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Xeon Platinum 8380 Fedora

2 x Intel Xeon Platinum 8380 testing with a Intel M50CYP2SB2U (SE5C6200.86B.0022.D08.2103221623 BIOS) and ASPEED on openSUSE Tumbleweed 20210929 via the Phoronix Test Suite.

Automated Executive Summary

openSUSE Tumbleweed had the most wins, coming in first place for 46% of the tests.

Based on the geometric mean of all complete results, the fastest (Ubuntu 21.10 Oct1) was 1.063x the speed of the slowest (openSUSE Tumbleweed). Fedora 35 Beta was 0.952x the speed of Ubuntu 21.10 Oct1 and openSUSE Tumbleweed was 0.988x the speed of Fedora 35 Beta.

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

Stress-NG (Test: Context Switching) at 5.448x
Apache HTTP Server (Concurrent Requests: 200) at 4.945x
NAS Parallel Benchmarks (Test / Class: SP.B) at 4.941x
NAS Parallel Benchmarks (Test / Class: LU.C) at 4.673x
NAS Parallel Benchmarks (Test / Class: BT.C) at 3.987x
NAS Parallel Benchmarks (Test / Class: SP.C) at 3.81x
NAS Parallel Benchmarks (Test / Class: MG.C) at 3.347x
NAS Parallel Benchmarks (Test / Class: EP.D) at 3.256x

PostgreSQL pgbench (Scaling Factor: 100 - Clients: 500 - Mode: Read Write - Average Latency) at 3.113x
PostgreSQL pgbench (Scaling Factor: 100 - Clients: 500 - Mode: Read Write) at 3.113x.

Test Systems:

Fedora 35 Beta

Processor: 2 x Intel Xeon Platinum 8380 @ 3.40GHz (80 Cores / 160 Threads), Motherboard: Intel M50CYP2SB2U (SE5C6200.86B.0022.D08.2103221623 BIOS), Chipset: Intel Device 0998, Memory: 504GB, Disk: 7682GB INTEL SSDPF2KX076TZ, Graphics: ASPEED, Monitor: VE228, Network: 2 x Intel X710 for 10GBASE-T + 2 x Intel E810-C for QSFP

OS: Fedora Linux 35, Kernel: 5.14.7-300.fc35.x86_64 (x86_64), Compiler: GCC 11.2.1 20210728, File-System: xfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: DEBUGINFOD_URLS=https://debuginfod.fedoraproject.org/
Compiler Notes: --build=x86_64-redhat-linux --disable-libunwind-exceptions --enable-_cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,objc,obj-c++,ada,go,d,lto --enable-link-serialization=1 --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-build-config=bootstrap-lto --with-gcc-major-version-only --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: NONE / attr2 inode64,logbsize=32k,logbufs=8,noquota,relatime,rw,seclabel / Block Size: 4096
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd0002a0
Java Notes: OpenJDK Runtime Environment 18.9 (build 11.0.12+7)
Python Notes: Python 3.10.0rc2
Security Notes: SELinux + itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbd: Not affected + tsx_async_abort: Not affected

Ubuntu 21.10 Oct1

Processor: 2 x Intel Xeon Platinum 8380 @ 3.40GHz (80 Cores / 160 Threads), Motherboard: Intel M50CYP2SB2U (SE5C6200.86B.0022.D08.2103221623 BIOS), Chipset: Intel Device 0998, Memory: 504GB, Disk: 7682GB INTEL SSDPF2KX076TZ, Graphics: ASPEED, Monitor: VE228, Network: 2 x Intel X710 for 10GBASE-T + 2 x Intel E810-C for QSFP

OS: Ubuntu 21.10, Kernel: 5.13.0-16-generic (x86_64), Desktop: GNOME Shell 40.5, Display Server: X Server, Vulkan: 1.1.182, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --enable-checking=release --enable-clocale-gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-ZPT0kp/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-ZPT0kp/gcc-11-11.2.0/debian/tmp-gcn/usr --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Disk Notes: NONE / errors=remount-ro,relatime,rw / Block Size: 4096
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd0002a0
Java Notes: OpenJDK Runtime Environment (build 11.0.12+7-Ubuntu-0ubuntu3)
Python Notes: Python 3.9.7
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbd: Not affected + tsx_async_abort: Not affected

openSUSE Tumbleweed

Processor: 2 x Intel Xeon Platinum 8380 @ 3.40GHz (80 Cores / 160 Threads), Motherboard: Intel M50CYP2SB2U (SE5C6200.86B.0022.D08.2103221623 BIOS), Chipset: Intel Device 0998, Memory: 504GB, Disk: 7682GB INTEL SSDPF2KX076TZ + 15GB Ultra USB 3.0, Graphics: ASPEED, Monitor: VE228, Network: 2 x Intel X710 for 10GBASE-T + 2 x Intel E810-C for QSFP

OS: openSUSE Tumbleweed 20210929, Kernel: 5.14.6-1-default (x86_64), Desktop: KDE Plasma, Display Server: X Server 1.20.13, Compiler: GCC 11.2.1 20210816 [revision 056e324ce46a7924b5cf10f61010cf9dd2ca10e9], File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always

Environment Notes: DEBUGINFOD_URLS=https://debuginfod.opensuse.org/

Compiler Notes: --build=x86_64-suse-linux --disable-libc1 --disable-libssp --disable-libstdcxx-pch --disable-libvtv --disable-werror --enable-cet=auto --enable-checking=release --enable-gnu-indirect-function --enable-host-shared --enable-languages=c,c++,objc,fortran,obj-c++,ada,go,d,jit --enable-libphobos --enable-libstdcxx-allocator=new --enable-link-mutex --enable-linux-futex --enable-multilib --enable-offload-targets=nvptx-none,amdgcn-amdhsa, --enable-plugin --enable-ssp --enable-version-specific-runtime-libs --host=x86_64-suse-linux --mandir=/usr/share/man --with-arch-32=x86-64 --with-build-config=bootstrap-lto-lean --with-gcc-major-version-only --with-slibdir=/lib64 --with-tune=generic --without-cuda-driver --without-system-libunwind

Disk Notes: NONE / relatime,rw,space_cache,ssd,subvol=@/home,subvolid=262 / Block Size: 4096

Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd0002a0

Java Notes: OpenJDK Runtime Environment (build 11.0.12+7-suse-3.1-x8664)

Python Notes: Python 3.8.12

Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	Fedora 35 Beta	Ubuntu 21.10 Oct1	openSUSE Tumbleweed
LevelDB - Hot Read (us/Op)	205.520	182.263	179.589
Normalized	87.38%	98.53%	100%
Standard Deviation	2.5%	2%	1.8%
High Performance Conjugate Gradient (GFLOP/s)	39.6784	40.0345	39.8828
Normalized	99.11%	100%	99.62%
Standard Deviation	0.3%	0.2%	0.4%
NAS Parallel Benchmarks - BT.C (Mop/s)	48296	192541	48701
Normalized	25.08%	100%	25.29%
Standard Deviation	0.5%	0.6%	0.4%
NAS Parallel Benchmarks - CG.C (Mop/s)	20483	39438	20497
Normalized	51.94%	100%	51.97%
Standard Deviation	1.4%	0.7%	5.5%
NAS Parallel Benchmarks - EP.D (Mop/s)	2725	8873	2873
Normalized	30.71%	100%	32.38%
Standard Deviation	0.1%	3.7%	1.4%
NAS Parallel Benchmarks - FT.C (Mop/s)	36258	91713	37549
Normalized	39.53%	100%	40.94%
Standard Deviation	0.3%	2.4%	1.2%
NAS Parallel Benchmarks - IS.D (Mop/s)	1879	3024	2040
Normalized	62.12%	100%	67.48%
Standard Deviation	3.1%	2%	2.5%
NAS Parallel Benchmarks - LU.C (Mop/s)	38573	177749	38036
Normalized	21.7%	100%	21.4%
Standard Deviation	0.7%	2.4%	0.8%
NAS Parallel Benchmarks - MG.C (Mop/s)	35006	117165	36360
Normalized	29.88%	100%	31.03%

	Standard Deviation	2.2%	0.2%	3.1%
NAS Parallel Benchmarks - SP.B (Mop/s)	23010	113703		23088
	Normalized	20.24%	100%	20.31%
	Standard Deviation	1.1%	1%	0.6%
NAS Parallel Benchmarks - SP.C (Mop/s)	23992	91411		24133
	Normalized	26.25%	100%	26.4%
	Standard Deviation	0.9%	0.3%	0.4%
Rodinia - OpenMP LavaMD (sec)	45.727	46.576	44.160	
	Normalized	96.57%	94.81%	100%
	Standard Deviation	0.5%	1.8%	0.1%
Rodinia - OpenMP Leukocyte (sec)	48.918	53.420		51.066
	Normalized	100%	91.57%	95.79%
	Standard Deviation	6.1%	3.9%	8.1%
Rodinia - O.S (sec)	8.179	8.282	8.178	
	Normalized	99.99%	98.74%	100%
	Standard Deviation	8.3%	1.6%	3.4%
NAMD - ATPase Simulation - 327,506 Atoms	0.28029	0.27847		0.27899
	(days/ns)			
	Normalized	99.35%	100%	99.81%
	Standard Deviation	0.6%	0.4%	0.3%
simdjson - Kostya (GB/s)	2.44	2.45	2.50	
	Normalized	97.6%	98%	100%
	Standard Deviation	0.2%	0.2%	0.2%
simdjson - LargeRand (GB/s)	0.86	0.85	0.87	
	Normalized	98.85%	97.7%	100%
	Standard Deviation	0.7%	0%	0%
simdjson - PartialTweets (GB/s)	3.63	3.71		3.65
	Normalized	97.84%	100%	98.38%
	Standard Deviation	0.3%	0%	0.6%
simdjson - DistinctUserID (GB/s)	4.16	4.22	4.12	
	Normalized	98.58%	100%	97.63%
	Standard Deviation	0.6%	0.1%	0.1%
GNU GMP GMPbench - Total Time	3777	4503		3828
	(GMPbench Score)			
	Normalized	83.87%	100%	85.02%
DaCapo Benchmark - H2 (msec)	10776	10704	9579	
	Normalized	88.89%	89.49%	100%
	Standard Deviation	1.7%	1.1%	2.4%
DaCapo Benchmark - Jython (msec)	5386	4727		5022
	Normalized	87.76%	100%	94.13%
	Standard Deviation	13.4%	11.7%	12.5%
DaCapo Benchmark - Tradebeans (msec)	16993	16793	15573	
	Normalized	91.64%	92.74%	100%
	Standard Deviation	0.6%	1.2%	0.8%
Renaissance - Rand Forest (ms)	1537	1562	1429	
	Normalized	92.95%	91.45%	100%
	Standard Deviation	2.3%	1%	1.1%
Renaissance - ALS Movie Lens (ms)	18146	18068	18283	
	Normalized	99.57%	100%	98.82%
	Standard Deviation	0.1%	0.5%	1.6%
Renaissance - Apache Spark ALS (ms)	3172	3096	3176	
	Normalized	97.58%	100%	97.48%
	Standard Deviation	0.6%	0.8%	0.8%
Renaissance - Apache Spark Bayes (ms)	1018	973.5	1172	
	Normalized	95.65%	100%	83.08%

	Standard Deviation	2.5%	2.3%	0.8%
Renaissance - Savina Reactors.IO (ms)	21211	21434	20868	
	Normalized	98.38%	97.36%	100%
	Standard Deviation	3.4%	1.1%	2.4%
Renaissance - F.H.R (ms)	8138	7753	5996	
	Normalized	73.68%	77.33%	100%
	Standard Deviation	2.4%	0.5%	2.4%
Renaissance - A.U.C.T (ms)	36176	35585	32549	
	Normalized	89.98%	91.47%	100%
	Standard Deviation	1%	2%	0.5%
Renaissance - G.A.U.J.F (ms)	6932	6835	6432	
	Normalized	92.78%	94.09%	100%
	Standard Deviation	0.3%	0.8%	0.5%
LZ4 Compression - 3 - Compression Speed (MB/s)	43.83	45.33	46.33	
	Normalized	94.6%	97.84%	100%
	Standard Deviation	0.8%	0%	0.3%
LZ4 Compression - 3 - D.S (MB/s)	7137	7194	7153	
	Normalized	99.21%	100%	99.44%
	Standard Deviation	0.1%	0.2%	0.5%
LZ4 Compression - 9 - Compression Speed (MB/s)	43.19	44.32	45.51	
	Normalized	94.9%	97.39%	100%
	Standard Deviation	0.1%	0.1%	0.1%
LZ4 Compression - 9 - D.S (MB/s)	7150	7211	7115	
	Normalized	99.15%	100%	98.68%
	Standard Deviation	0.2%	0.1%	0.1%
Zstd Compression - 8 - Compression Speed (MB/s)	2027	2035	1947	
	Normalized	99.61%	100%	95.66%
	Standard Deviation	1%	5.1%	3.7%
Zstd Compression - 8 - D.S (MB/s)	3105	2917	3026	
	Normalized	100%	93.97%	97.48%
	Standard Deviation	0.2%	12%	7.6%
Zstd Compression - 19 - Compression Speed (MB/s)	81.2	80.2	87.1	
	Normalized	93.23%	92.08%	100%
	Standard Deviation	1.2%	1.1%	2.2%
Zstd Compression - 19 - D.S (MB/s)	2658	2646	2671	
	Normalized	99.52%	99.08%	100%
	Standard Deviation	0.2%	0.1%	0.1%
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	44.6	44.1	48.0	
	Normalized	92.92%	91.88%	100%
	Standard Deviation	0.3%	0.5%	2.6%
Zstd Compression - 19, Long Mode - D.S (MB/s)	2729	2690	2743	
	Normalized	99.49%	98.04%	100%
	Standard Deviation	0.5%	0.3%	0.4%
JPEG XL libjxl - PNG - 7 (MP/s)	7.24	7.30	8.15	
	Normalized	88.83%	89.57%	100%
	Standard Deviation	1.7%	0.4%	0.7%
JPEG XL libjxl - PNG - 8 (MP/s)	0.66	0.66	0.76	
	Normalized	86.84%	86.84%	100%

Xeon Platinum 8380 Fedora

	Standard Deviation	0%	0.9%	0.8%
JPEG XL libjxl - JPEG - 7 (MP/s)	Normalized	40.42	40.72	49.82
	Standard Deviation	81.13%	81.73%	100%
JPEG XL libjxl - JPEG - 8 (MP/s)	Normalized	15.68	16.39	17.57
	Standard Deviation	0.2%	0.2%	0.7%
Node.js Express HTTP Load Test (Req/sec)	Normalized	0.3%	0.1%	0.9%
	Standard Deviation	5453	7318	
OSpray - San Miguel - SciVis (FPS)	Normalized	90.91	90.91	90.91
	Standard Deviation	0%	0%	0%
OSpray - San Miguel - Path Tracer (FPS)	Normalized	10.42	10.42	10.64
	Standard Deviation	2.4%	4.4%	
OSpray - M.R - SciVis (FPS)	Normalized	111.11	110.19	111.11
	Standard Deviation	0%	0%	0%
Embree - Pathtracer - Crown (FPS)	Normalized	62.1289	64.4883	64.8851
	Standard Deviation	100%	99.17%	100%
Embree - Pathtracer ISPC - Crown (FPS)	Normalized	64.7554	66.3379	71.8391
	Standard Deviation	0.9%	1.1%	1.7%
Embree - Pathtracer - Asian Dragon (FPS)	Normalized	81.9327	83.0416	83.5001
	Standard Deviation	0.6%	0.5%	2.4%
Embree - Pathtracer ISPC - Asian Dragon (FPS)	Normalized	105.4949	107.6734	108.9060
	Standard Deviation	0.9%	1.8%	1.6%
SVT-AV1 - Preset 4 - Bosphorus 4K (FPS)	Normalized	2.952	2.944	3.036
	Standard Deviation	96.87%	98.87%	100%
SVT-AV1 - Preset 8 - Bosphorus 4K (FPS)	Normalized	30.117	31.697	34.268
	Standard Deviation	0.5%	0.6%	0.5%
SVT-HEVC - 1 - Bosphorus 1080p (FPS)	Normalized	30.32	29.74	30.04
	Standard Deviation	0.7%	0.6%	0.5%
SVT-HEVC - 7 - Bosphorus 1080p (FPS)	Normalized	168.45	174.24	176.05
	Standard Deviation	0.9%	2.2%	0.7%
SVT-VP9 - P.S.O - Bosphorus 1080p (FPS)	Normalized	207.34	214.16	212.88
	Standard Deviation	1.8%	1.4%	1.9%
SVT-VP9 - V.Q.O - Bosphorus 1080p (FPS)	Normalized	172.78	178.73	178.98
	Standard Deviation	0.9%	1.5%	2.4%
x265 - Bosphorus 4K (FPS)	Normalized	11.91	12.08	12.30
	Standard Deviation	1%	1.8%	0.4%
x265 - Bosphorus 1080p (FPS)	Normalized	26.99	26.95	27.06
	Standard Deviation	0.74%	0.59%	0.4%
	Standard Deviation	1.4%	2.1%	1.7%

Xeon Platinum 8380 Fedora

Intel Open Image Denoise - RT.hdr_alb_nrm.3840x2160 (Images / Sec)	2.87	2.94	2.90
Normalized	97.62%	100%	98.64%
Standard Deviation	0.3%	0.3%	0.6%
OpenVKL - vklBenchmark ISPC (Items / Sec)	271	268	274
Normalized	98.91%	97.81%	100%
Standard Deviation	0%	0.6%	1%
Coremark - CoreMark Size 666 - I.P.S	2387053	2282293	2393687
(Iterations/Sec)			
Normalized	99.72%	95.35%	100%
Standard Deviation	0.1%	0.1%	0%
7-Zip Compression - C.S.T (MIPS)	290145	306548	354644
Normalized	81.81%	86.44%	100%
Standard Deviation	0.6%	0.9%	0.6%
Stockfish - Total Time (Nodes/s)	180079720	176162289	183803628
Normalized	97.97%	95.84%	100%
Standard Deviation	2.1%	2.6%	2.1%
Timed Godot Game Engine Compilation - Time To Compile (sec)	61.622	73.737	
Normalized	100%	83.57%	
Standard Deviation	1.6%	0.8%	
Timed Linux Kernel Compilation - Time To Compile (sec)	25.863	25.284	
Normalized	97.76%	100%	
Standard Deviation	4.5%	4%	
Timed LLVM Compilation - Ninja (sec)	131.309	129.937	131.767
Normalized	98.96%	100%	98.61%
Standard Deviation	0.2%	1%	0.6%
Timed LLVM Compilation - Unix Makefiles	199.621	200.787	199.274
Normalized	99.83%	99.25%	100%
Standard Deviation	0.6%	0.1%	1.5%
Timed Node.js Compilation - Time To Compile (sec)		98.281	101.799
Normalized		100%	96.54%
Standard Deviation		1.9%	0.3%
oneDNN - IP Shapes 1D - bf16bf16bf16 - CPU (ms)	6.50917	6.50961	6.63389
Normalized	100%	99.99%	98.12%
Standard Deviation	49.5%	40.7%	41.1%
oneDNN - IP Shapes 3D - bf16bf16bf16 - CPU (ms)	2.99045	3.96654	2.77560
Normalized	92.82%	69.98%	100%
Standard Deviation	12%	59.2%	10.1%
oneDNN - C.B.S.A - bf16bf16bf16 - CPU (ms)	2.13007	2.12241	2.12178
Normalized	99.61%	99.97%	100%
Standard Deviation	1.5%	2%	1.3%
oneDNN - D.B.s - bf16bf16bf16 - CPU (ms)	3.23502	3.29168	3.23059
Normalized	99.86%	98.14%	100%
Standard Deviation	0.4%	0.4%	0.1%
oneDNN - D.B.s - bf16bf16bf16 - CPU (ms)	3.63442	3.61481	3.63231
Normalized	99.46%	100%	99.52%
Standard Deviation	3.7%	3.5%	3.4%
oneDNN - R.N.N.T - bf16bf16bf16 - CPU (ms)	684.349	680.887	664.141
Normalized	97.05%	97.54%	100%

	Standard Deviation	0.7%	0.5%	0.7%
oneDNN - R.N.N.I - bf16bf16bf16 - CPU (ms)	Normalized	449.104	449.010	438.642
	Standard Deviation	0.6%	0.7%	0.4%
Timed Wasmer Compilation - Time To	Normalized	44.812	57.203	42.776
	Compile (sec)			
	Normalized	95.46%	74.78%	100%
	Standard Deviation	1.1%	2.5%	0.4%
Google SynthMark - VoiceMark_100 (Voices)	Normalized	543.430	550.527	543.043
	Standard Deviation	1.9%	1.3%	0.2%
SecureMark - SecureMark-TLS (marks)	Normalized	228244	223678	229049
	Standard Deviation	0.1%	0.1%	2.4%
OpenSSL - SHA256 (byte/s)	Normalized	59198740233	58476634107	58447799270
	Standard Deviation	0.2%	0.2%	0.1%
OpenSSL - RSA4096 (sign/s)	Normalized	17707	17798	17744
	Standard Deviation	1.2%	0.9%	1.3%
OpenSSL - RSA4096 (verify/s)	Normalized	1187547	1191218	1193326
	Standard Deviation	0.2%	0%	0.1%
GROMACS - MPI CPU - water_GMX50_bare	Normalized	9.049	9.038	9.076
	(Ns/Day)			
	Normalized	99.7%	99.58%	100%
	Standard Deviation	0.4%	2.2%	0.6%
TensorFlow Lite - SqueezeNet (us)	Normalized	49724	50688	49661
	Standard Deviation	0.5%	97.97%	100%
TensorFlow Lite - Inception V4 (us)	Normalized	710372	710386	693874
	Standard Deviation	0.7%	1.5%	2.2%
TensorFlow Lite - NASNet Mobile (us)	Normalized	83310	84493	82945
	Standard Deviation	2%	98.17%	100%
TensorFlow Lite - Mobilenet Float (us)	Normalized	40682	42433	39087
	Standard Deviation	2.1%	92.11%	100%
TensorFlow Lite - Mobilenet Quant (us)	Normalized	37666	41711	37729
	Standard Deviation	0.3%	90.3%	99.83%
TensorFlow Lite - I.R.V (us)	Normalized	594597	595226	596888
	Standard Deviation	0.4%	99.89%	99.62%
PostgreSQL pgbench - 100 - 250 - Read Only	Normalized	991583	937156	912058
	(TPS)			
	Normalized	100%	94.51%	91.98%
	Standard Deviation	2.3%	8.9%	20.3%
PostgreSQL pgbench - 100 - 250 - Read Only	Normalized	0.252	0.269	0.297
	- Average Latency (ms)			
	Normalized	100%	93.68%	84.85%
	Standard Deviation	2.4%	9.9%	42.7%

