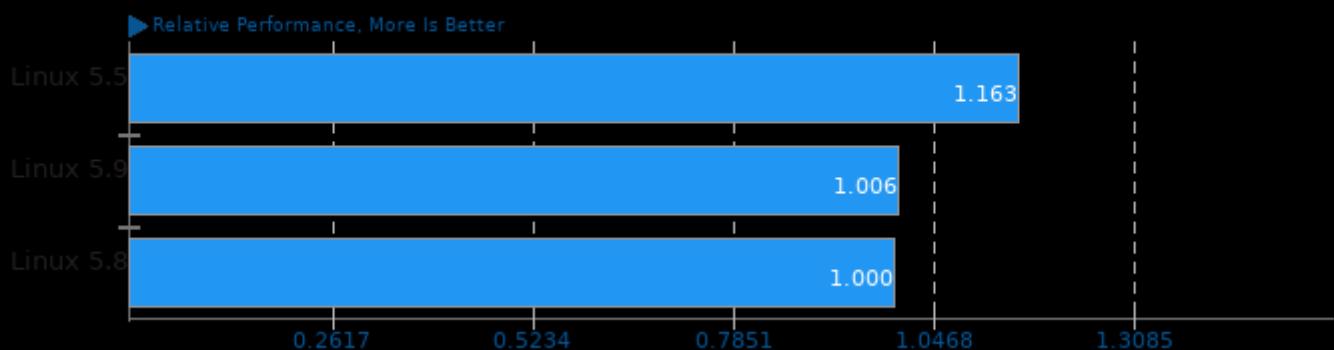
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/yafaray and pts/caffe

Geometric Mean Of OpenMPI Tests

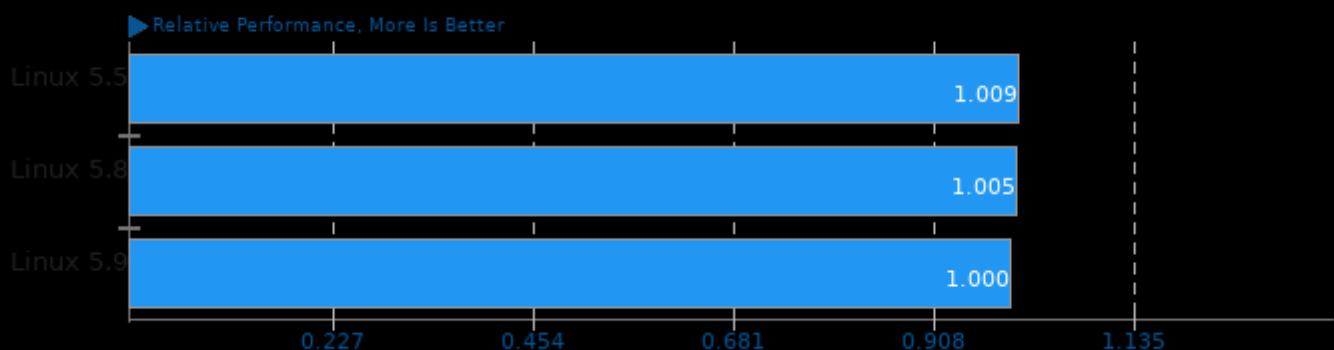
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/amg, pts/incompact3d, pts/mocassin, pts/lammps, pts/lulesh, pts/gromacs and pts/gpaw