PostgreSQL pgbench - 100 - 250 - Read	32630	31120	12099
Write (TPS)			
Normalized	100%	95.37%	37.08%
Standard Deviation	0.1%	0.3%	3.3%
PostgreSQL pgbench - 100 - 250 - Read	7.663	8.039	20.686
Write - Average Latency (ms)			
Normalized	100%	95.32%	37.04%
Standard Deviation	0.1%	0.3%	3.2%
SQLite Speedtest - Timed Time - Size 1,000	59.770	62.546	72.652
(sec)			
Normalized	100%	95.56%	82.27%
Standard Deviation	0.7%	0.8%	0.8%
Stress-NG - MMAP (Bogo Ops/s)	4720	3839	4697
Normalized	100%	81.34%	99.53%
Standard Deviation	1.2%	1.6%	1%
Stress-NG - NUMA (Bogo Ops/s)	45.25	44.94	7.11
Normalized	100%	99.31%	15.71%
Standard Deviation	2.5%	0.6%	23.8%
Stress-NG - MEMFD (Bogo Ops/s)	3895		
Normalized	90.91%	88%	100%
Standard Deviation	1.3%	1.9%	1.6%
Stress-NG - Crypto (Bogo Ops/s)	14075		
Normalized	98.71%	96.11%	100%
Standard Deviation	1.5%	1.5%	0.8%
Stress-NG - Malloc (Bogo Ops/s)	1399403296	1407281591	1410532156
Normalized	99.21%	99.77%	100%
Standard Deviation	0.2%	0.2%	0.4%
Stress-NG - RdRand (Bogo Ops/s)	666960	666871	666960
Normalized	100%	99.99%	100%
Standard Deviation	0.6%	0.6%	0.6%
Stress-NG - Forking (Bogo Ops/s)	69886		
Normalized	76.9%	72.92%	100%
Standard Deviation	0.7%	0.4%	2.3%
Stress-NG - IO_uring (Bogo Ops/s)	336629	91422	75342
Normalized	100%	27.16%	22.38%
Standard Deviation	4.1%	0.7%	8.5%
Stress-NG - SENDFILE (Bogo Ops/s)	1225385		
Normalized	99.51%	97.21%	100%
Standard Deviation	0.4%	0.4%	0.5%
Stress-NG - CPU Cache (Bogo Ops/s)	15.93	16.10	16.45
Normalized	96.84%	97.87%	100%
Standard Deviation	0%	2.4%	3.8%
Stress-NG - CPU Stress (Bogo Ops/s)	126640		
Normalized	99.62%	99.35%	100%
Standard Deviation	0.5%	0.4%	0.3%
Stress-NG - Semaphores (Bogo Ops/s)	9177477	9460606	10452080
Normalized	87.81%	90.51%	100%
Standard Deviation	2.5%	0.2%	0.2%
Stress-NG - Matrix Math (Bogo Ops/s)	290056	292344	294254
Normalized	98.57%	99.35%	100%
Standard Deviation	0.8%	0.6%	0.6%
Stress-NG - Vector Math (Bogo Ops/s)	277479	278045	278158
Normalized	99.76%	99.96%	100%
Standard Deviation	0.5%	0.6%	0.3%

Stress-NG - Memory Copying (Bogo Ops/s)	13309	13002	13315
Normalized	99.96%	97.65%	100%
Standard Deviation	0.2%	0.1%	0.1%
Stress-NG - Context Switching (Bogo Ops/s)	4484675	5272695	24430642
Normalized	18.36%	21.58%	100%
Standard Deviation	1.7%	2.1%	1.5%
Stress-NG - G.C.S.F (Bogo Ops/s)	7933317	7962721	7905372
Normalized	99.63%	100%	99.28%
Standard Deviation	0.8%	0.5%	2.3%
Stress-NG - G.Q.D.S (Bogo Ops/s)	978.29	964.65	980.62
Normalized	99.76%	98.37%	100%
Standard Deviation	0.6%	0.5%	0.8%
Stress-NG - S.V.M.P (Bogo Ops/s)	4098551	3578020	3045985
Normalized	100%	87.3%	74.32%
Standard Deviation	9.2%	2.4%	0.3%
Mobile Neural Network - mobilenetV3 (ms)	1.994	1.949	2.069
Normalized	97.74%	100%	94.2%
Standard Deviation	8.4%	0.6%	6.2%
Mobile Neural Network - squeezenetv1.1	3.840	3.770	3.760
Normalized	97.92%	99.73%	100%
Standard Deviation	5.1%	6.1%	6.1%
Mobile Neural Network - resnet-v2-50 (ms)	19.122	18.794	18.854
Normalized	98.28%	100%	99.68%
Standard Deviation	1.2%	0.4%	2.9%
Mobile Neural Network - SqueezeNetV1.0	4.672	4.421	5.061
Normalized	94.63%	100%	87.35%
Standard Deviation	12%	0.4%	4.6%
Mobile Neural Network - MobileNetV2_224	2.795	2.731	2.876
Normalized	97.71%	100%	94.96%
Standard Deviation	5.7%	1.9%	7.1%
Mobile Neural Network - mobilenet-v1-1.0	1.946	1.844	1.995
Normalized	94.76%	100%	92.43%
Standard Deviation	5.5%	1%	2.7%
Mobile Neural Network - inception-v3 (ms)	22.304	21.614	22.326
Normalized	96.91%	100%	96.81%
Standard Deviation	2.2%	0.6%	1.3%
NCNN - CPU - mobilenet (ms)	21.31	21.26	21.27
Normalized	99.77%	100%	99.95%
Standard Deviation	2.4%	0.8%	1%
NCNN - CPU-v2-v2 - mobilenet-v2 (ms)	11.99	11.85	11.82
Normalized	98.58%	99.75%	100%
Standard Deviation	1.2%	0.8%	1.7%
NCNN - CPU - shufflenet-v2 (ms)	11.67	11.70	11.84
Normalized	100%	99.74%	98.56%
Standard Deviation	0.6%	1.8%	0.2%
NCNN - CPU - mnasnet (ms)	11.43	11.28	11.17
Normalized	97.73%	99.02%	100%
Standard Deviation	1.8%	0.7%	0.8%
NCNN - CPU - efficientnet-b0 (ms)	14.48	14.32	14.13
Normalized	97.58%	98.67%	100%
Standard Deviation	1.9%	0.5%	1.1%
NCNN - CPU - blazeface (ms)	6.96	6.99	6.69
Normalized	96.12%	95.71%	100%
Standard Deviation	3.5%	2.1%	1.7%
NCNN - CPU - googlenet (ms)	23.54	22.40	21.51

Xeon Platinum 8380 Fedora

Normalized	91.38%	96.03%	100%
Standard Deviation	5.1%	4.2%	2.1%
NCNN - CPU - vgg16 (ms)	29.02	28.66	31.60
Normalized	98.76%	100%	90.7%
Standard Deviation	3.2%	4.2%	2.1%
NCNN - CPU - resnet18 (ms)	14.58	14.09	13.35
Normalized	91.56%	94.75%	100%
Standard Deviation	6.1%	6.9%	2.2%
NCNN - CPU - alexnet (ms)	9.69	9.35	8.53
Normalized	88.03%	91.23%	100%
Standard Deviation	3.3%	7.8%	2.6%
NCNN - CPU - resnet50 (ms)	26.02	26.27	26.94
Normalized	100%	99.05%	96.59%
Standard Deviation	3.1%	2.2%	1.2%
NCNN - CPU - yolov4-tiny (ms)	25.41	25.15	25.69
Normalized	98.98%	100%	97.9%
Standard Deviation	6.2%	2.2%	0.9%
NCNN - CPU - squeezenet_ssd (ms)	23.85	24.03	23.74
Normalized	99.54%	98.79%	100%
Standard Deviation	2.3%	0.2%	1.3%
NCNN - CPU - regnety_400m (ms)	37.97	37.70	37.77
Normalized	99.29%	100%	99.81%
Standard Deviation	3.2%	1.2%	1.7%
NCNN - CPU-v3-v3 - mobilenet-v3 (ms)	11.66	11.56	11.43
Normalized	98.03%	98.88%	100%
Standard Deviation	2.4%	1%	0.9%
TNN - CPU - DenseNet (ms)	4131	4539	3940
Normalized	95.38%	86.81%	100%
Standard Deviation	1.7%	2.8%	1.1%
TNN - CPU - MobileNet v2 (ms)	396.219	441.997	383.432
Normalized	96.77%	86.75%	100%
Standard Deviation	1.2%	8.4%	5%
TNN - CPU - SqueezeNet v2 (ms)	74.022	76.861	74.832
Normalized	100%	96.31%	98.92%
Standard Deviation	1.6%	1.7%	2.3%
TNN - CPU - SqueezeNet v1.1 (ms)	366.322	368.220	365.690
Normalized	99.83%	99.31%	100%
Standard Deviation	0.1%	0%	0%
Apache Cassandra - Writes (Op/s)	155829	150942	150708
Normalized	100%	96.86%	96.71%
Standard Deviation	2.8%	2.9%	2.5%
Facebook RocksDB - Rand Fill (Op/s)	101033	99799	
Normalized	100%	98.78%	
Standard Deviation	0.4%	0.2%	
Facebook RocksDB - Rand Read (Op/s)	369206119	324373890	
Normalized	100%	87.86%	
Standard Deviation	4%	1.9%	
Facebook RocksDB - Update Rand (Op/s)	96320	94412	
Normalized	100%	98.02%	
Standard Deviation	0.2%	0.1%	
Facebook RocksDB - Rand Fill Sync (Op/s)	100599	71086	
Normalized	100%	70.66%	
Standard Deviation	0.2%	0.1%	
Facebook RocksDB - R.R.W.R (Op/s)	884458	866761	
Normalized	100%	98%	

Xeon Platinum 8380 Fedora

	Standard Deviation	0.2%	0.1%	
Blender - BMW27 - CPU-Only (sec)	Normalized	29.86	29.53	29.20
	Standard Deviation	0.3%	0.7%	0.3%
Blender - Classroom - CPU-Only (sec)	Normalized	73.64	73.41	72.44
	Standard Deviation	0%	0.2%	0.3%
Blender - Barbershop - CPU-Only (sec)	Normalized	109.60	108.68	105.32
	Standard Deviation	0.7%	0.7%	0.2%
ONNX Runtime - yolov4 - OpenMP CPU	(Inferences/min)	548	541	
	Normalized	100%	98.72%	
	Standard Deviation	1.2%	1%	
ONNX Runtime - bertsquad-10 - OpenMP	CPU (Inferences/min)	687	648	
	Normalized	100%	94.32%	
	Standard Deviation	5.7%	5.9%	
ONNX Runtime - fcn-resnet101-11 - OpenMP	CPU (Inferences/min)	474	476	
	Normalized	99.58%	100%	
	Standard Deviation	1.2%	1.9%	
ONNX Runtime - shufflenet-v2-10 - OpenMP	CPU (Inferences/min)	12630	11943	
	Normalized	100%	94.56%	
	Standard Deviation	1%	1.1%	
PyBench - T.F.A.T.T (Milliseconds)		1157	1011	1205
	Normalized	87.38%	100%	83.9%
	Standard Deviation	0.2%	0.6%	0.4%
PyPerformance - 2to3 (Milliseconds)		524	515	556
	Normalized	98.28%	100%	92.63%
	Standard Deviation	0.2%	0%	0%
PyPerformance - chaos (Milliseconds)		132	136	177
	Normalized	100%	97.06%	74.58%
	Standard Deviation	1.6%	1.9%	6.7%
PyPerformance - float (Milliseconds)		128	148	174
	Normalized	100%	86.49%	73.56%
	Standard Deviation	0%	9.6%	7.6%
PyPerformance - nbody (Milliseconds)		161	152	191
	Normalized	94.41%	100%	79.58%
	Standard Deviation	2.2%	9.1%	8.3%
PyPerformance - pathlib (Milliseconds)		28.7	26.1	29.4
	Normalized	90.94%	100%	88.78%
	Standard Deviation	0%	5.2%	6.3%
PyPerformance - raytrace (Milliseconds)		525	487	627
	Normalized	92.76%	100%	77.67%
	Standard Deviation	0.4%	0.9%	0.7%
PyPerformance - json.loads (Milliseconds)		26.2	30.5	31.8
	Normalized	100%	85.9%	82.39%
	Standard Deviation	1%	7.2%	7.7%
PyPerformance - crypto_pyaes		137	133	173
	Normalized	97.08%	100%	76.88%
	Standard Deviation	1.5%	9.2%	7.1%
PyPerformance - regex_compile		206	215	248
	Normalized	100%	95.81%	83.06%

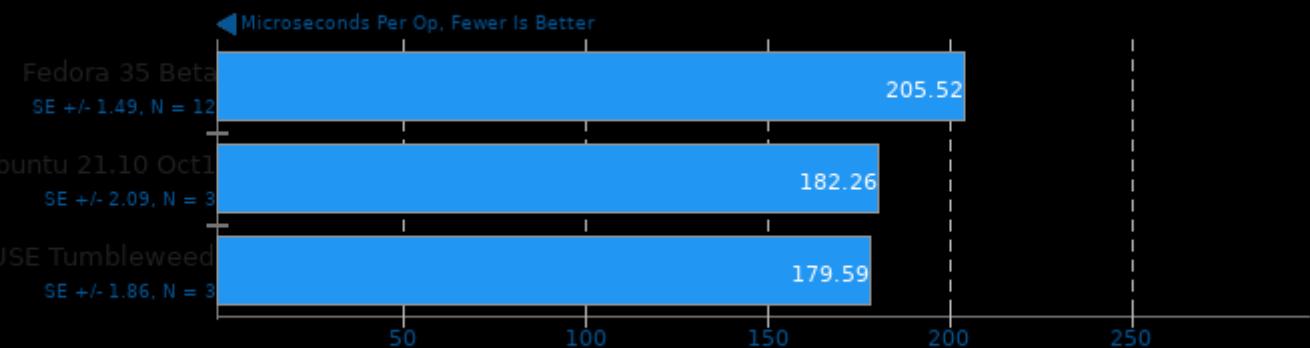
Xeon Platinum 8380 Fedora

	Standard Deviation	0.6%	7.9%	2.5%
PyPerformance - python_startup	Normalized	16.1	16.8	19.9
	Standard Deviation	0.4%	1%	0.3%
PyPerformance - django_template (Milliseconds)	Normalized	55.8	59.1	67.9
	Standard Deviation	2.4%	10.3%	1.1%
PyPerformance - pickle_pure_python (Milliseconds)	Normalized	516	604	705
	Standard Deviation	1%	7.6%	9.5%
nginx - 100 (Req/sec)	Normalized	88738	72553	78819
	Standard Deviation	1.9%	0.7%	1.6%
nginx - 200 (Req/sec)	Normalized	204765	168716	195438
	Standard Deviation	1%	19.3%	2.3%
nginx - 500 (Req/sec)	Normalized	213761	189132	206192
	Standard Deviation	1.1%	2.5%	1.1%
nginx - 1000 (Req/sec)	Normalized	216774	191182	208713
	Standard Deviation	1%	1.1%	1.2%
Apache HTTP Server - 100 (Req/sec)	Normalized	40138	30630	78275
	Standard Deviation	51.28%	39.13%	100%
	Standard Deviation	1.1%	0.9%	0.4%
Apache HTTP Server - 200 (Req/sec)	Normalized	39792	43438	196789
	Standard Deviation	20.22%	22.07%	100%
	Standard Deviation	0.4%	0.8%	1.3%
Apache HTTP Server - 1000 (Req/sec)	Normalized	59961	106682	206714
	Standard Deviation	29.01%	51.61%	100%
	Standard Deviation	17.5%	17.8%	1.7%
Appleseed - Emily (sec)	Normalized	178.073796	178.454037	175.525803
	Standard Deviation	98.57%	98.36%	100%
Appleseed - Disney Material (sec)	Normalized	83.066417	81.862378	83.338994
	Standard Deviation	98.55%	100%	98.23%
Appleseed - Material Tester (sec)	Normalized	194.072632	190.722468	189.12003
	Standard Deviation	97.45%	99.16%	100%
PHPBench - P.B.S (Score)	Normalized	761666	784757	628171
	Standard Deviation	97.06%	100%	80.05%
	Standard Deviation	0.2%	0.5%	1.9%
Git - T.T.C.C.G.C (sec)	Normalized	62.329	60.819	60.788
	Standard Deviation	97.53%	99.95%	100%
	Standard Deviation	0.5%	0.2%	0.4%
Chaos Group V-RAY - CPU (vsamples)	Normalized	63528	63275	66690
	Standard Deviation	95.26%	94.88%	100%
	Standard Deviation	0.9%	1%	1.2%
Timed LLVM Compilation - Ninja (sec)	Normalized	132.315	131.763	133.642
	Standard Deviation	99.58%	100%	98.59%
	Standard Deviation	0.7%	0.2%	0.4%
Timed LLVM Compilation - Unix Makefiles	Normalized	206.063	205.281	206.827
	Standard Deviation	99.62%	100%	99.25%
	Standard Deviation	0.7%	1.2%	1.4%

PostgreSQL pgbench - 100 - 500 - Read Only	1875522 (TPS)	1859821	1794700
Normalized	100%	99.16%	95.69%
Standard Deviation	2.4%	4.1%	10.7%
PostgreSQL pgbench - 100 - 500 - Read Only	0.267 - Average Latency (ms)	0.269	0.282
Normalized	100%	99.26%	94.68%
Standard Deviation	2.4%	4.2%	10.7%
PostgreSQL pgbench - 100 - 500 - Read	27335 Write (TPS)	30731	9872
Normalized	88.95%	100%	32.12%
Standard Deviation	0.1%	0.2%	1%
PostgreSQL pgbench - 100 - 500 - Read	18.292 Write - Average Latency (ms)	16.270	50.652
Normalized	88.95%	100%	32.12%
Standard Deviation	0.1%	0.2%	1%

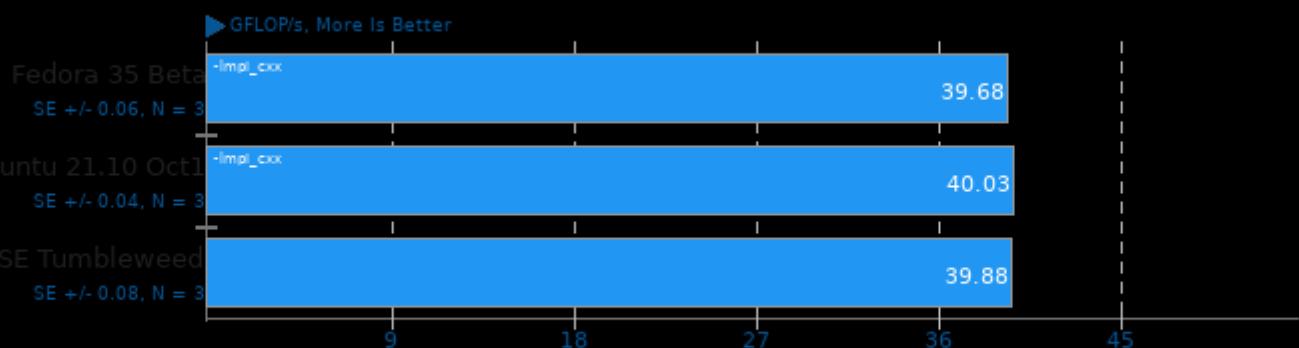
LevelDB 1.22

Benchmark: Hot Read



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

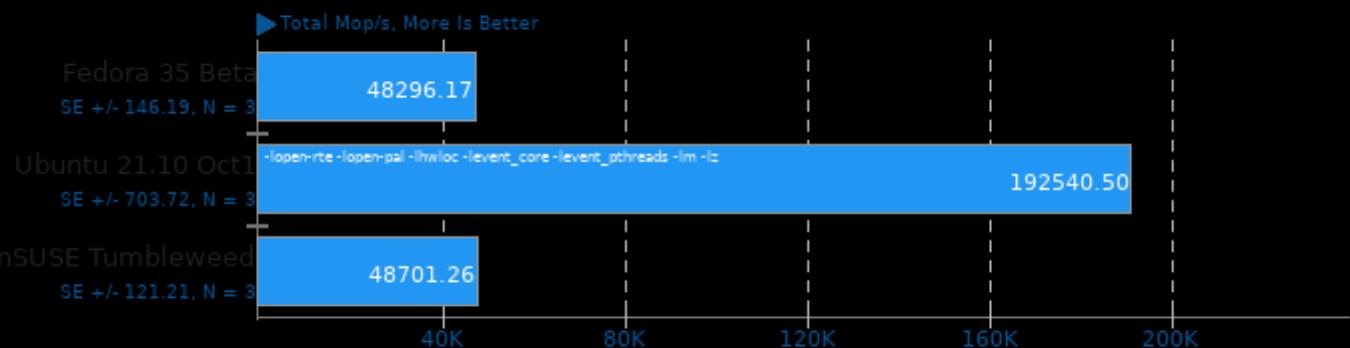
High Performance Conjugate Gradient 3.1



1. (CXX) g++ options: -O3 -ffast-math -fno-vectorize -lmpi

NAS Parallel Benchmarks 3.4

Test / Class: BT.C

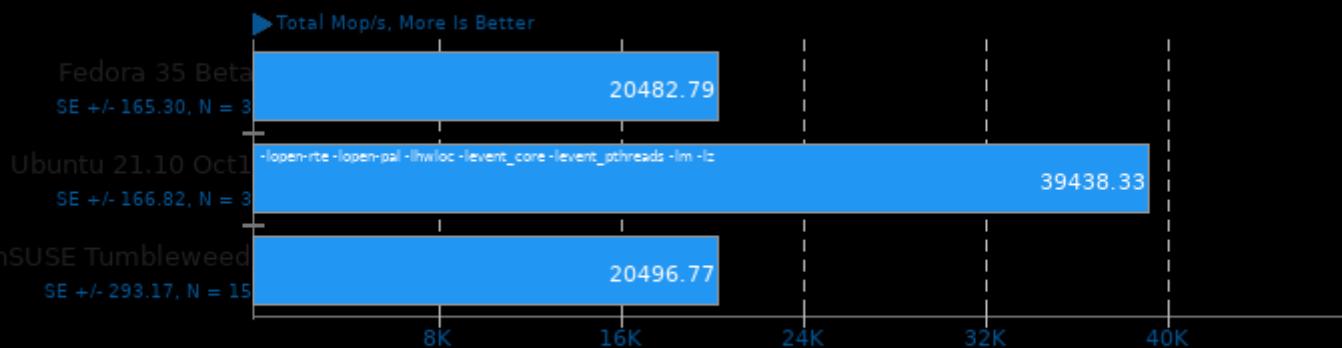


1. (F9X) gfortran options: -O3 -march=native -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

Test / Class: CG.C



1. (F9X) gfortran options: -O3 -march=native -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

Test / Class: EP.D

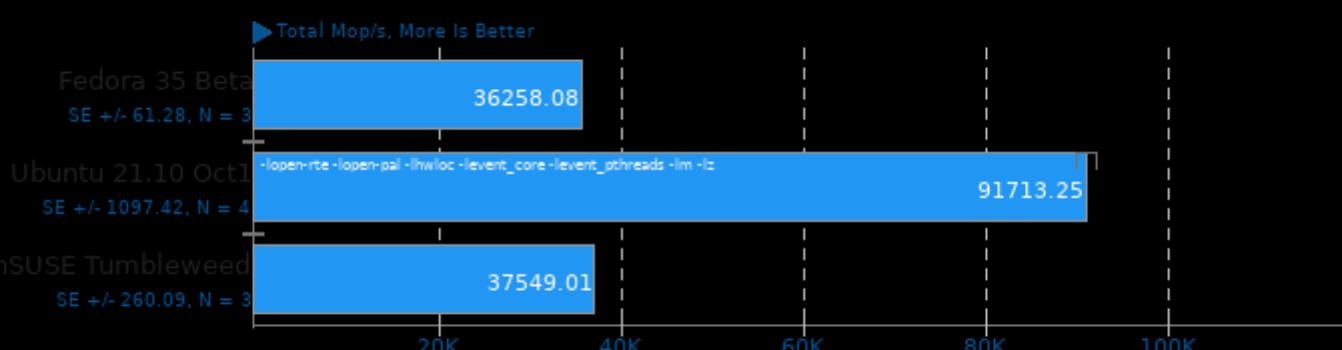


1. (F9X) gfortran options: -O3 -march=native -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

Test / Class: FT.C

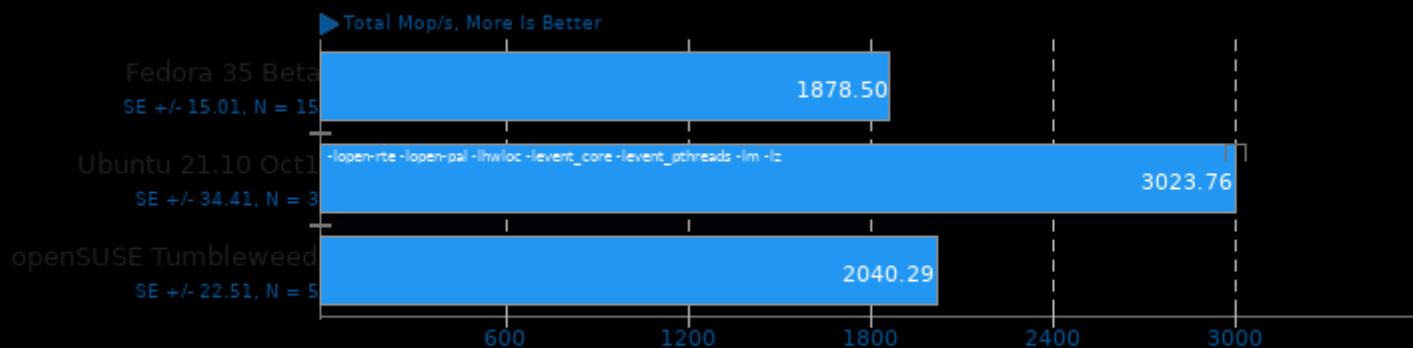


1. (F9X) gfortran options: -O3 -march=native -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

Test / Class: IS.D

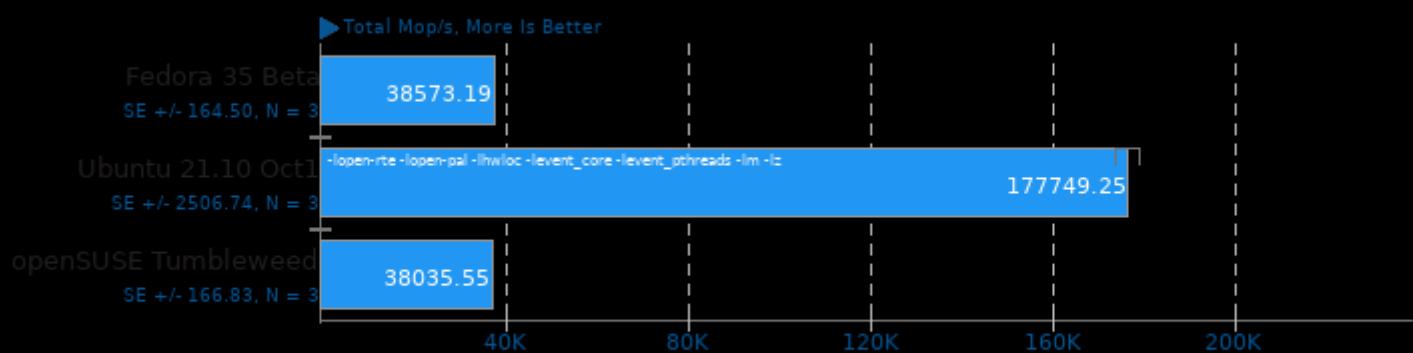


1. (F9X) gfortran options: -O3 -march=native -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

Test / Class: LU.C

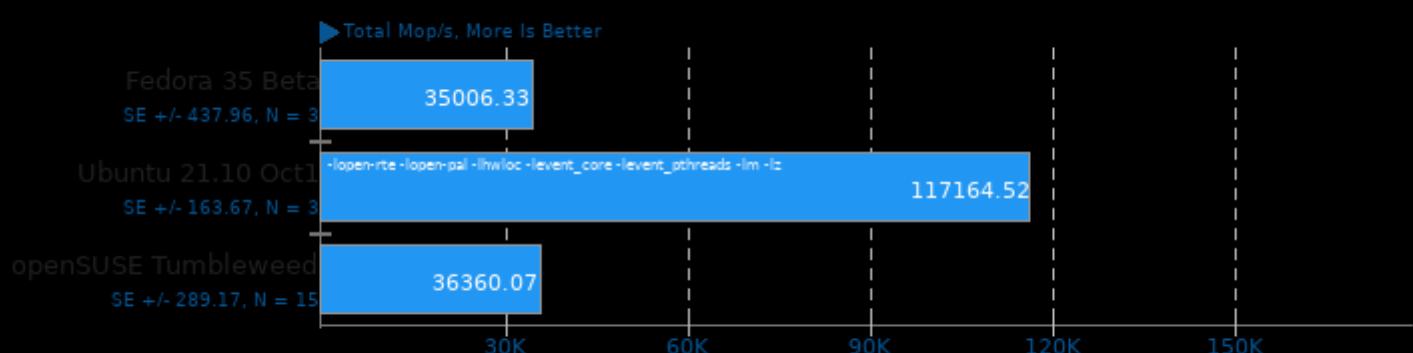


1. (F9X) gfortran options: -O3 -march=native -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

Test / Class: MG.C

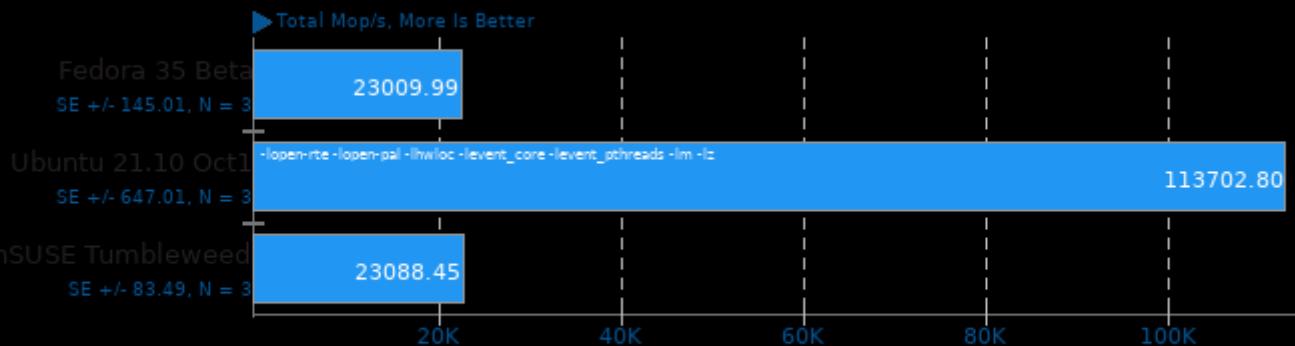


1. (F9X) gfortran options: -O3 -march=native -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

Test / Class: SP.B

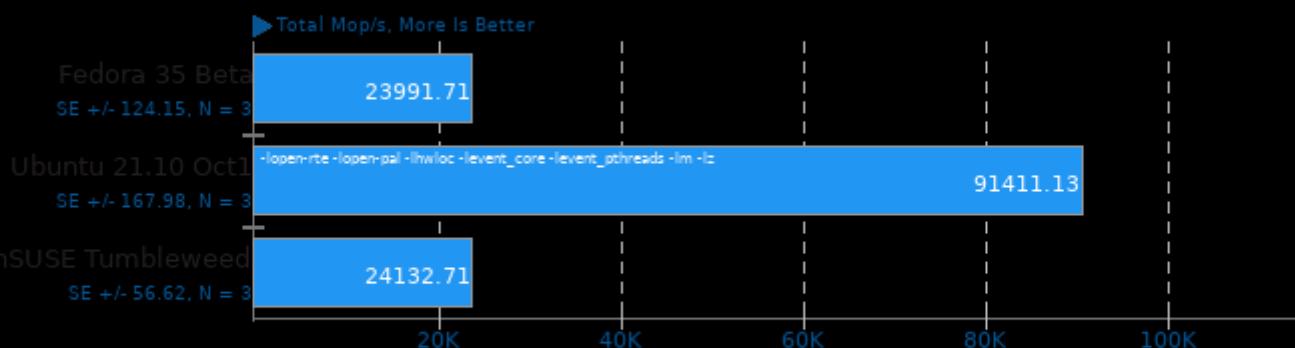


1. (F9X) gfortran options: -O3 -march=native -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

Test / Class: SP.C

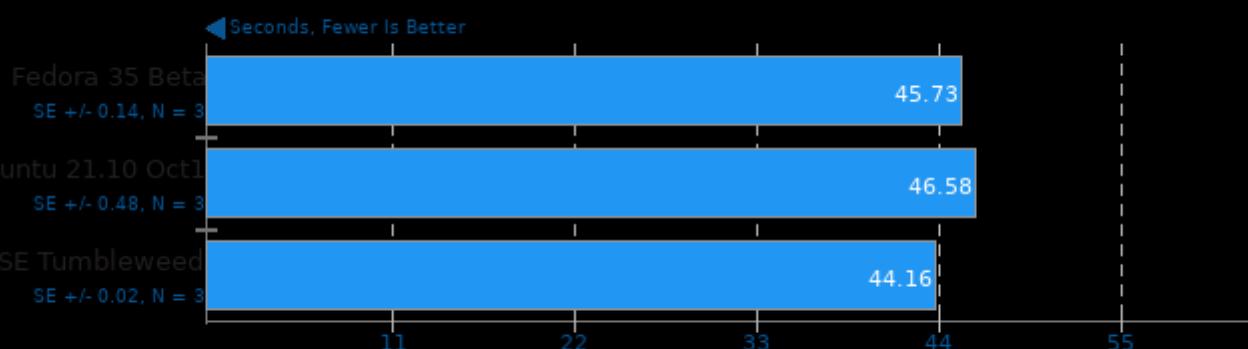


1. (F9X) gfortran options: -O3 -march=native -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.1.0