Geometric Mean Of Programmer / Developer System Benchmarks Tests

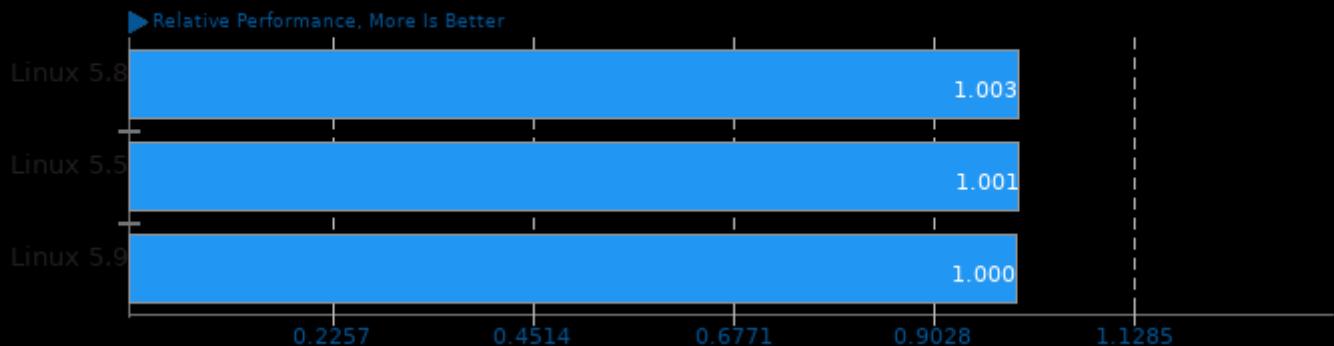
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/git, pts/blosc, pts/compress-zstd, pts/pyperformance, pts/build-apache, pts/build-php, pts/build-linux-kernel, pts/build-gdb, pts/build-llvm, pts/build-ffmpeg, pts/build-mplayer, pts/build2, pts/arrayfire and pts/amg

Geometric Mean Of Python Tests

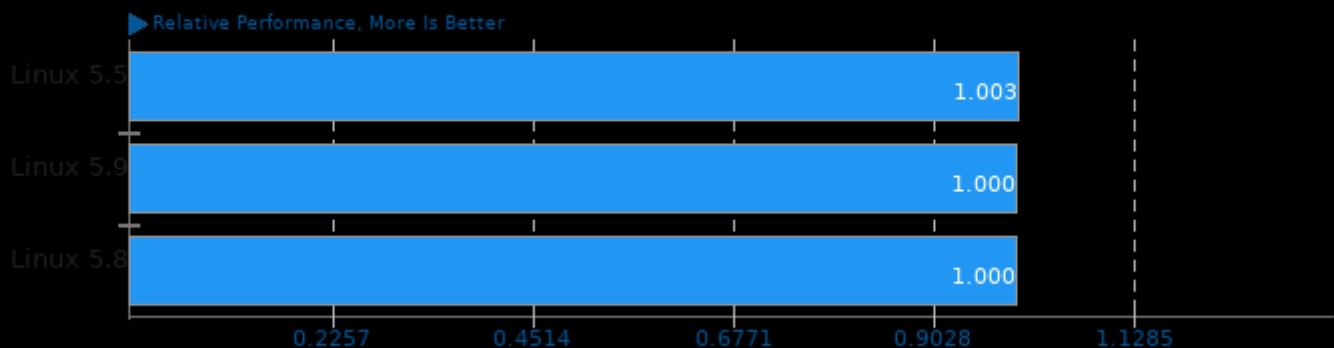
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/mlpack and pts/pyperformance

Geometric Mean Of Raytracing Tests

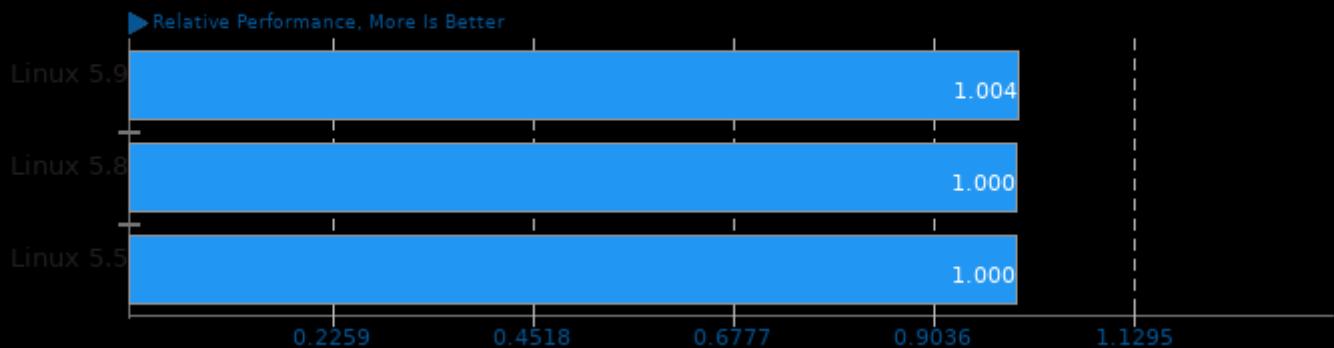
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/tachyon and pts/yafaray

Geometric Mean Of Renderers Tests

Result Composite - Core i7 4790K Haswell Intel Linux

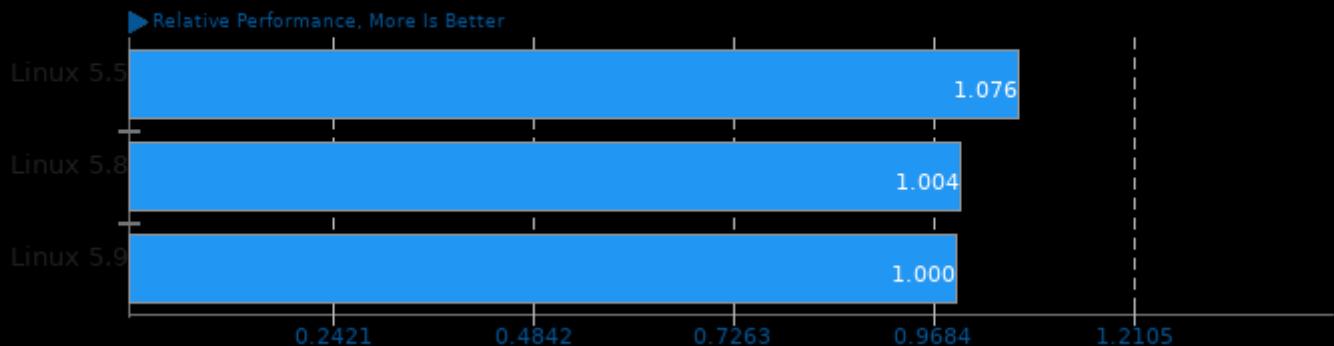


Geometric mean based upon tests: pts/tachyon, pts/yafaray and pts/luxcorerender

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Geometric Mean Of Scientific Computing Tests

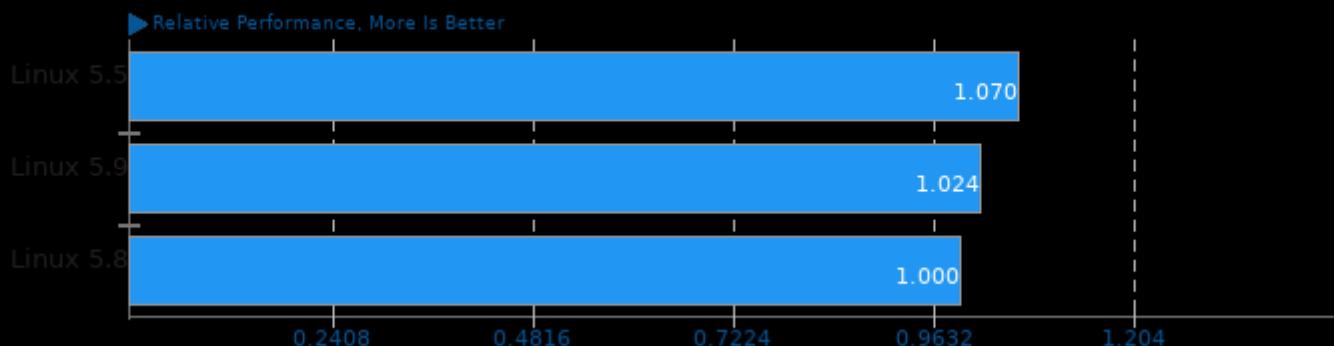
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/ffte, system/octave-benchmark, pts/neat, pts/arrayfire, pts/amg, pts/namd, pts/gromacs, pts/dolfin, pts/lammps, pts/lulesh, pts/incompact3d, pts/hmmer, pts/mafft, pts/gpaw and pts/mocassin