Rodinia 3.1

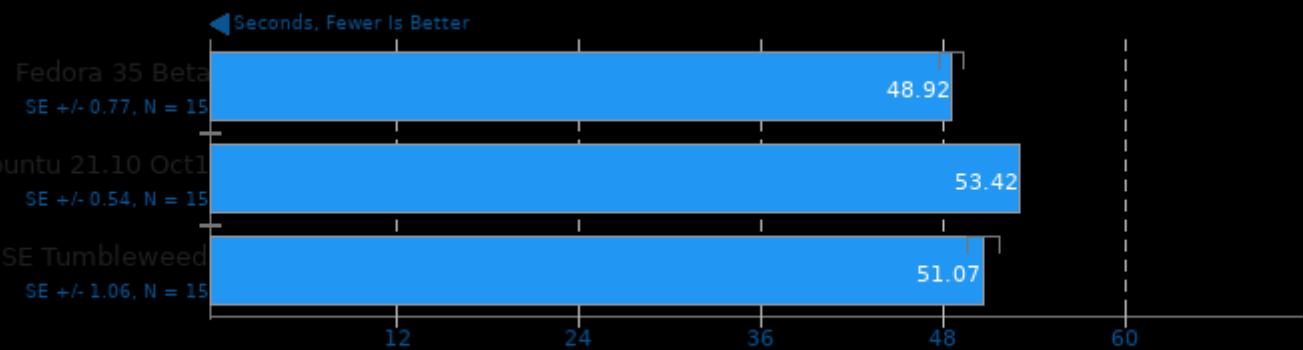
Test: OpenMP LavaMD



1. (CXX) g++ options: -O2 -fOpenCL

Rodinia 3.1

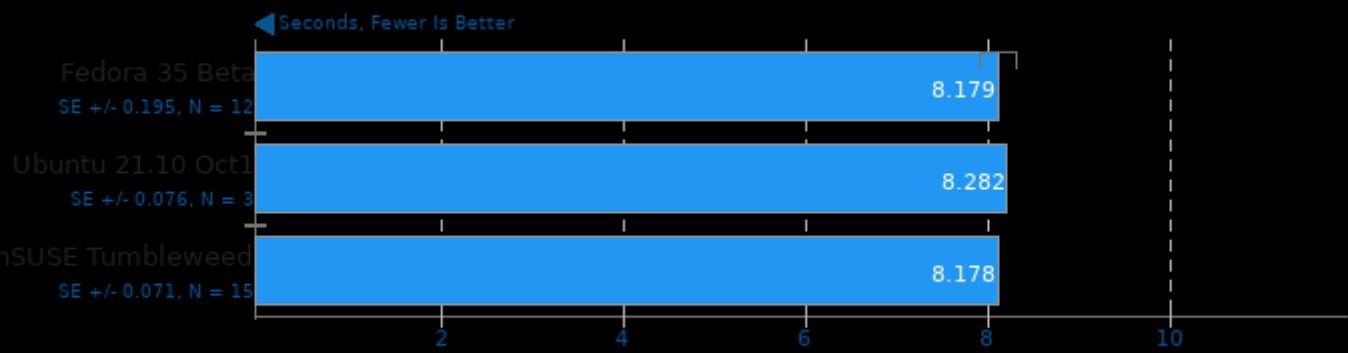
Test: OpenMP Leukocyte



1. (CXX) g++ options: -O2 -fOpenCL

Rodinia 3.1

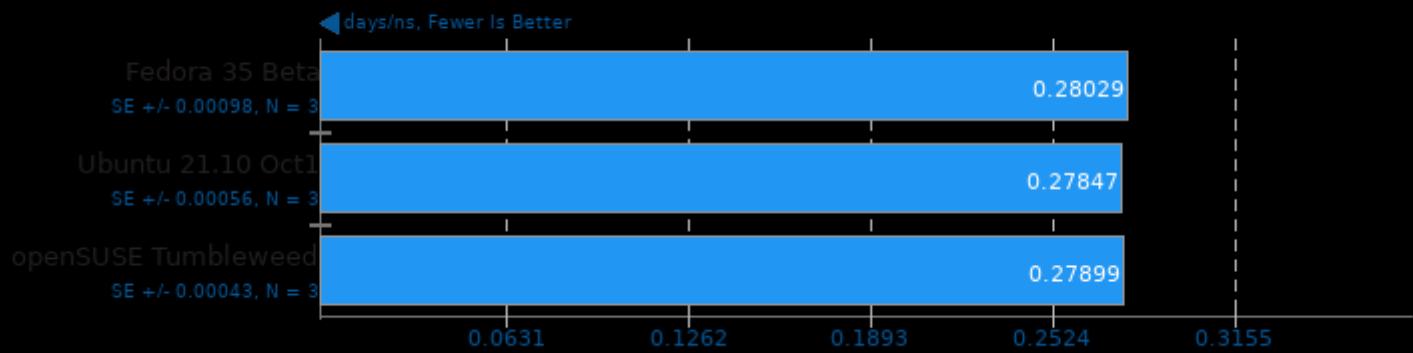
Test: OpenMP Streamcluster



1. (CXX) g++ options: -O2 -fOpenCL

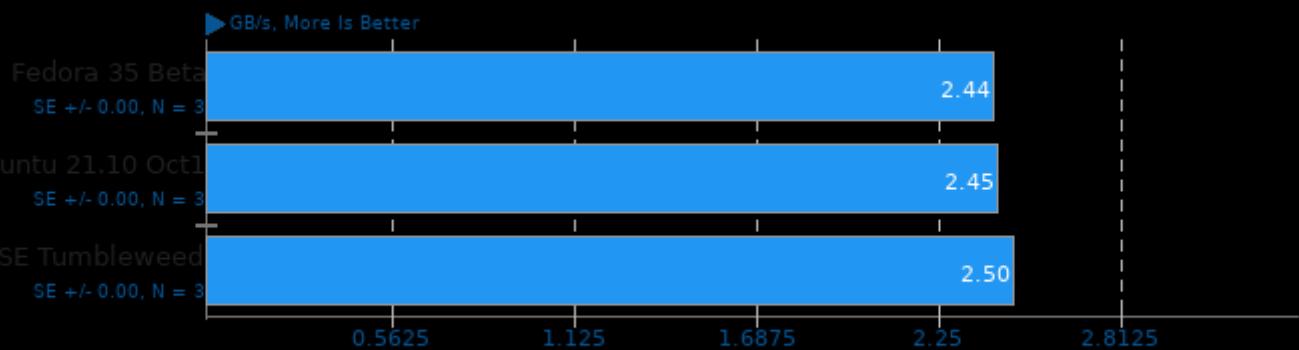
NAMD 2.14

ATPase Simulation - 327,506 Atoms



simdjson 1.0

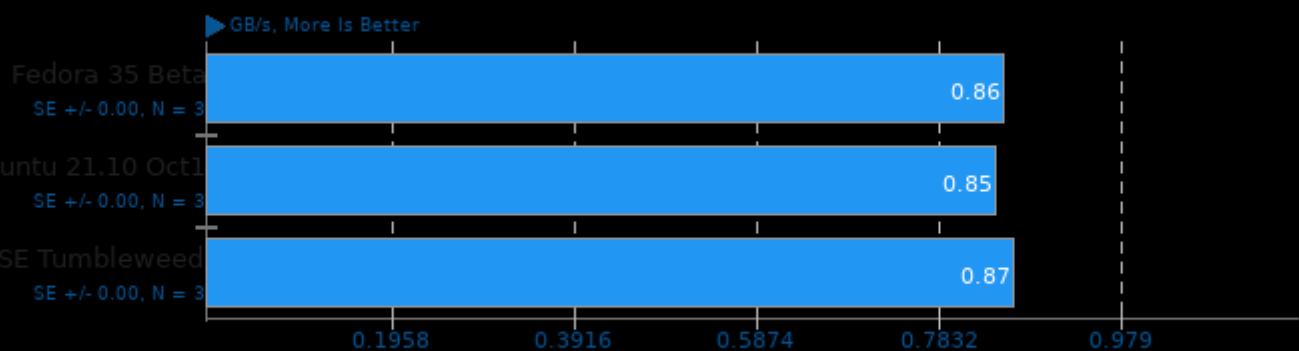
Throughput Test: Kostya



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

simdjson 1.0

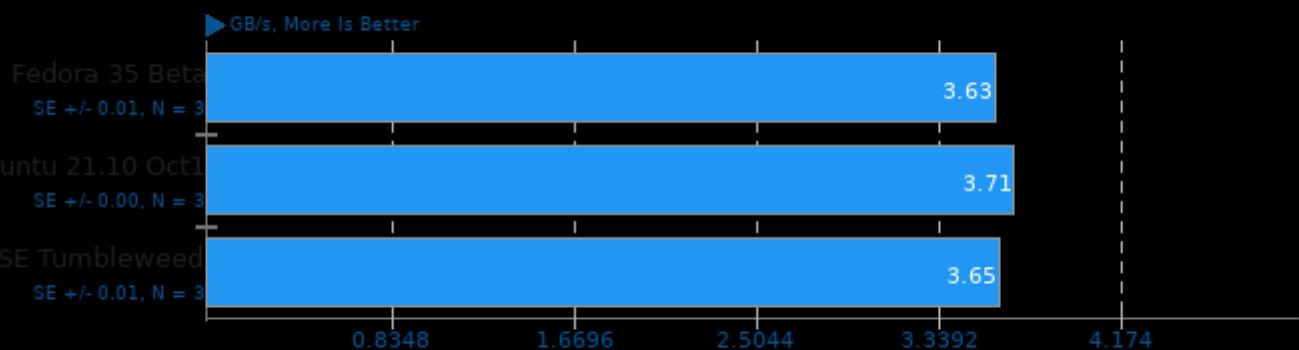
Throughput Test: LargeRandom



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

simdjson 1.0

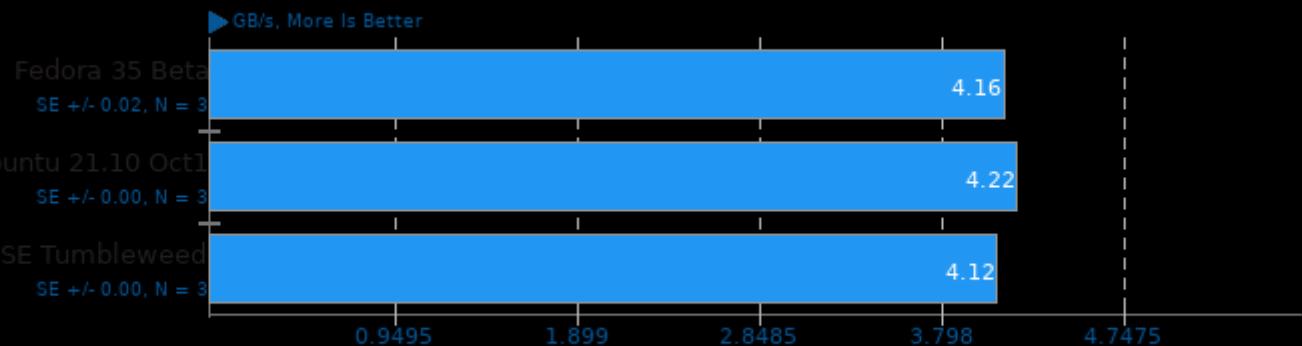
Throughput Test: PartialTweets



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

simdjson 1.0

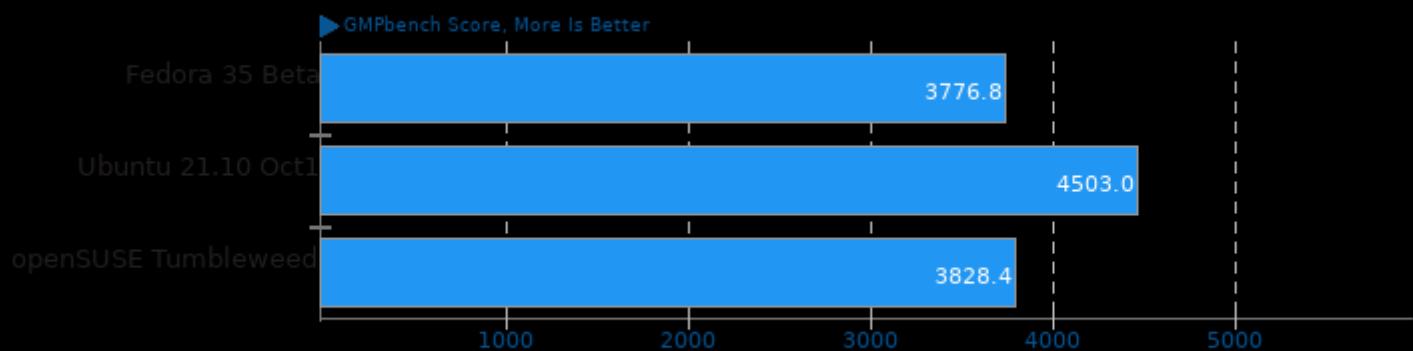
Throughput Test: DistinctUserID



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

GNU GMP GMPbench 6.2.1

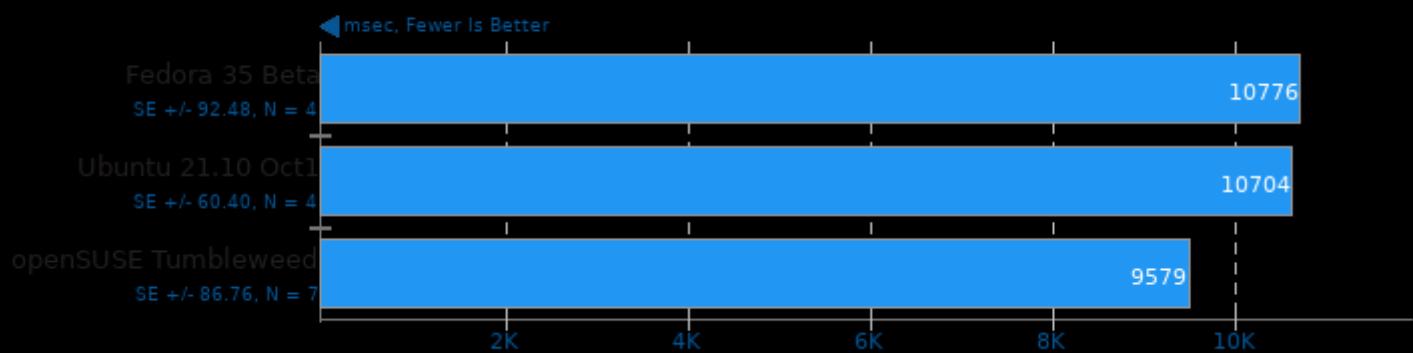
Total Time



1. (CC) gcc options: -O3 -fomit-frame-pointer -lm

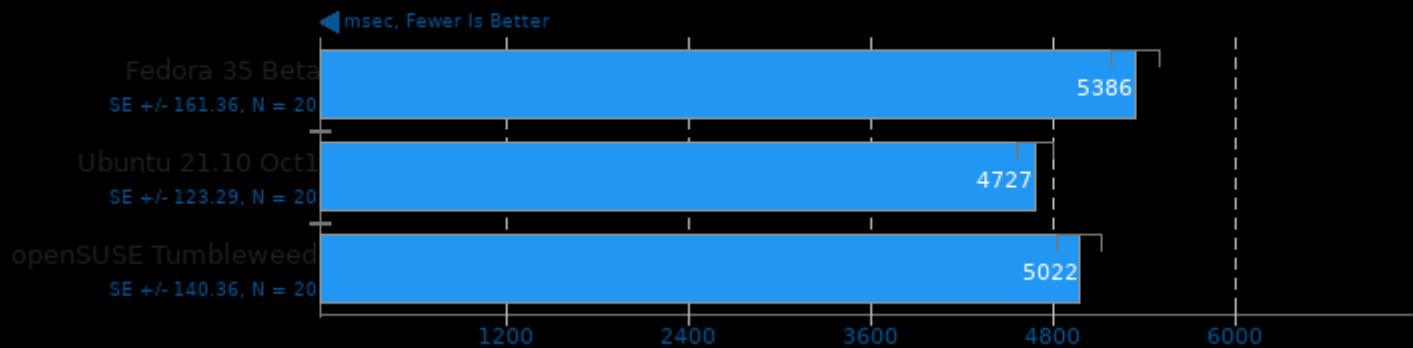
DaCapo Benchmark 9.12-MR1

Java Test: H2



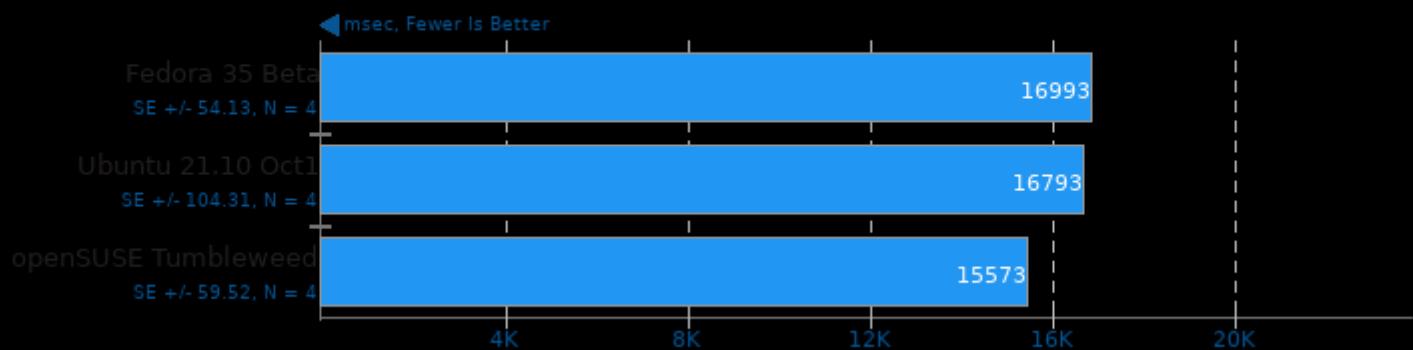
DaCapo Benchmark 9.12-MR1

Java Test: Jython



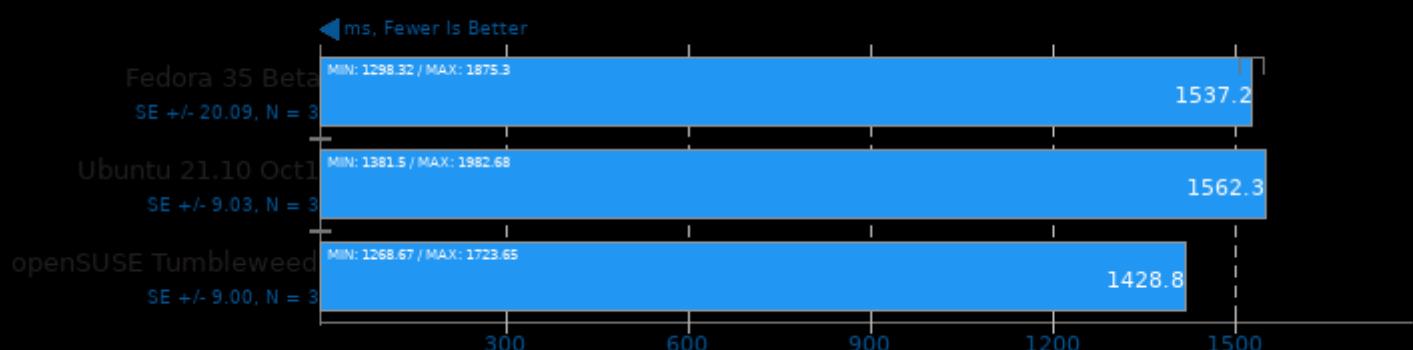
DaCapo Benchmark 9.12-MR1

Java Test: Tradebeans



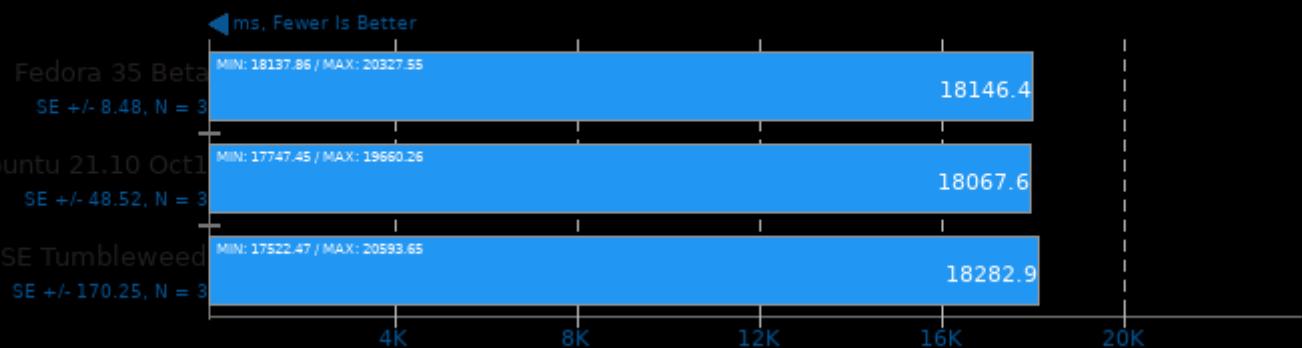
Renaissance 0.12

Test: Random Forest



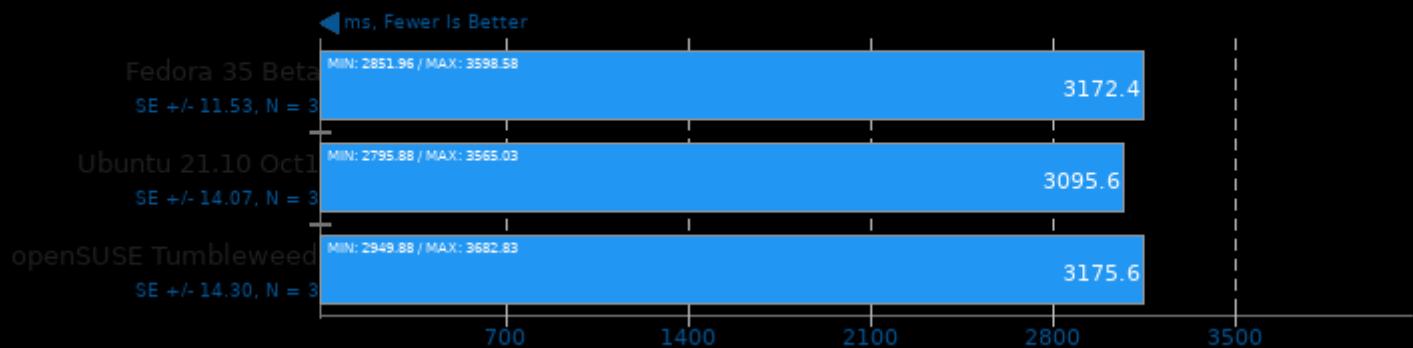
Renaissance 0.12

Test: ALS Movie Lens



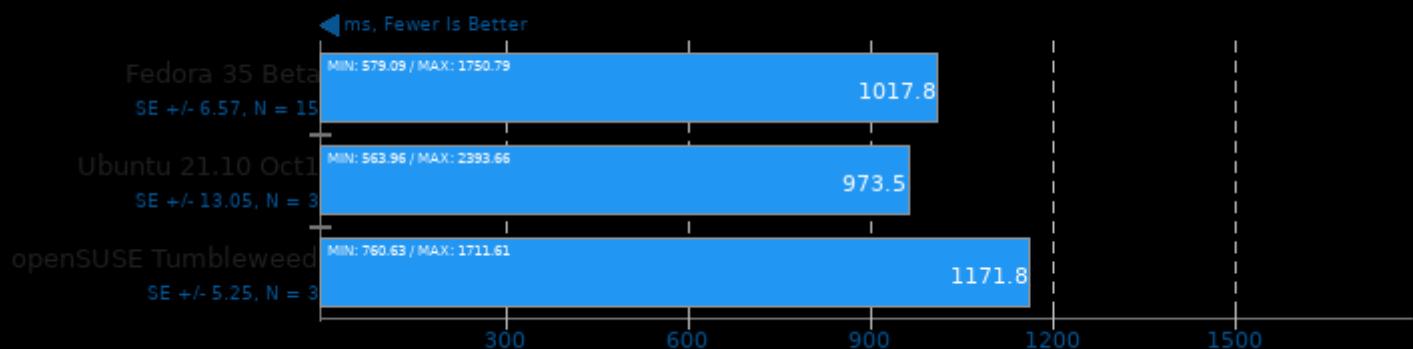
Renaissance 0.12

Test: Apache Spark ALS



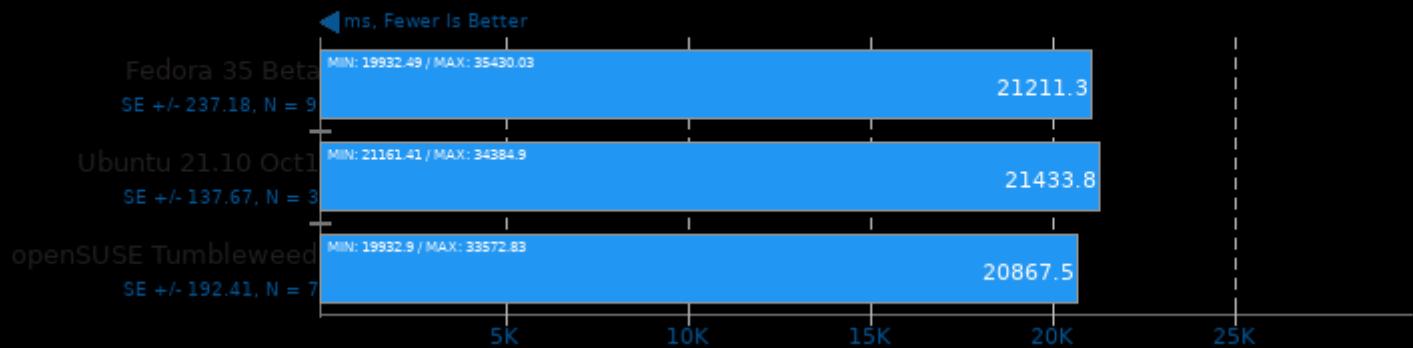
Renaissance 0.12

Test: Apache Spark Bayes



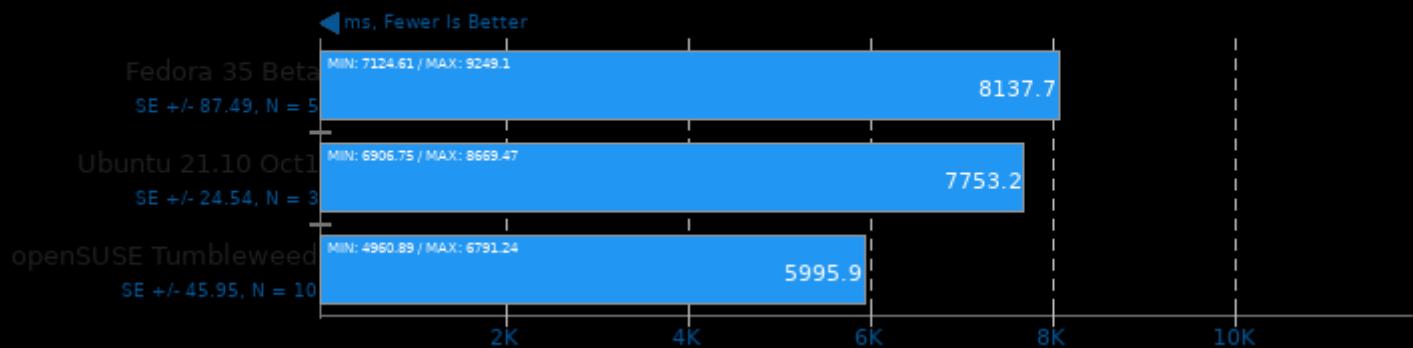
Renaissance 0.12

Test: Savina Reactors.IO



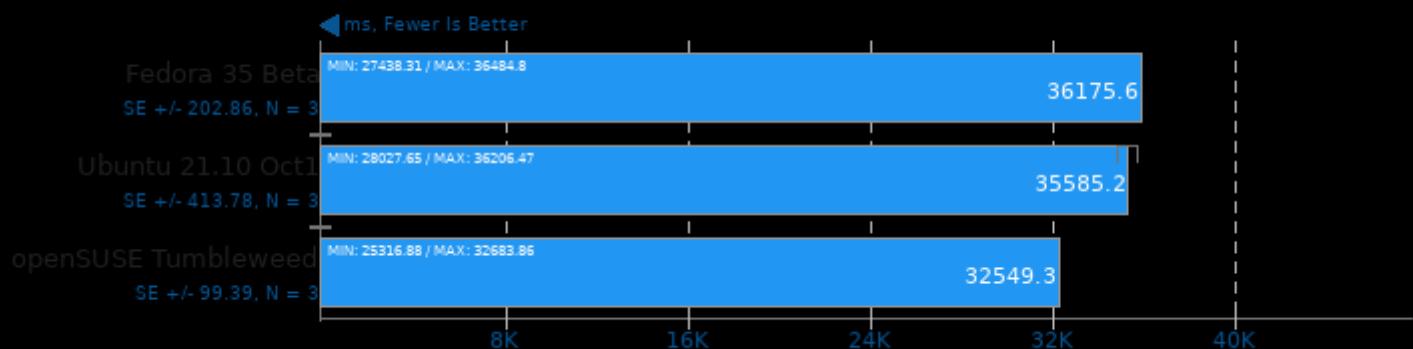
Renaissance 0.12

Test: Finagle HTTP Requests



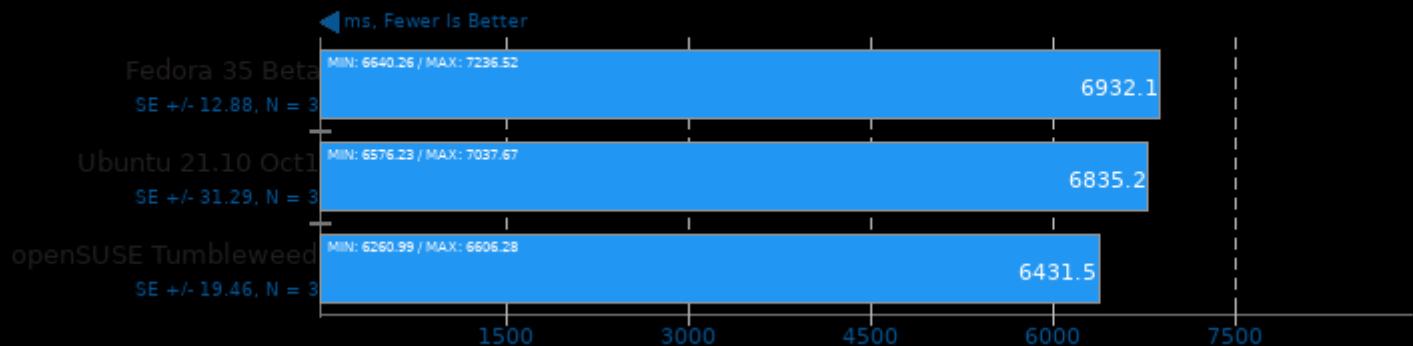
Renaissance 0.12

Test: Akka Unbalanced Cobwebbed Tree



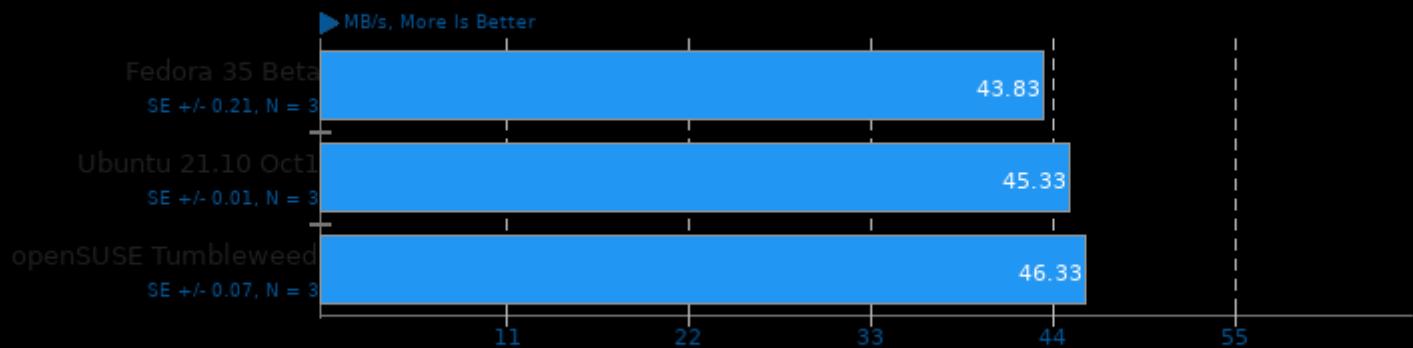
Renaissance 0.12

Test: Genetic Algorithm Using Jenetics + Futures



LZ4 Compression 1.9.3

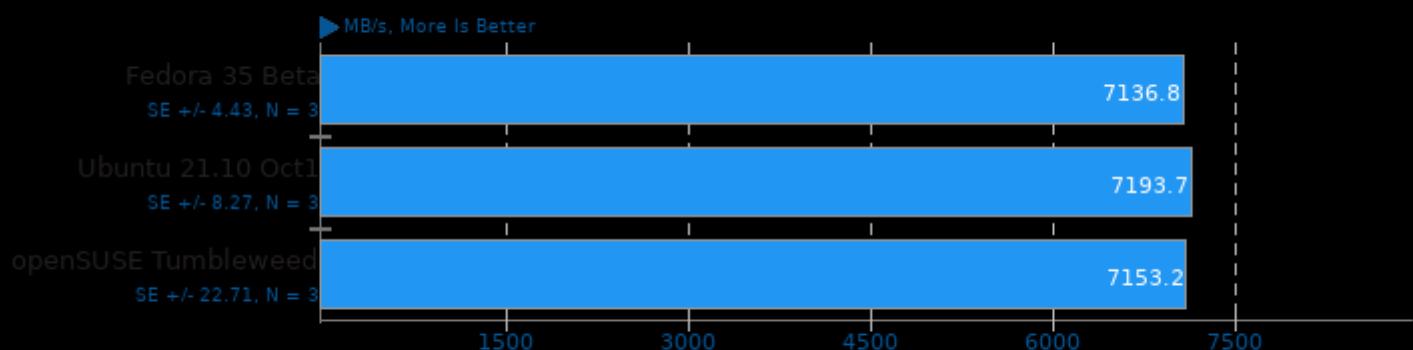
Compression Level: 3 - Compression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

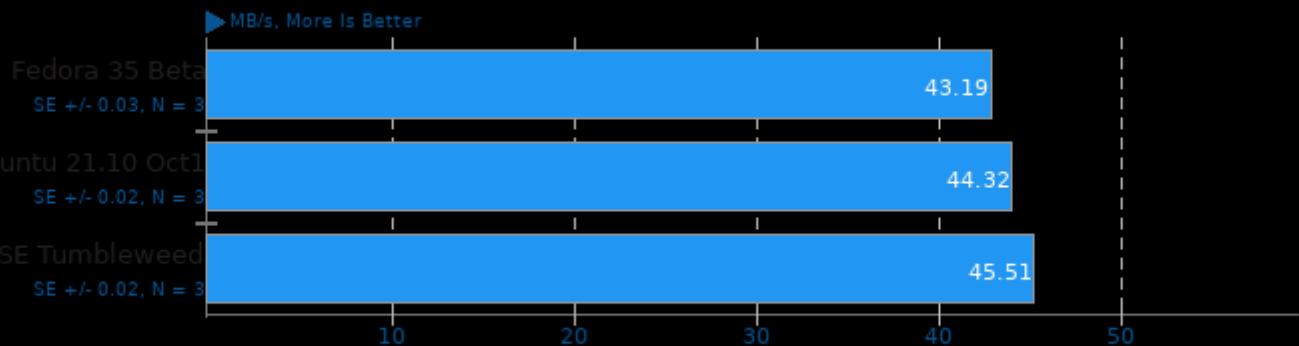
Compression Level: 3 - Decompression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

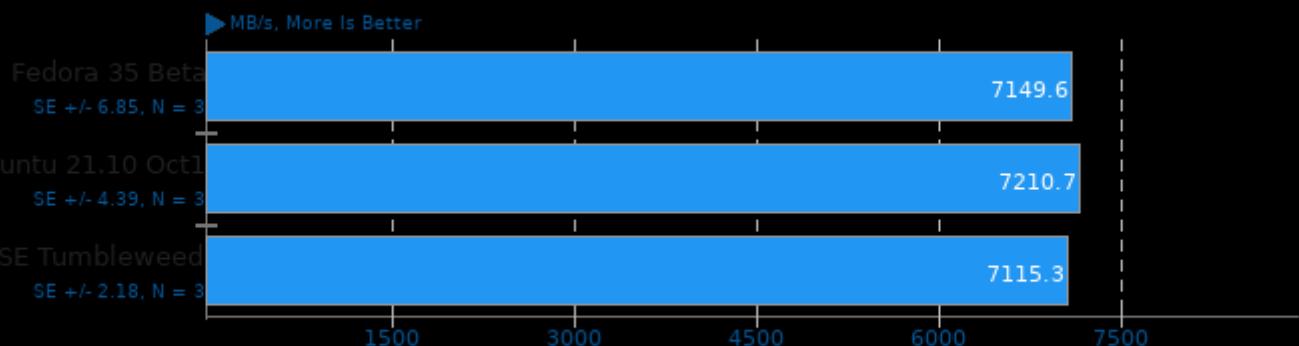
Compression Level: 9 - Compression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

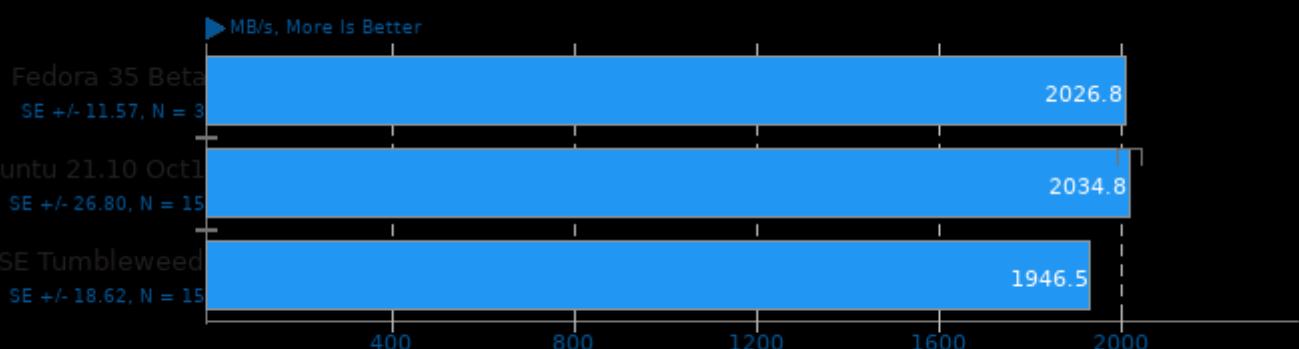
Compression Level: 9 - Decompression Speed



1. (CC) gcc options: -O3

Zstd Compression 1.5.0

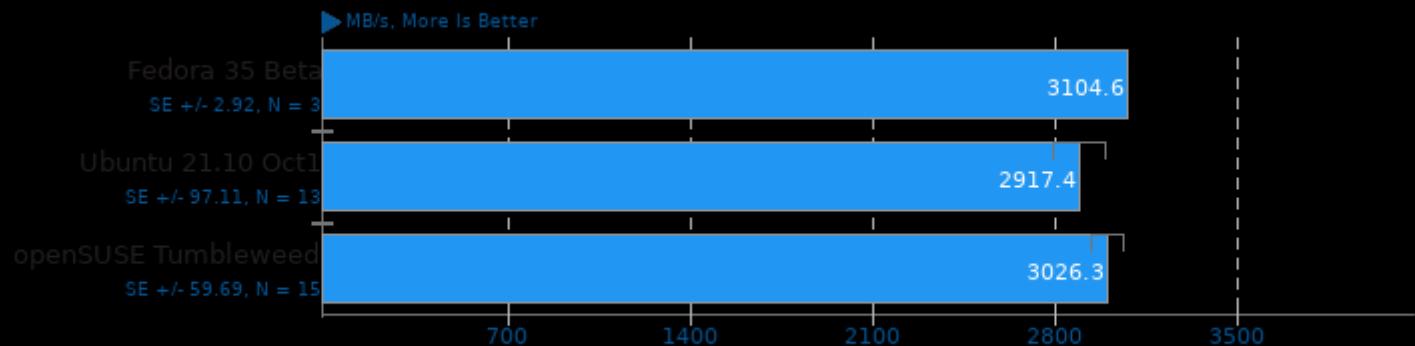
Compression Level: 8 - Compression Speed



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

Zstd Compression 1.5.0

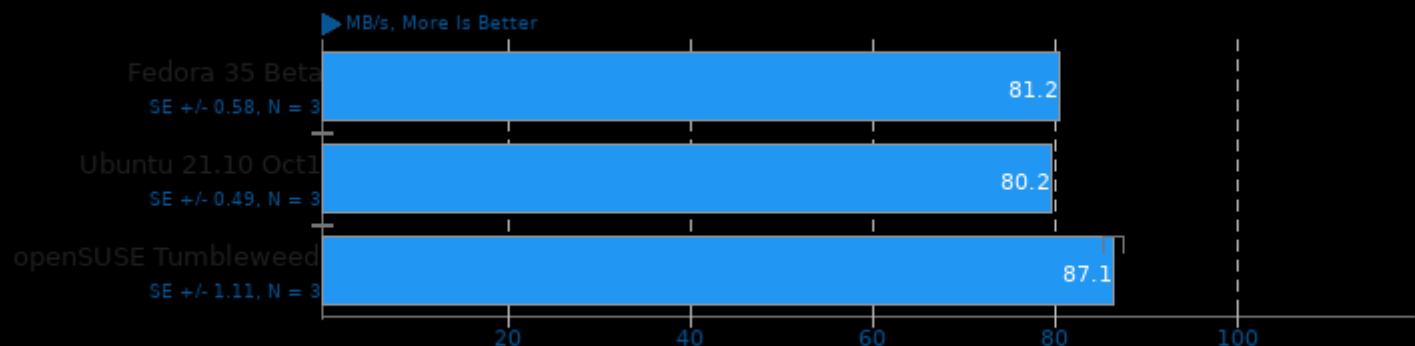
Compression Level: 8 - Decompression Speed



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

Zstd Compression 1.5.0

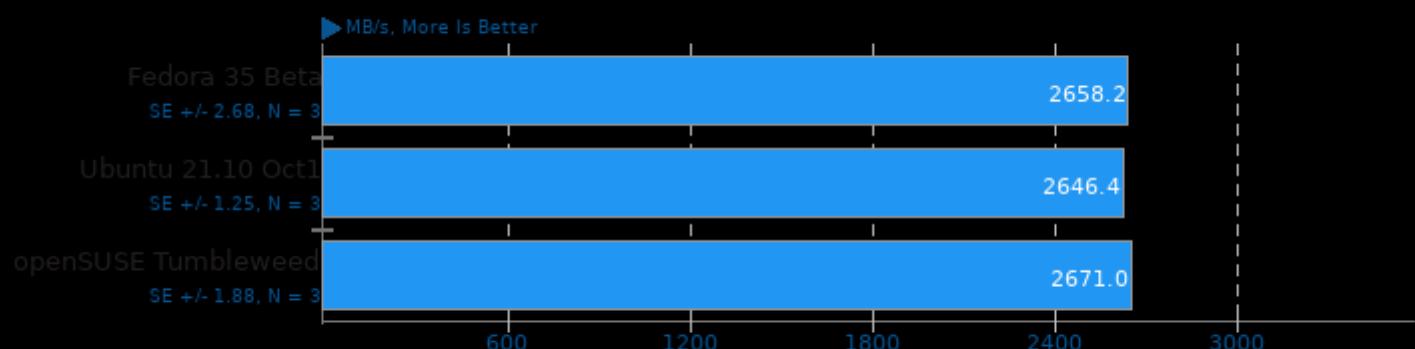
Compression Level: 19 - Compression Speed



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

Zstd Compression 1.5.0

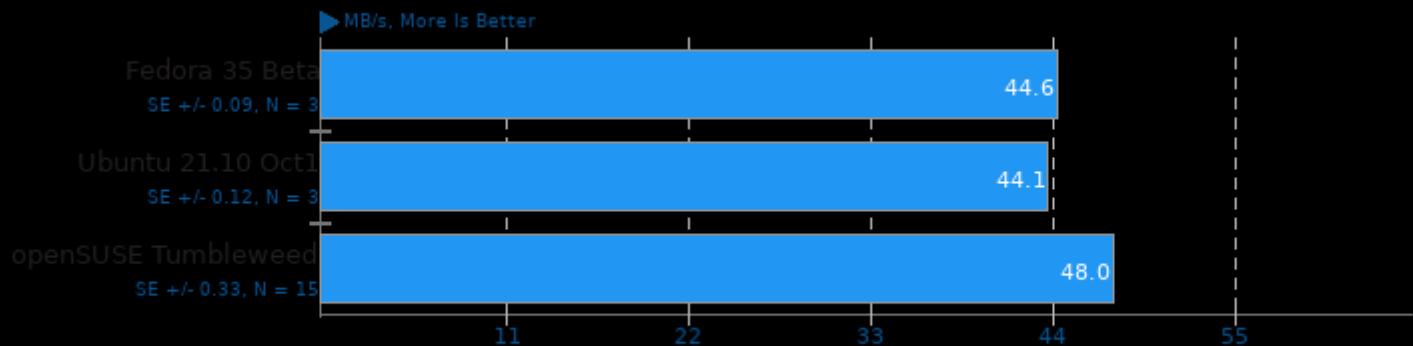
Compression Level: 19 - Decompression Speed



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

Zstd Compression 1.5.0

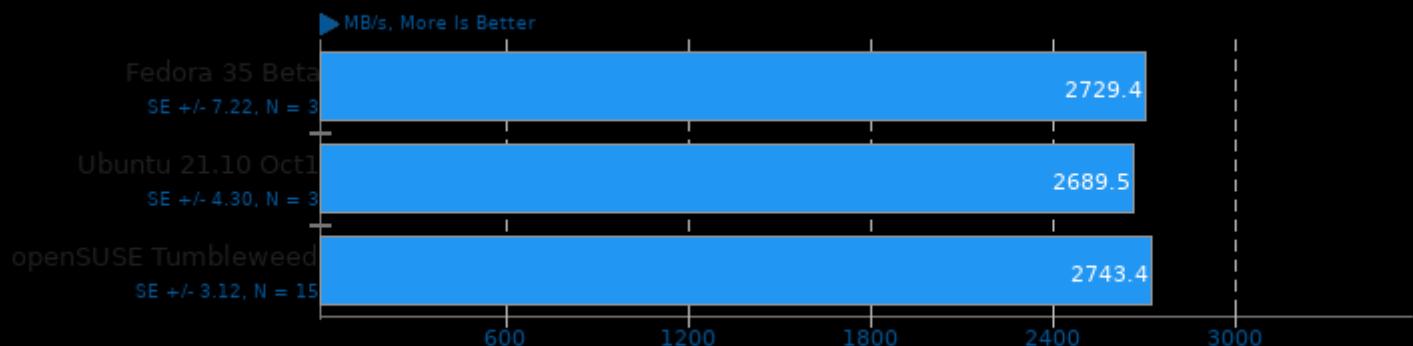
Compression Level: 19, Long Mode - Compression Speed



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

Zstd Compression 1.5.0

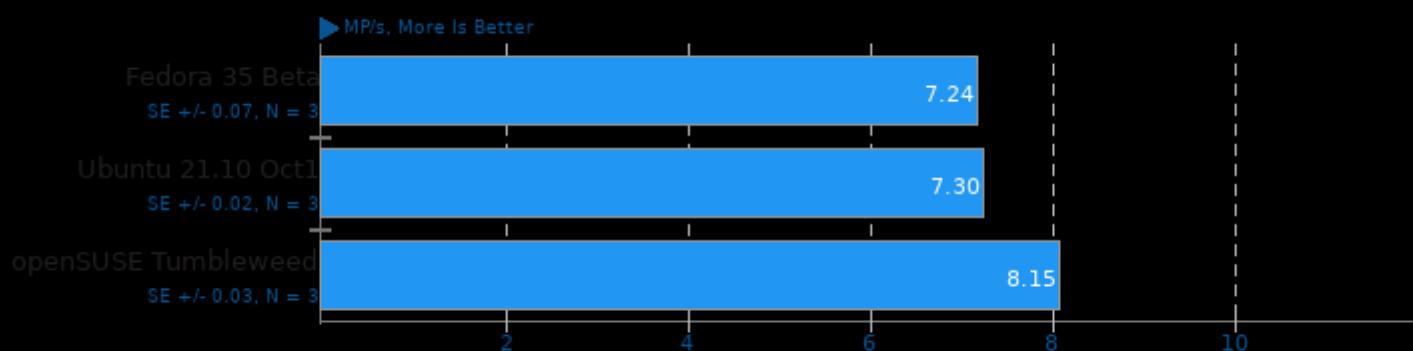
Compression Level: 19, Long Mode - Decompression Speed