Geometric Mean Of Server Tests

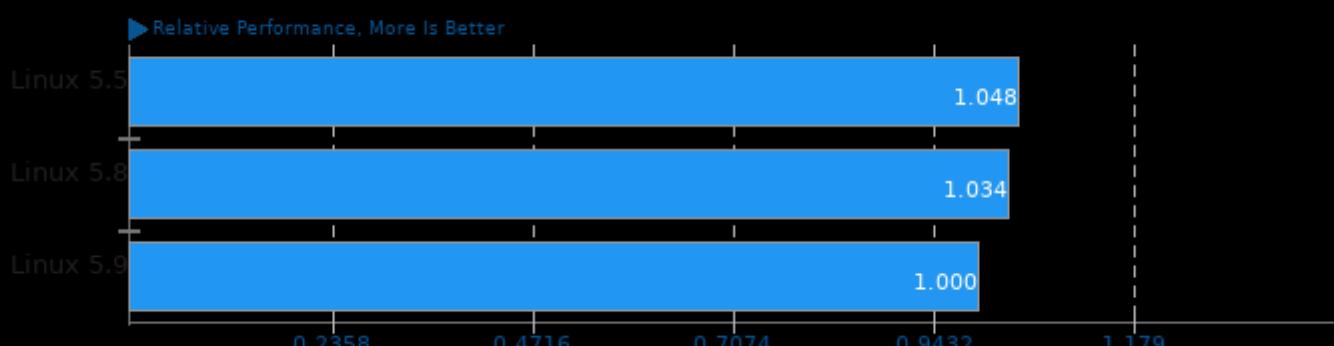
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/keydb, pts/leveldb and pts/influxdb

Geometric Mean Of Server CPU Tests

Result Composite - Core i7 4790K Haswell Intel Linux

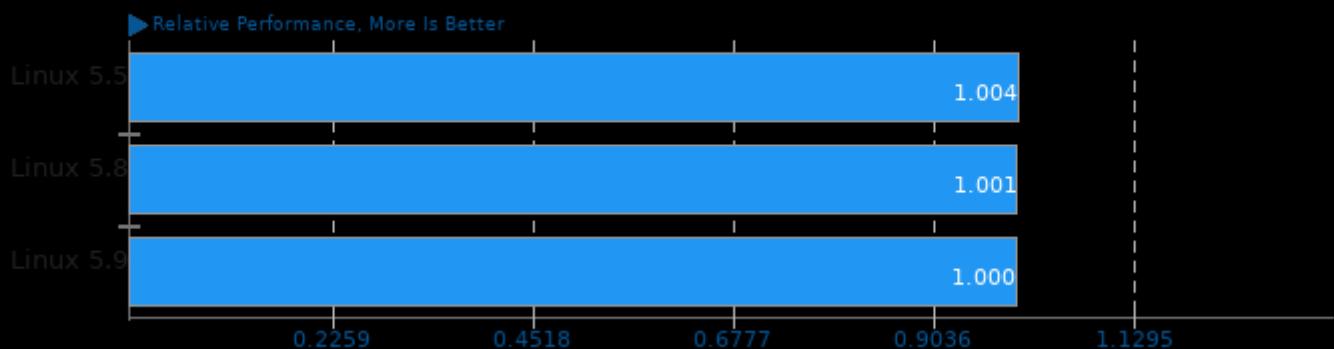


Geometric mean based upon tests: pts/namd, pts/john-the-ripper, pts/onednn, pts/svt-av1, pts/svt-vp9, pts/x264, pts/dav1d, pts/compress-7zip, pts/build-linux-kernel, pts/build-php, pts/build-llvm, pts/compress-zstd and system/tesseract-ocr

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Geometric Mean Of Single-Threaded Tests