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

JPEG XL libjxl 0.5

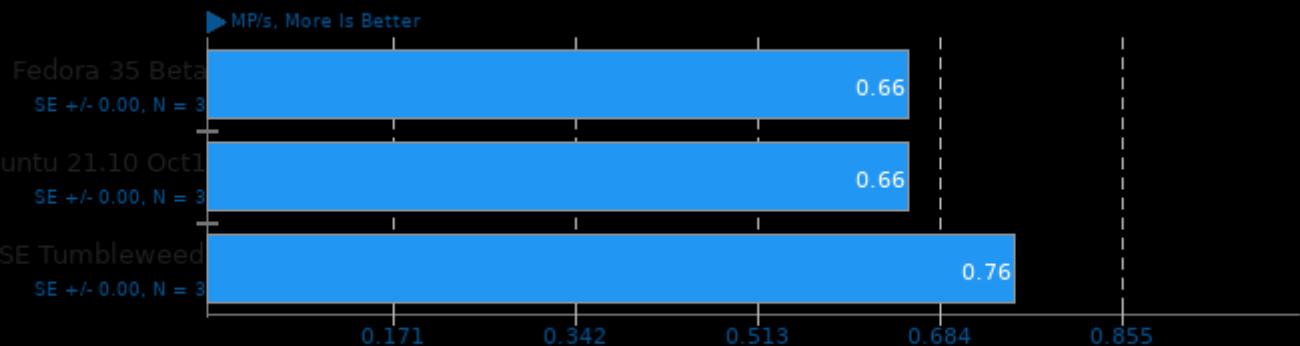
Input: PNG - Encode Speed: 7



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

JPEG XL libjxl 0.5

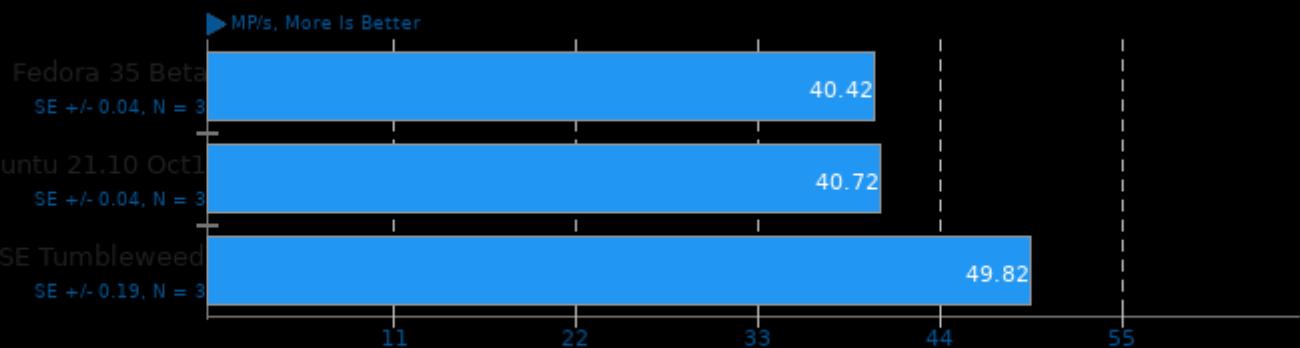
Input: PNG - Encode Speed: 8



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

JPEG XL libjxl 0.5

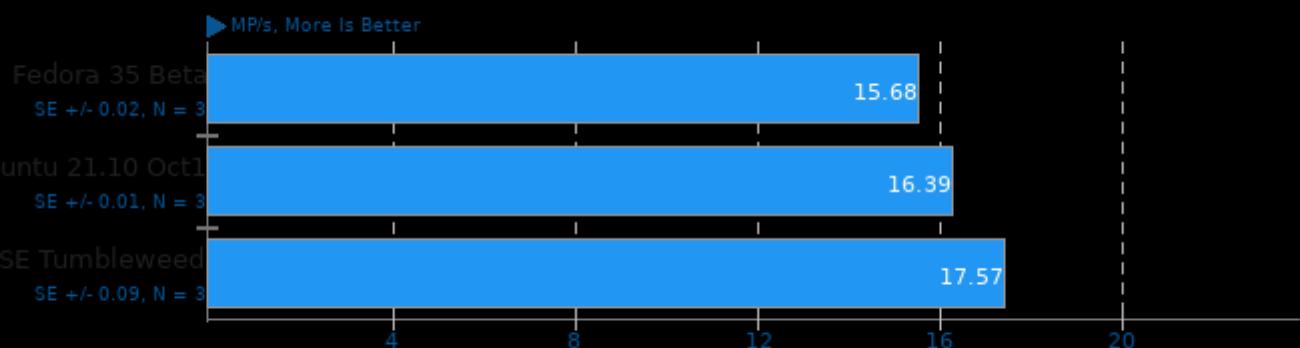
Input: JPEG - Encode Speed: 7



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

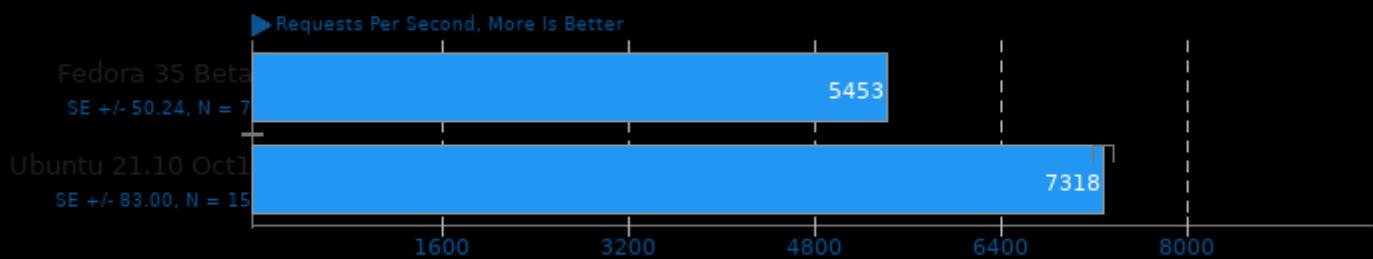
JPEG XL libjxl 0.5

Input: JPEG - Encode Speed: 8



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

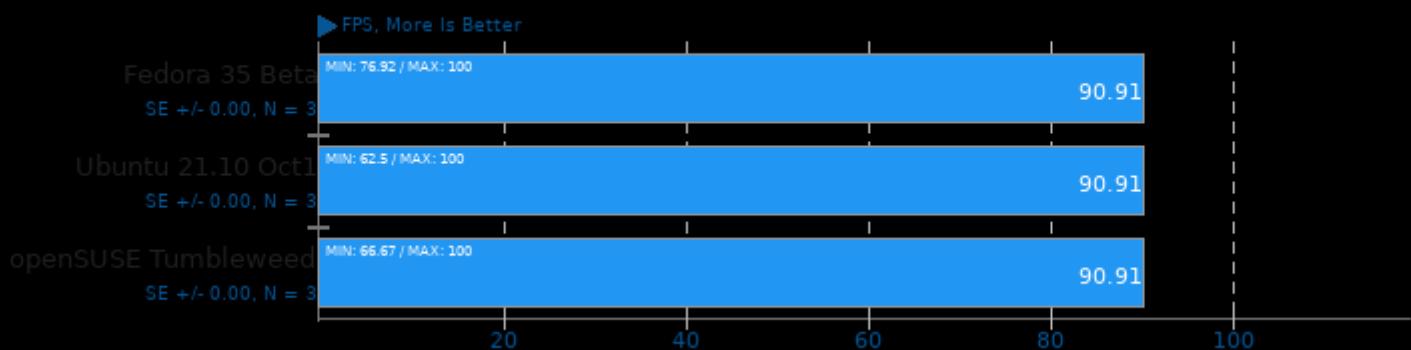
Node.js Express HTTP Load Test



1. Fedora 35 Beta: Nodejs
2. Ubuntu 21.10 Oct1: Nodejs
v12.22.5

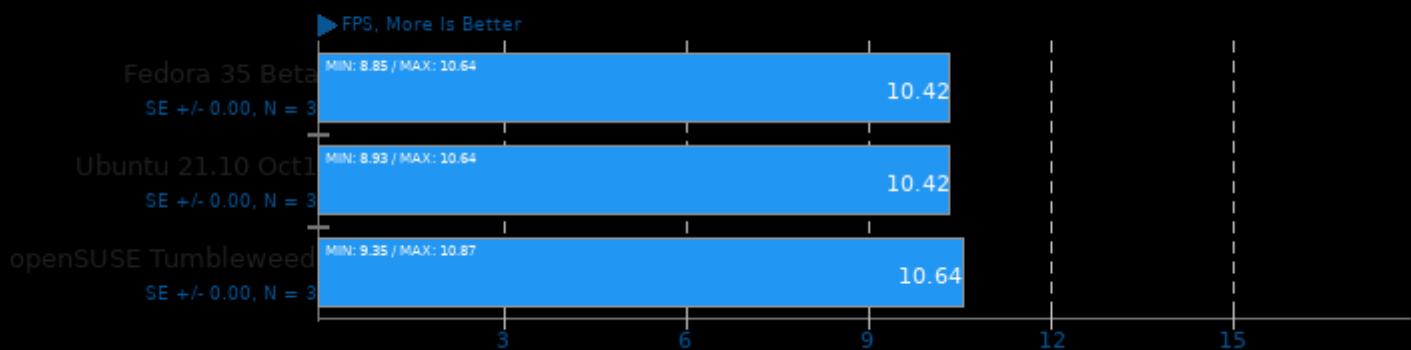
OSPray 1.8.5

Demo: San Miguel - Renderer: SciVis



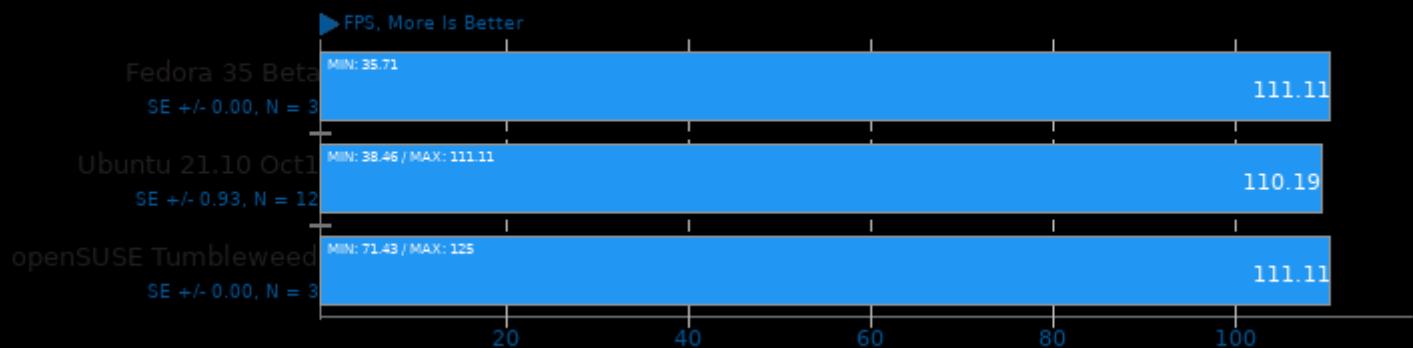
OSPray 1.8.5

Demo: San Miguel - Renderer: Path Tracer



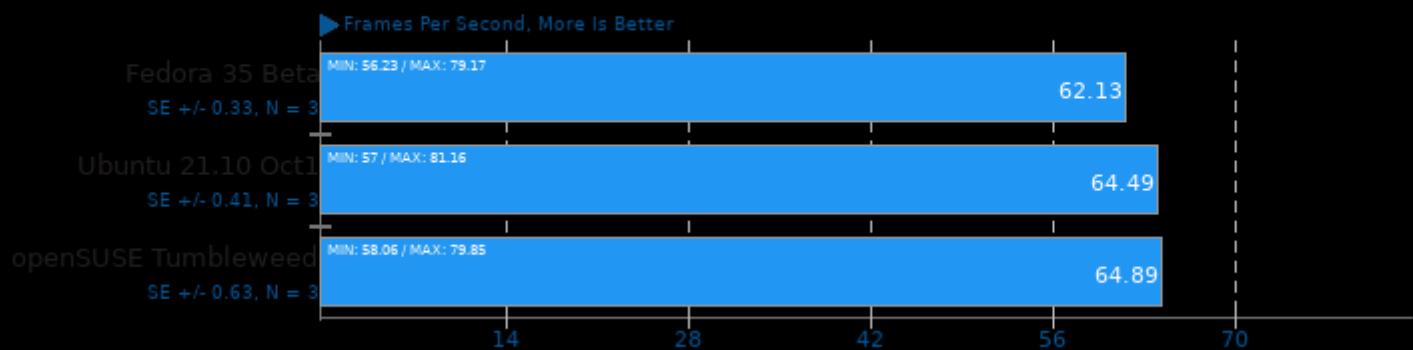
OSPray 1.8.5

Demo: Magnetic Reconnection - Renderer: SciVis



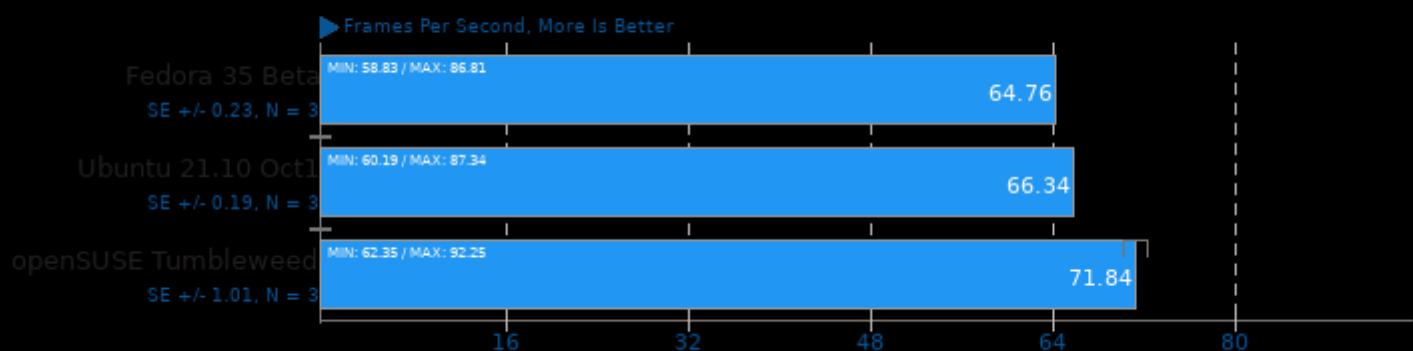
Embree 3.13

Binary: Pathtracer - Model: Crown



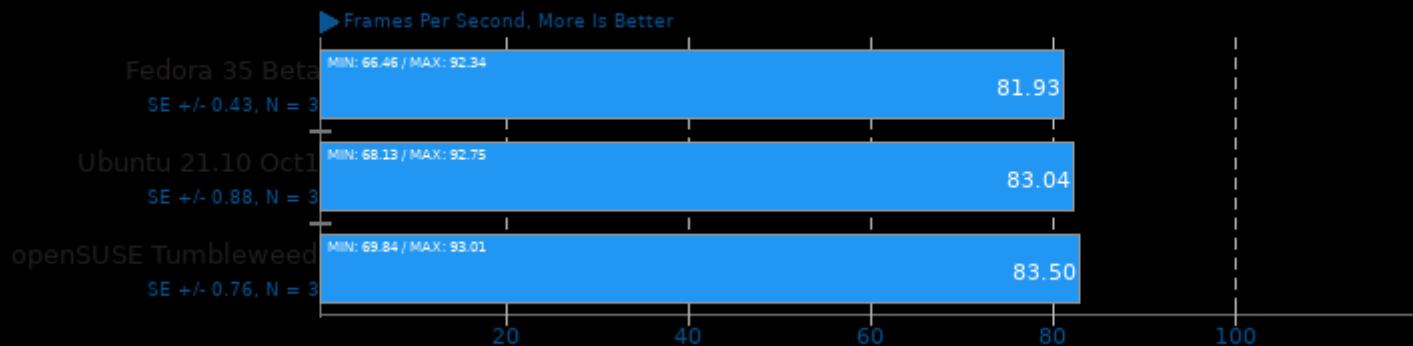
Embree 3.13

Binary: Pathtracer ISPC - Model: Crown



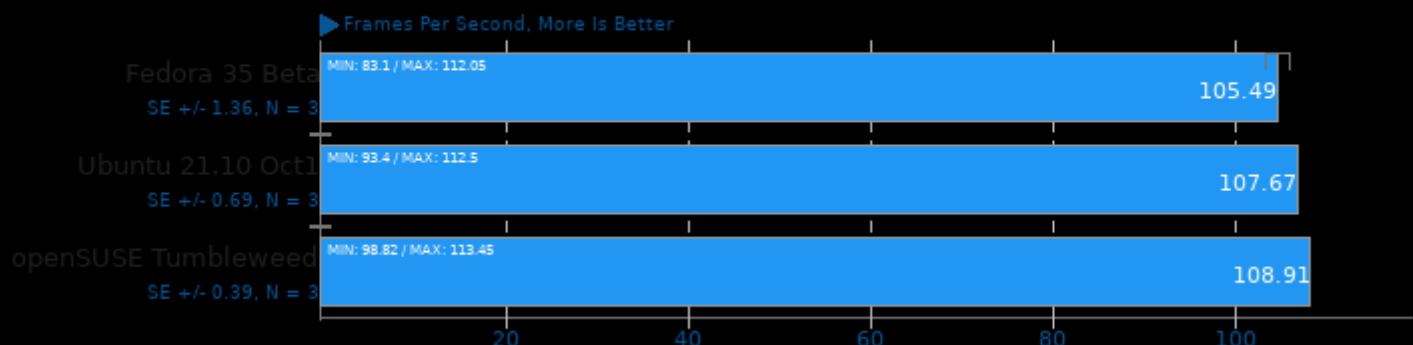
Embree 3.13

Binary: Pathtracer - Model: Asian Dragon



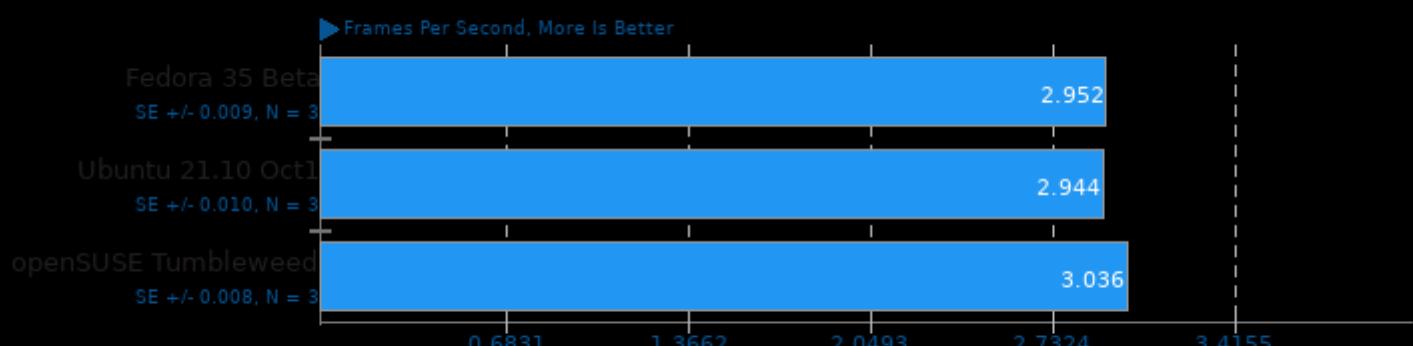
Embree 3.13

Binary: Pathtracer ISPC - Model: Asian Dragon



SVT-AV1 0.8.7

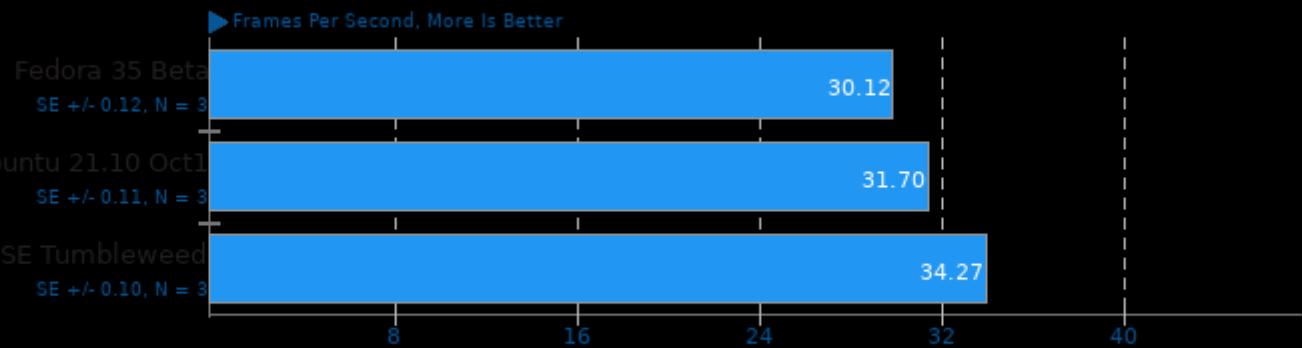
Encoder Mode: Preset 4 - Input: Bosphorus 4K



1. (CXX) g++ options: -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

SVT-AV1 0.8.7

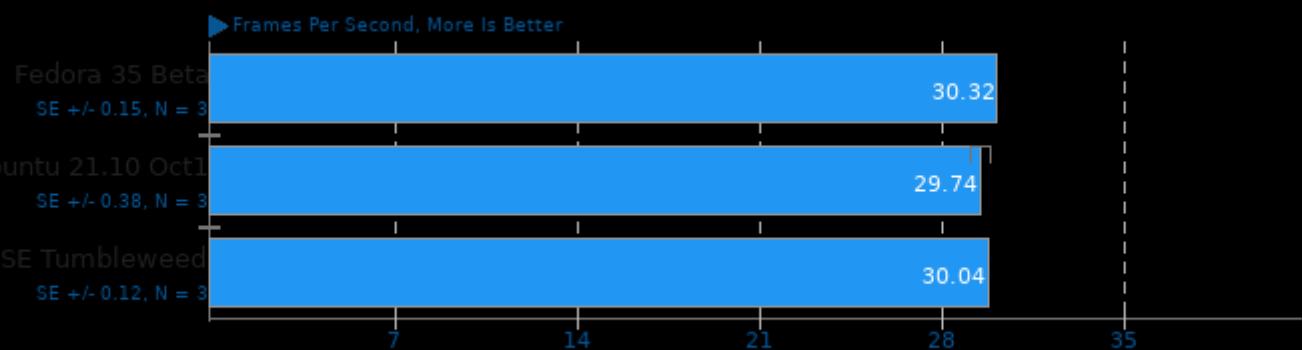
Encoder Mode: Preset 8 - Input: Bosphorus 4K



1. (CXX) g++ options: -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

SVT-HEVC 1.5.0

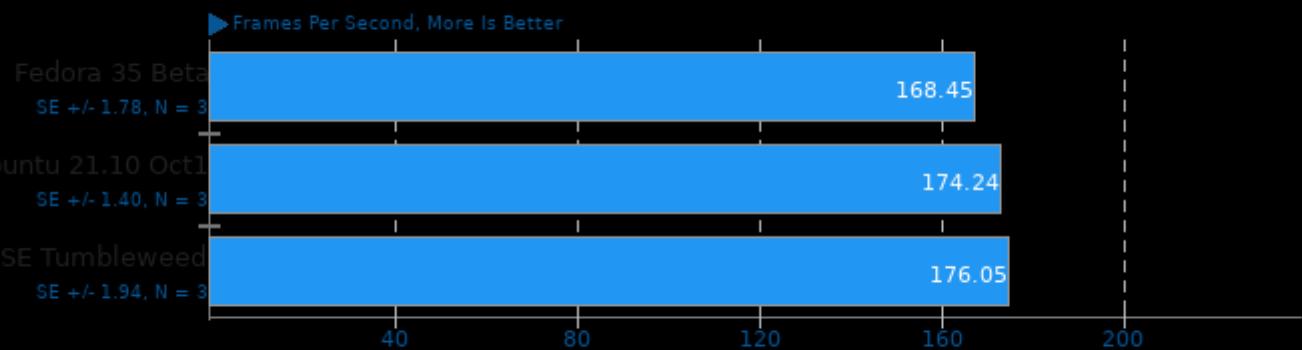
Tuning: 1 - Input: Bosphorus 1080p



1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

SVT-HEVC 1.5.0

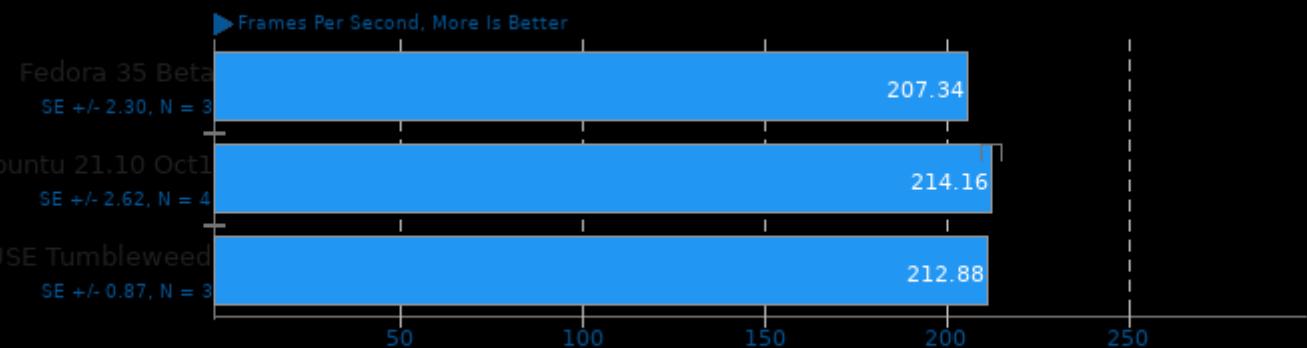
Tuning: 7 - Input: Bosphorus 1080p



1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

SVT-VP9 0.3

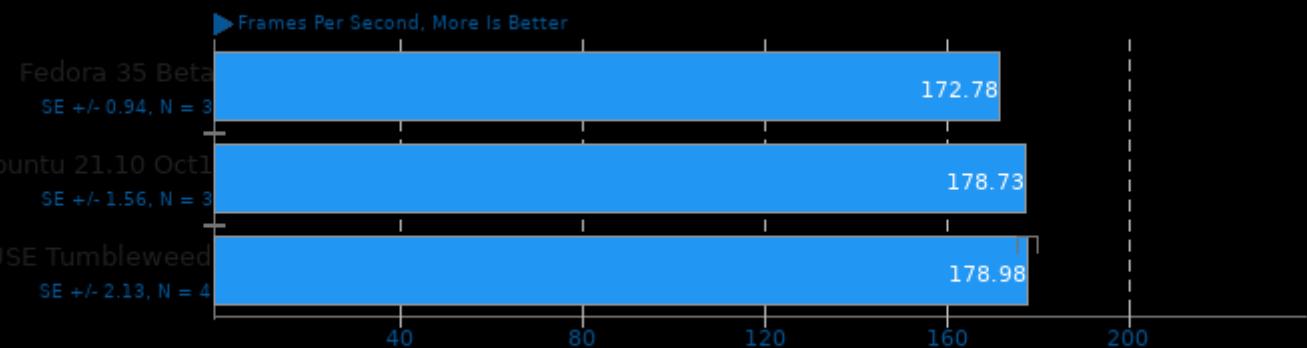
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p



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

SVT-VP9 0.3

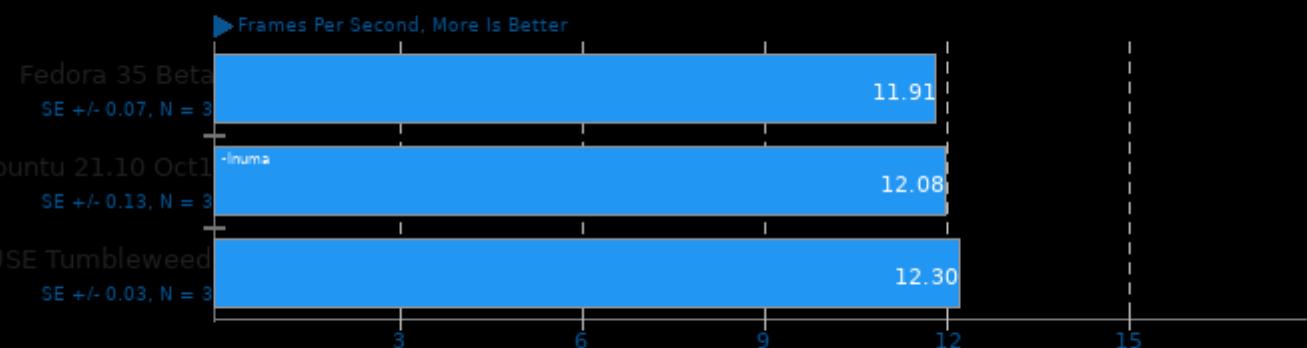
Tuning: Visual Quality Optimized - Input: Bosphorus 1080p