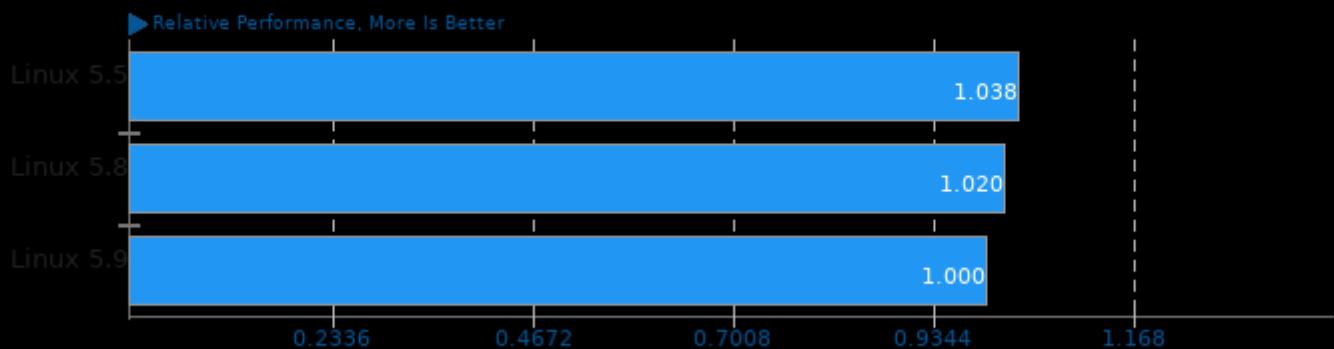
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/lzbench, pts/byte, pts/botan, pts/espeak, pts/hint, pts/git and system/tesseract-ocr

Geometric Mean Of Speech Tests

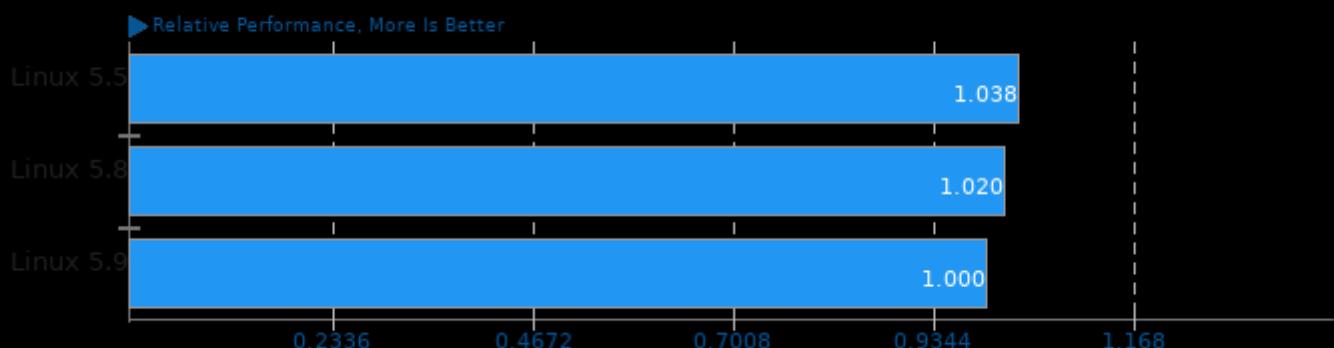
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/espeak and pts/rnnoise

Geometric Mean Of Telephony Tests

Result Composite - Core i7 4790K Haswell Intel Linux

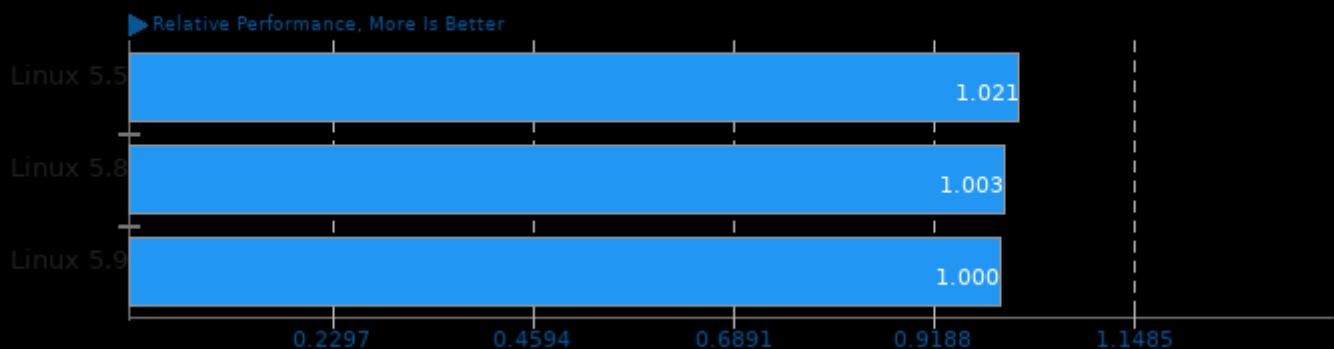


Geometric mean based upon tests: pts/espeak and pts/rnnoise

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Geometric Mean Of Texture Compression Tests

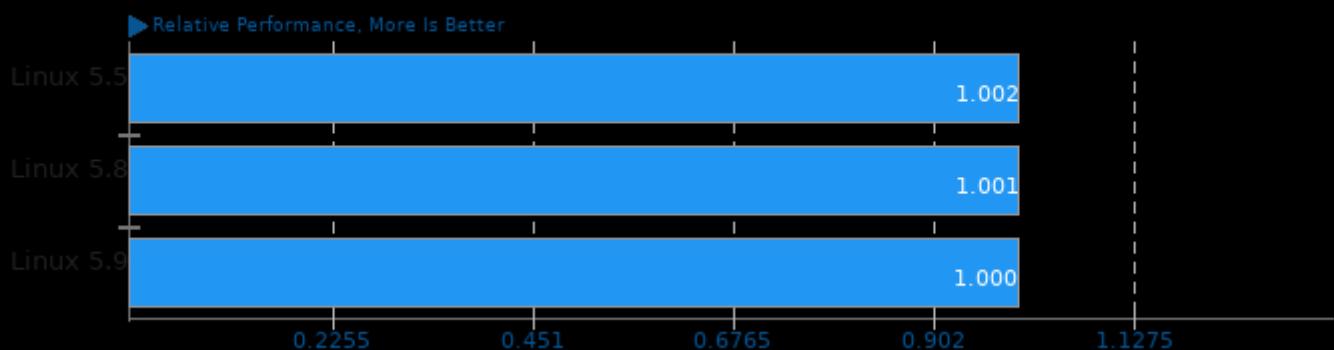
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/basis and pts/astcenc

Geometric Mean Of Video Encoding Tests

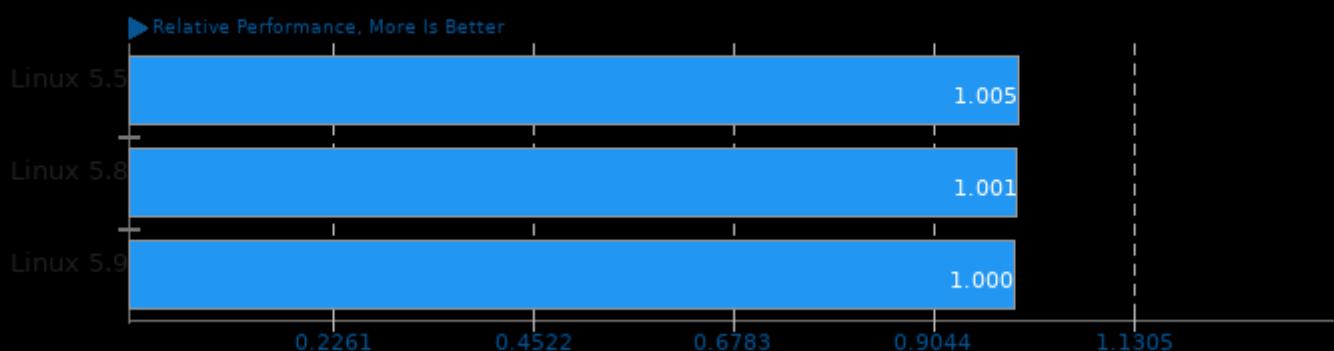
Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/svt-vp9, pts/x264, pts/dav1d, pts/aom-av1, pts/svt-av1 and pts/avifenc

Geometric Mean Of Common Workstation Benchmarks Tests

Result Composite - Core i7 4790K Haswell Intel Linux



Geometric mean based upon tests: pts/brl-cad and pts/git

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 15:24.