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

x265 3.4

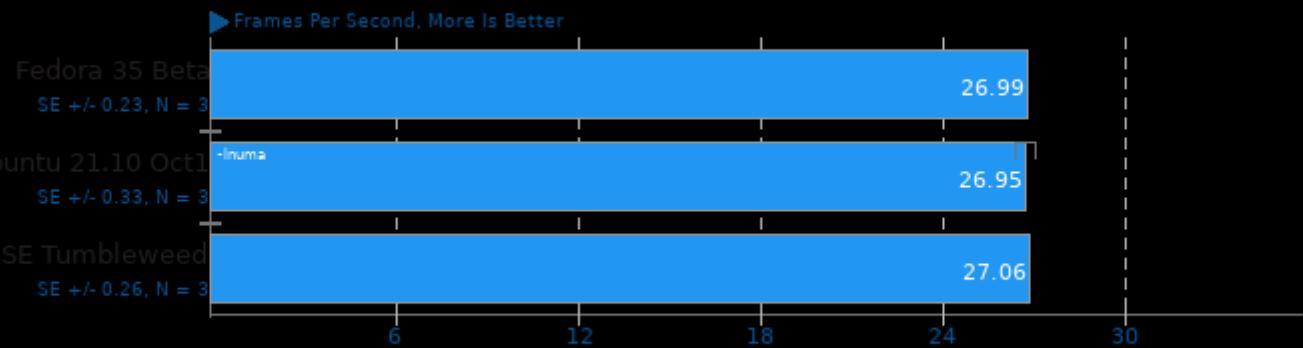
Video Input: Bosphorus 4K



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

x265 3.4

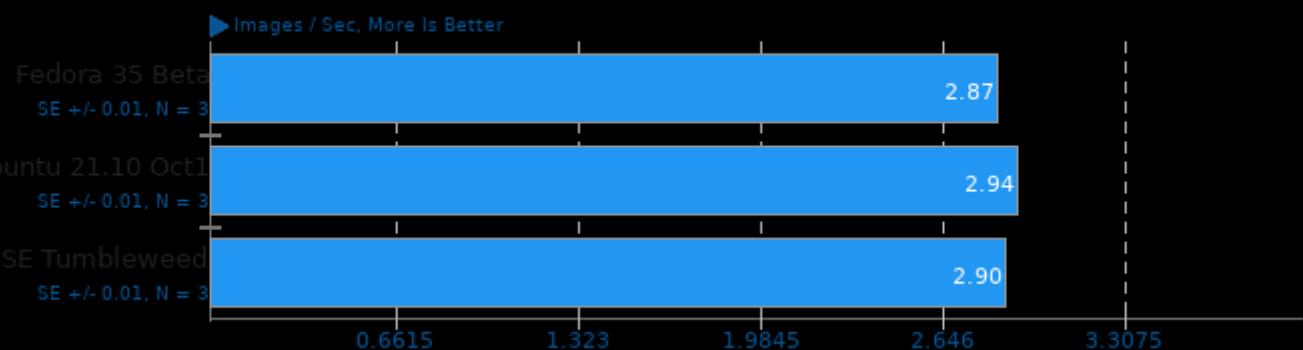
Video Input: Bosphorus 1080p



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

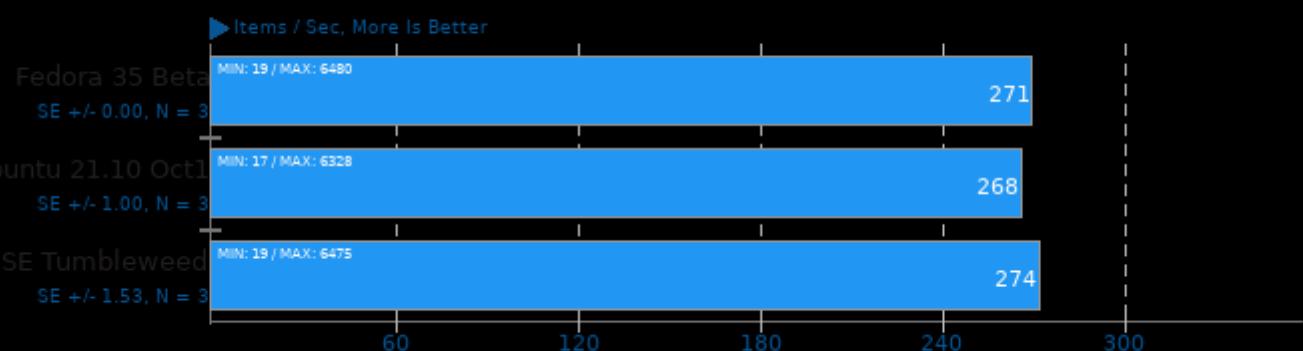
Intel Open Image Denoise 1.4.0

Run: RT.hdr_alb_nrm.3840x2160



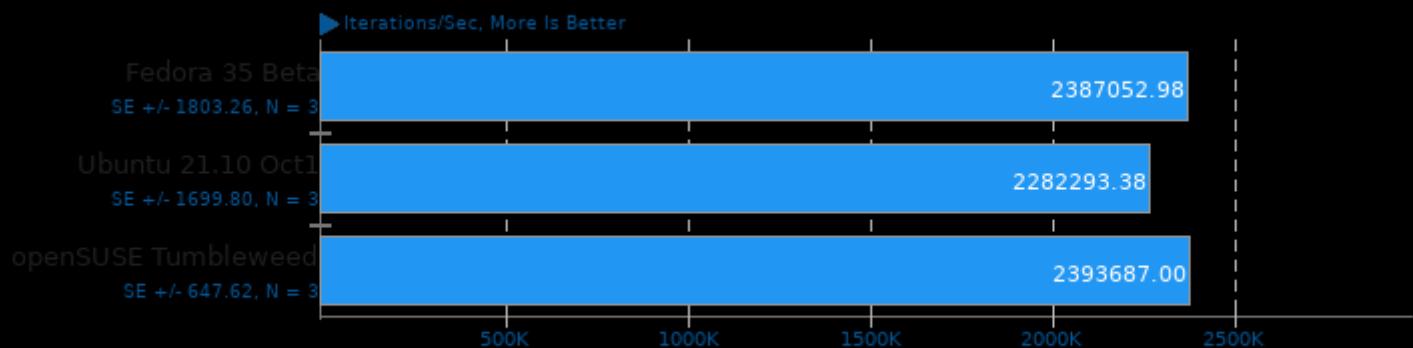
OpenVKL 1.0

Benchmark: vklBenchmark ISPC



Coremark 1.0

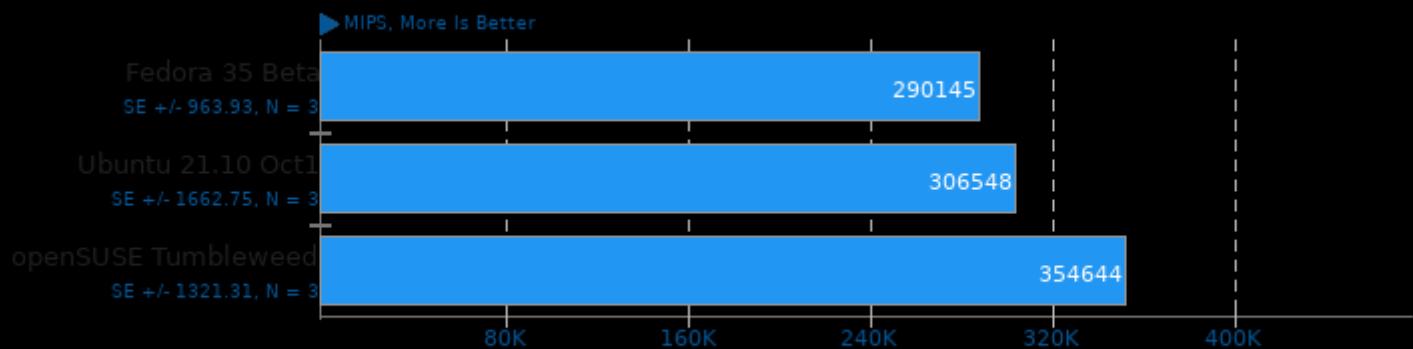
CoreMark Size 666 - Iterations Per Second



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

7-Zip Compression 16.02

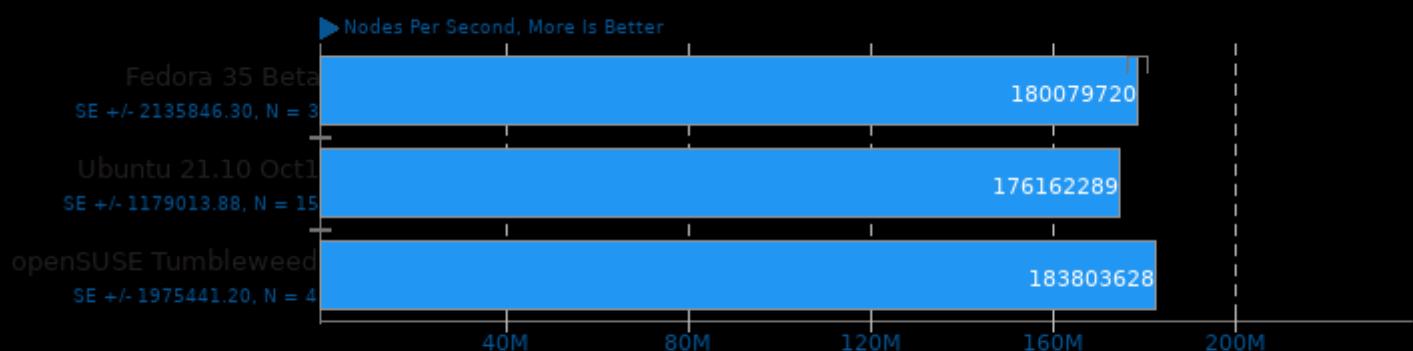
Compress Speed Test



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

Stockfish 13

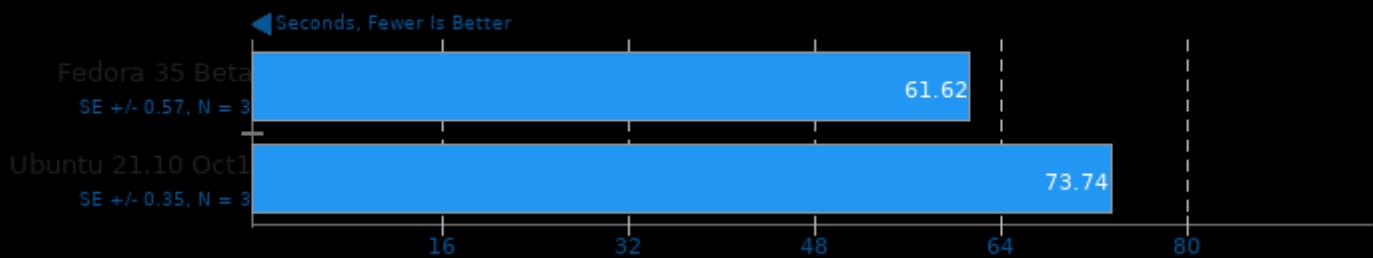
Total Time



1. (CXX) g++ options: -lgcov -m64 -lpthread -fno-exceptions -std=c++17 -fprofile-use -fno-peel-loops -fno-tracer -pedantic -O3 -msse -msse3 -mpopcnt -

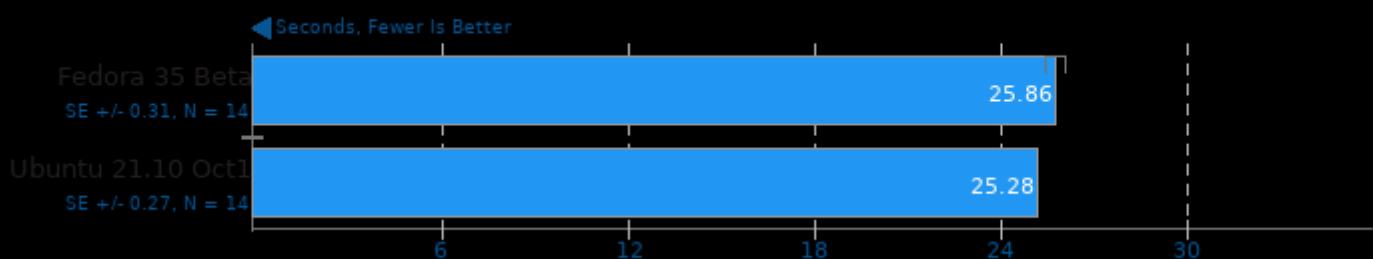
Timed Godot Game Engine Compilation 3.2.3

Time To Compile



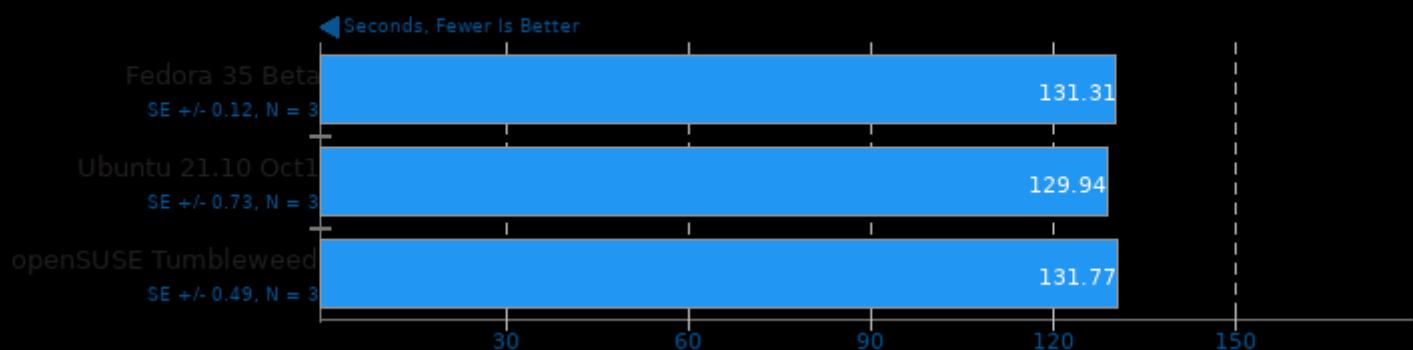
Timed Linux Kernel Compilation 5.14

Time To Compile



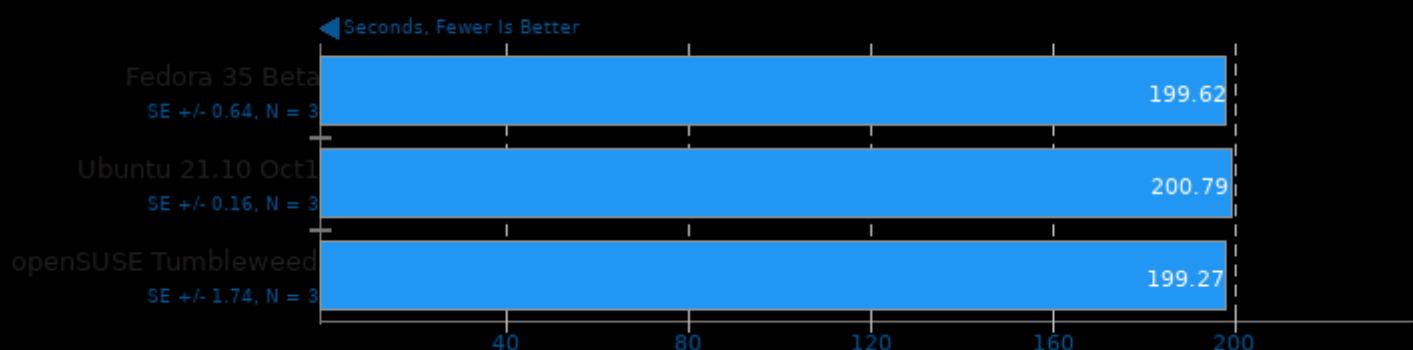
Timed LLVM Compilation 12.0

Build System: Ninja



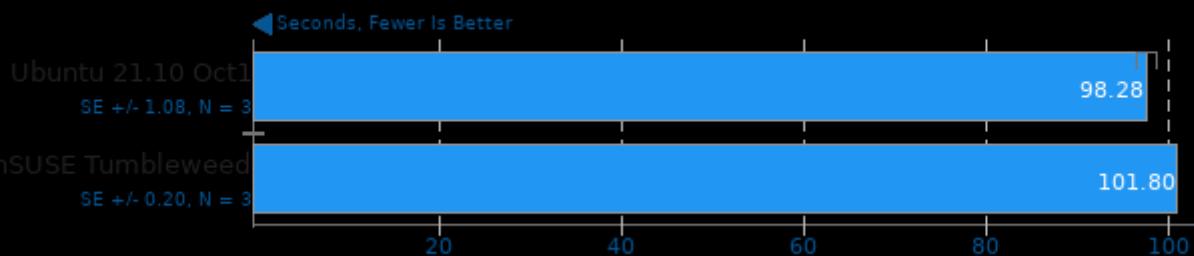
Timed LLVM Compilation 12.0

Build System: Unix Makefiles



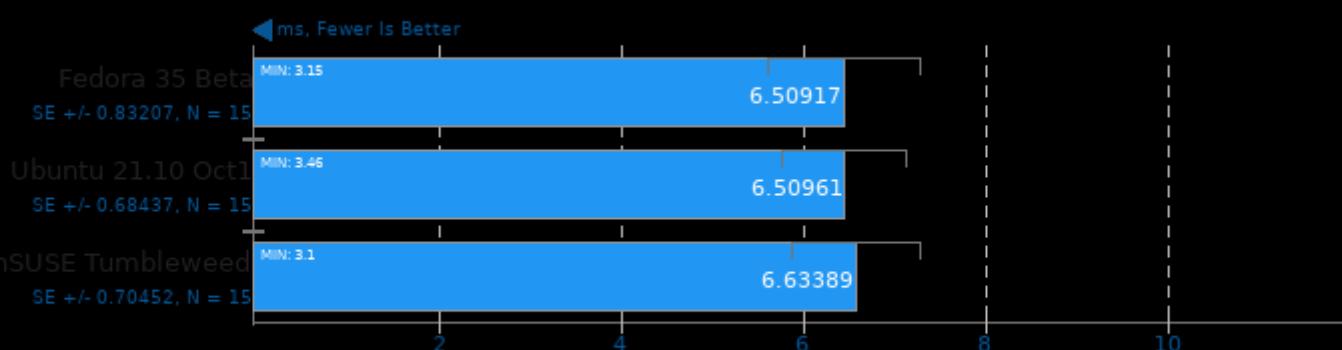
Timed Node.js Compilation 15.11

Time To Compile



oneDNN 2.1.2

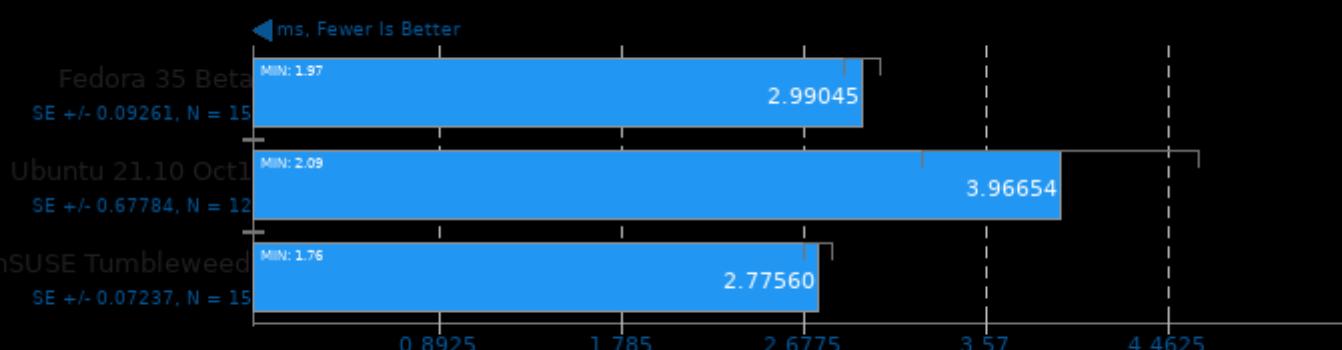
Harness: IP Shapes 1D - Data Type: bf16bf16bf16 - Engine: CPU



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

oneDNN 2.1.2

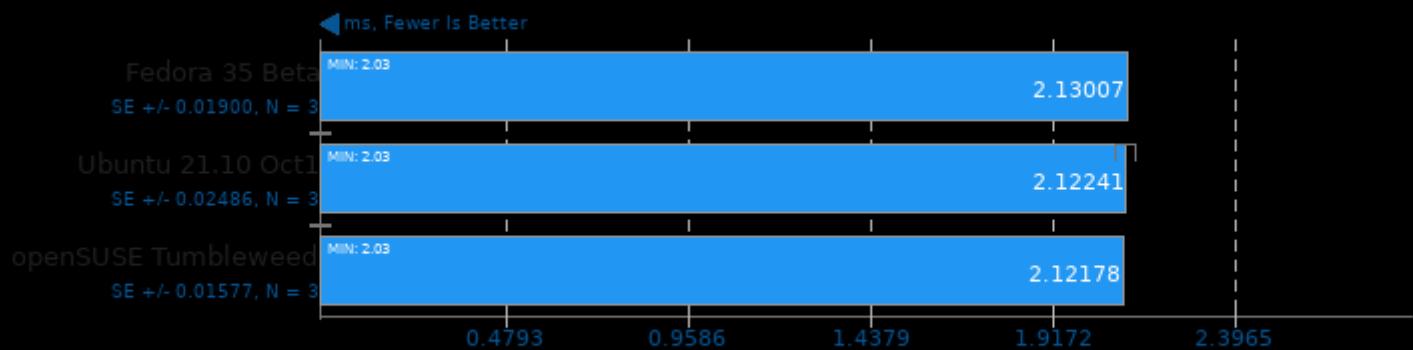
Harness: IP Shapes 3D - Data Type: bf16bf16bf16 - Engine: CPU



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

oneDNN 2.1.2

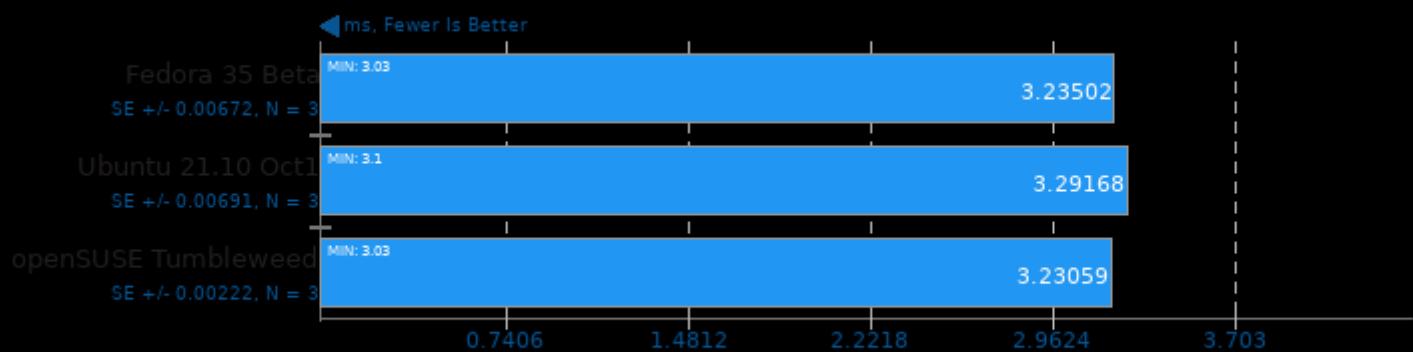
Harness: Convolution Batch Shapes Auto - Data Type: bf16bf16bf16 - Engine: CPU



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

oneDNN 2.1.2

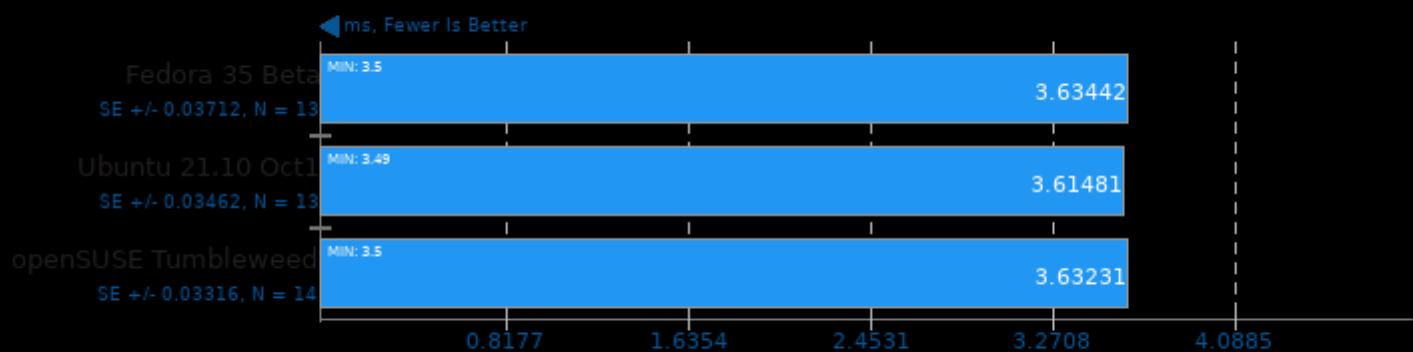
Harness: Deconvolution Batch shapes_1d - Data Type: bf16bf16bf16 - Engine: CPU



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

oneDNN 2.1.2

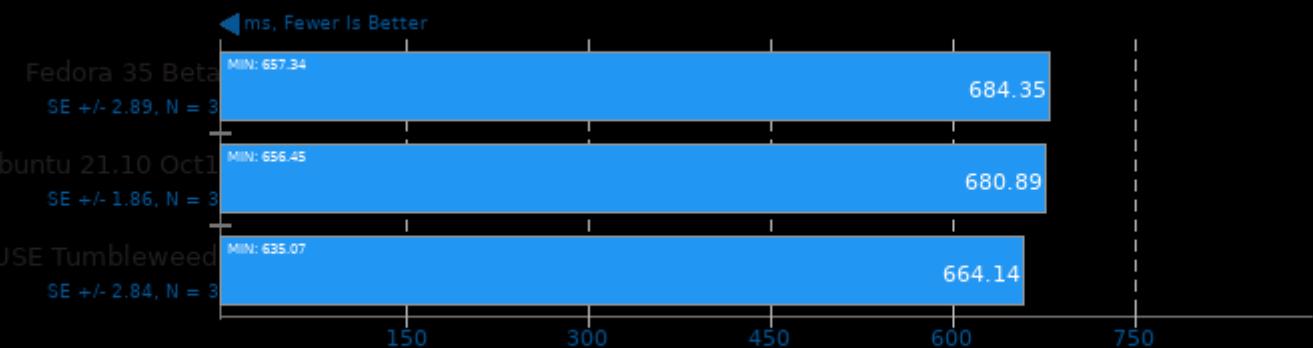
Harness: Deconvolution Batch shapes_3d - Data Type: bf16bf16bf16 - Engine: CPU



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

oneDNN 2.1.2

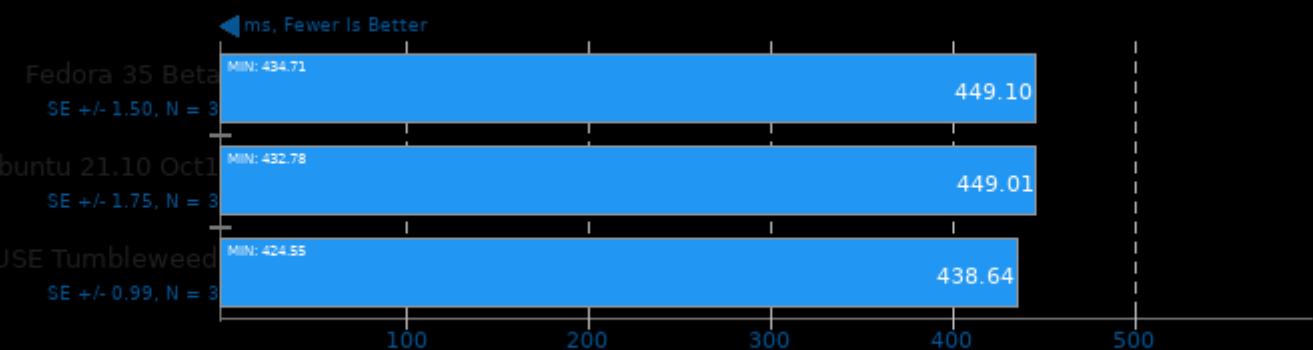
Harness: Recurrent Neural Network Training - Data Type: bf16bf16bf16 - Engine: CPU



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

oneDNN 2.1.2

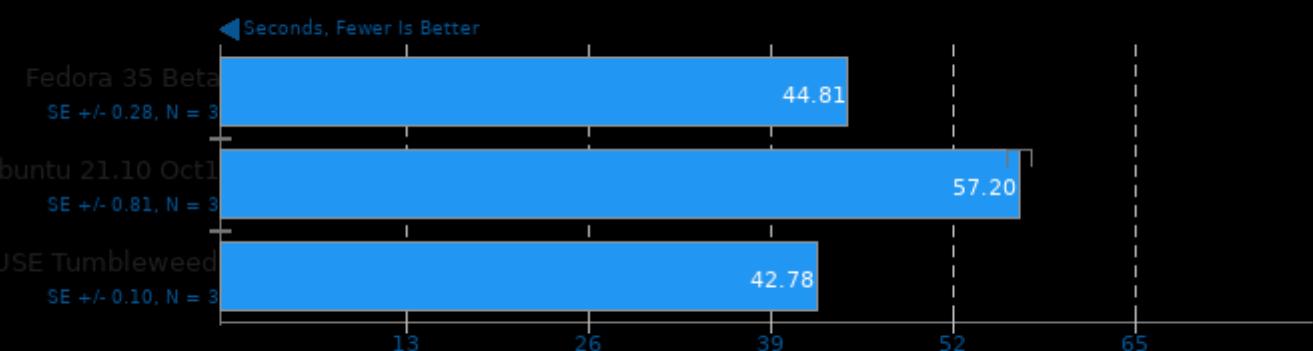
Harness: Recurrent Neural Network Inference - Data Type: bf16bf16bf16 - Engine: CPU



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

Timed Wasmer Compilation 1.0.2

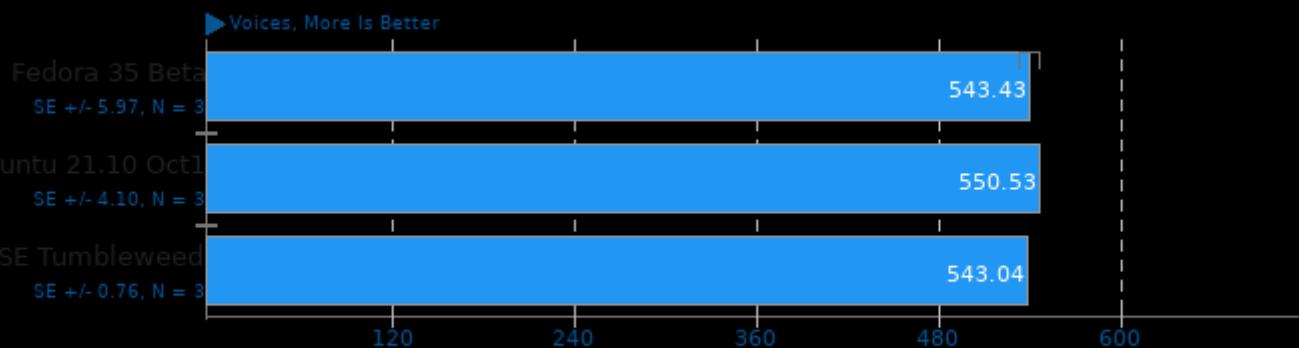
Time To Compile



1. (CC) gcc options: -m64 -ldl -lgcc_s -util -lrt -lpthread -lm -lc -pie -nodefaultlibs

Google SynthMark 20201109

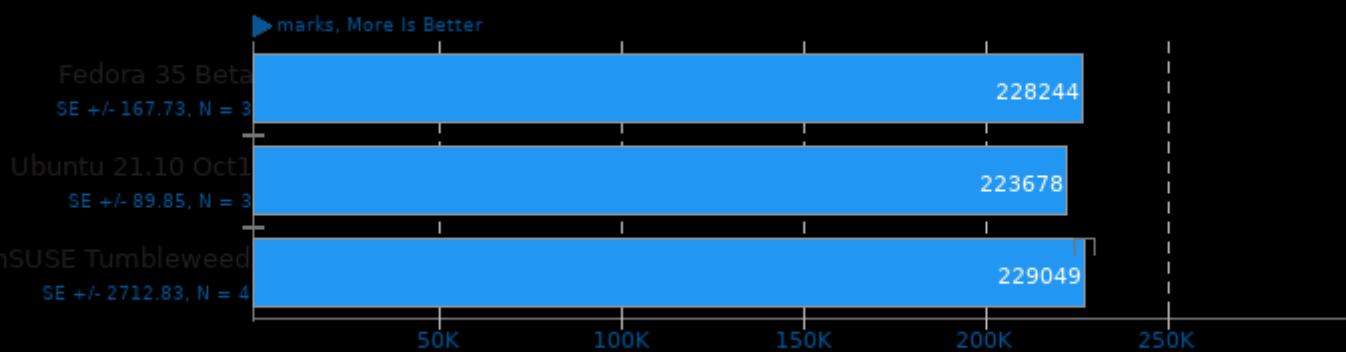
Test: VoiceMark_100



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

SecureMark 1.0.4

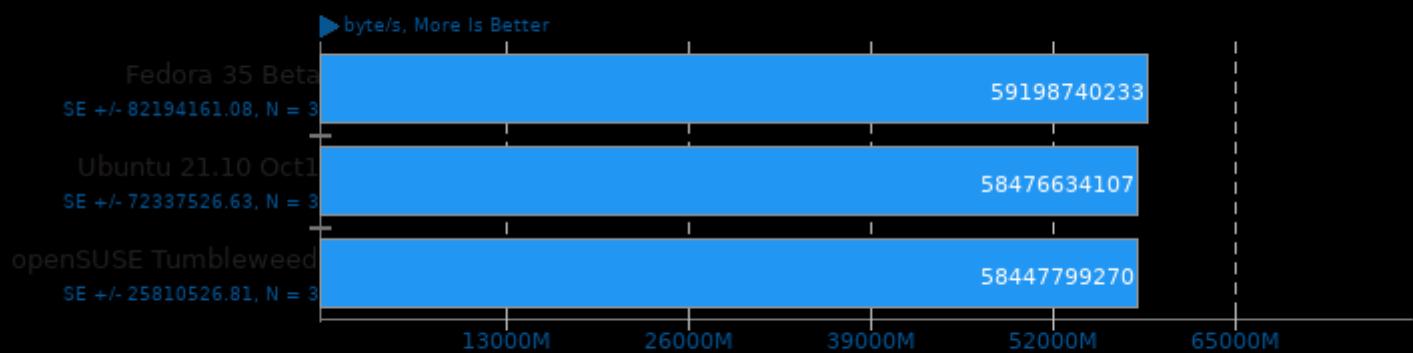
Benchmark: SecureMark-TLS



1. (CC) gcc options: -pedantic -O3

OpenSSL 3.0

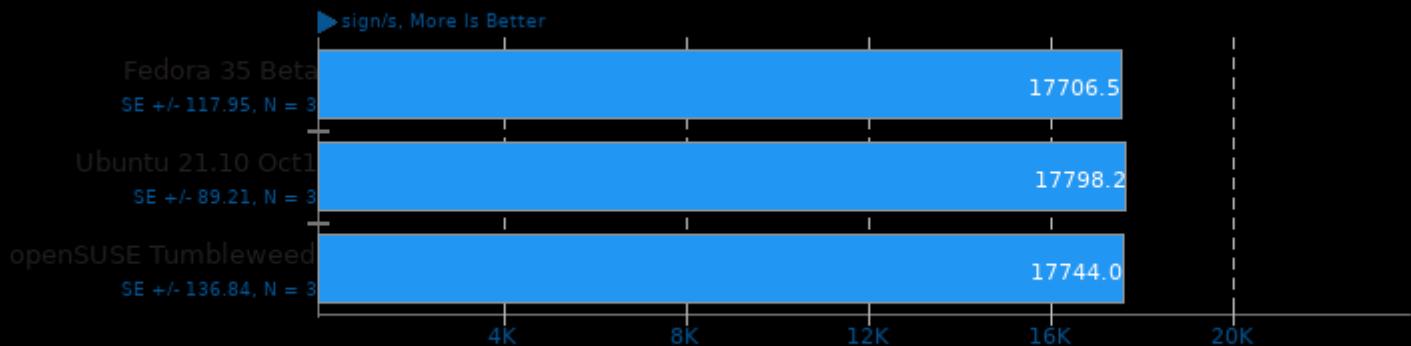
Algorithm: SHA256



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

OpenSSL 3.0

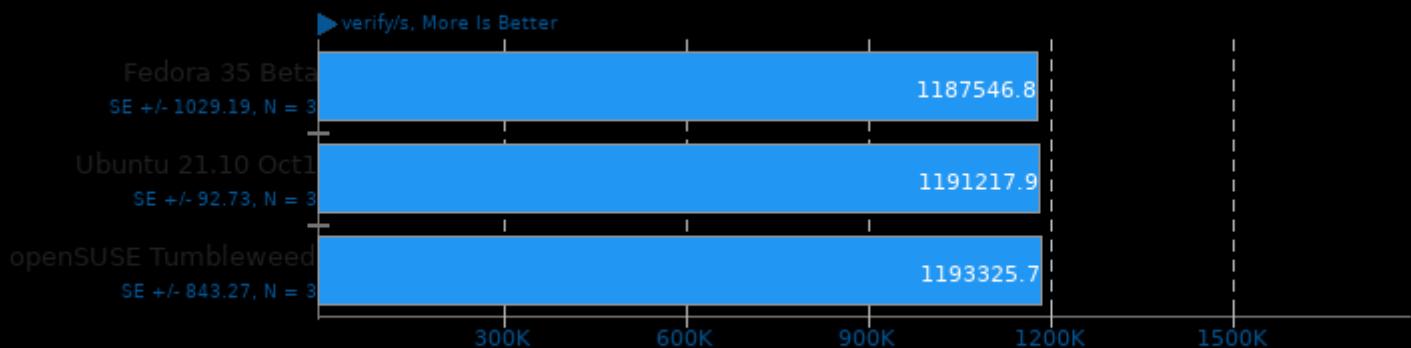
Algorithm: RSA4096



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

OpenSSL 3.0

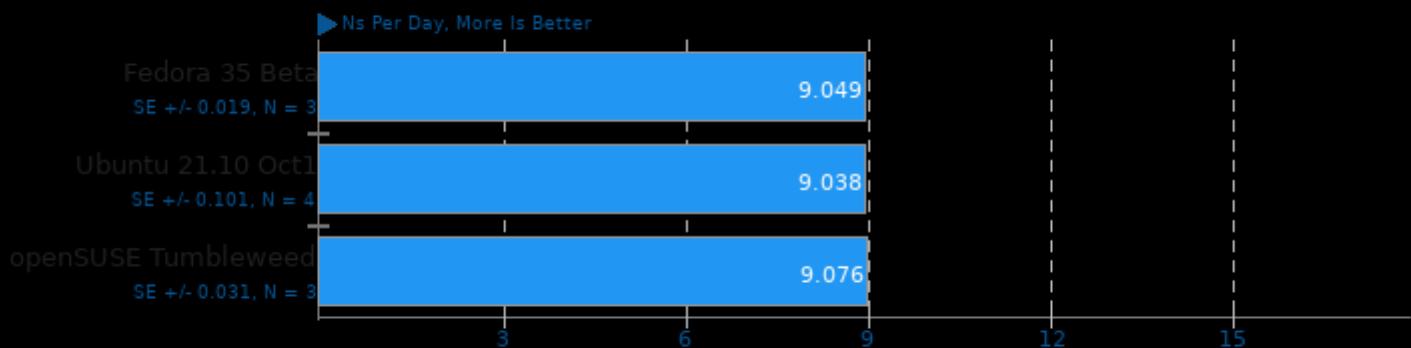
Algorithm: RSA4096



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

GROMACS 2021.2

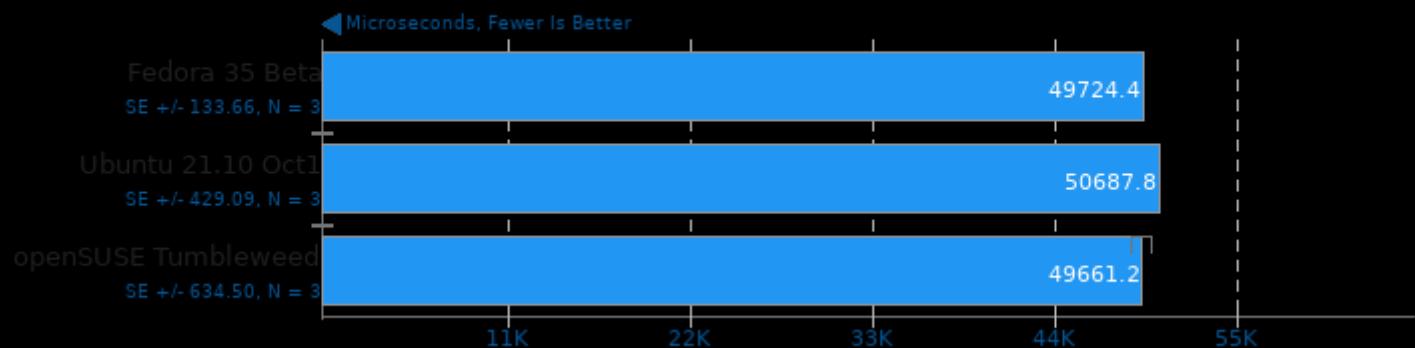
Implementation: MPI CPU - Input: water_GMX50_bare



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

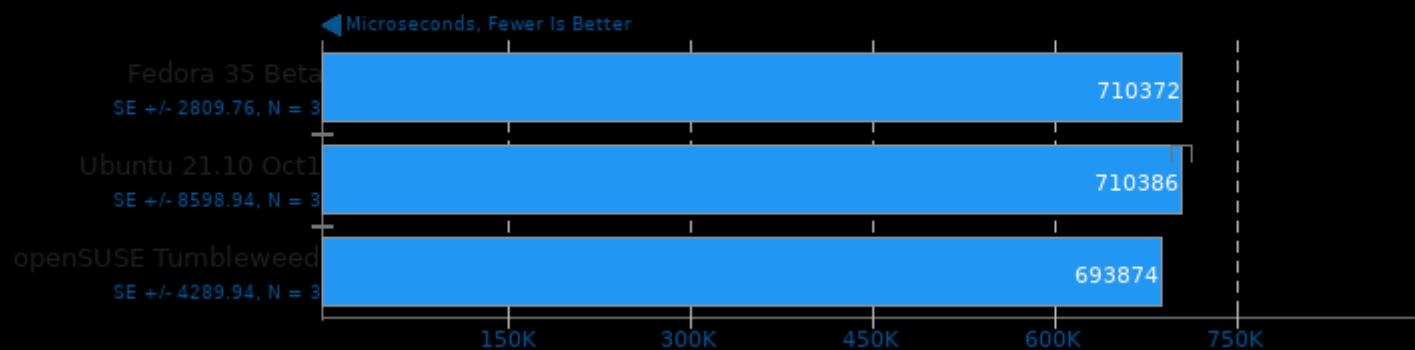
TensorFlow Lite 2020-08-23

Model: SqueezeNet



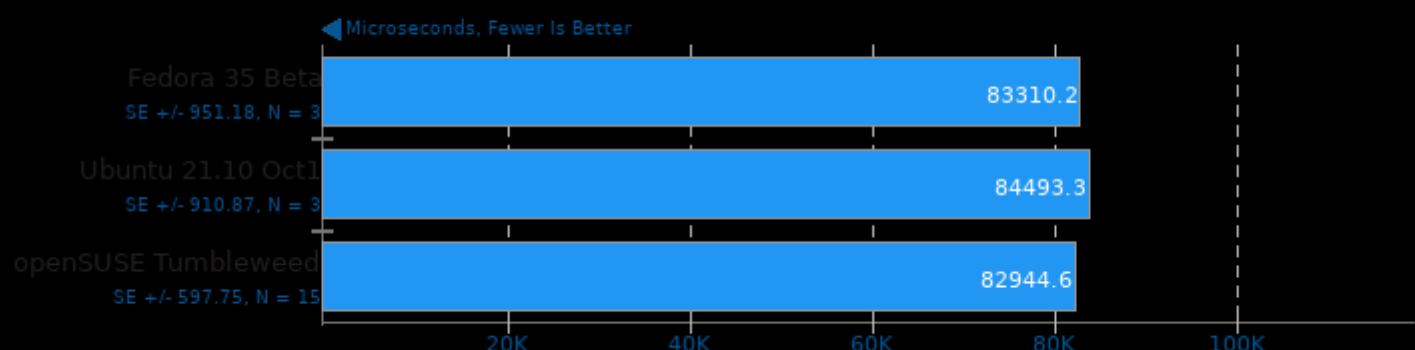
TensorFlow Lite 2020-08-23

Model: Inception V4



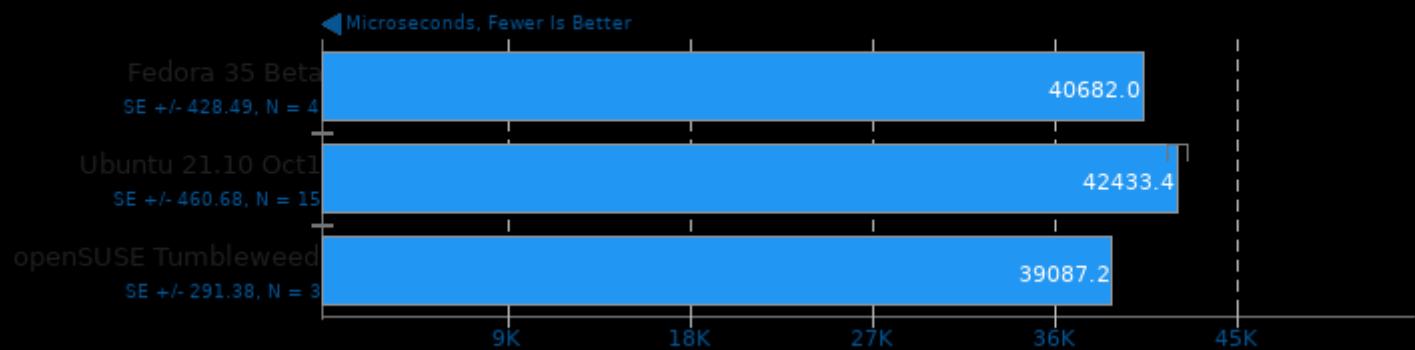
TensorFlow Lite 2020-08-23

Model: NASNet Mobile



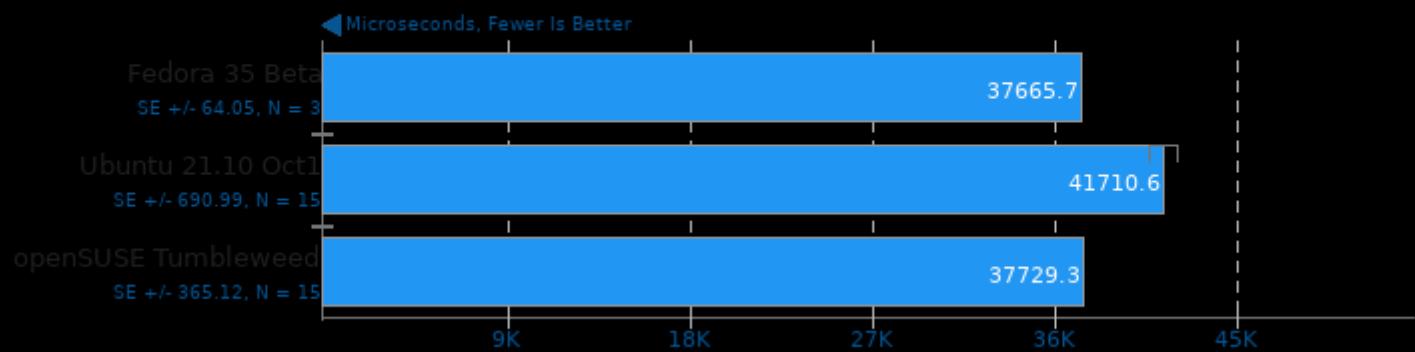
TensorFlow Lite 2020-08-23

Model: Mobilenet Float



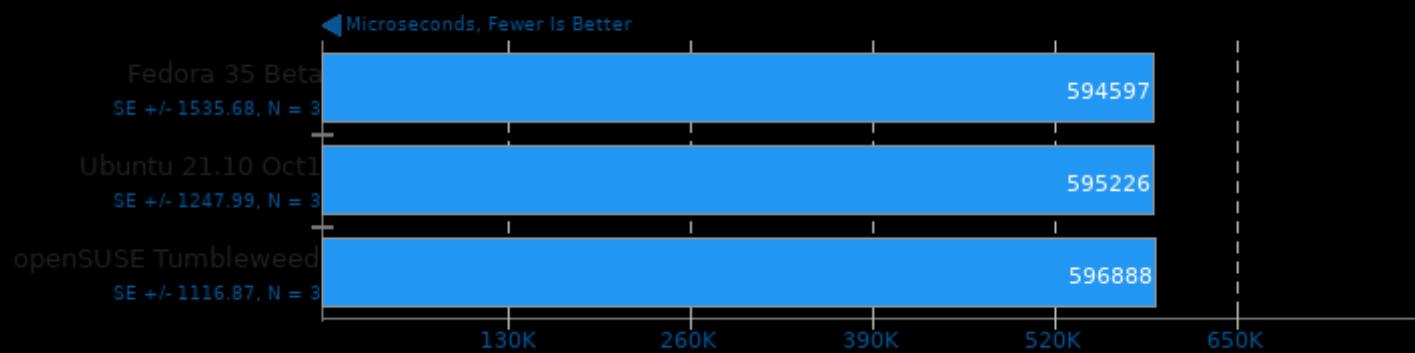
TensorFlow Lite 2020-08-23

Model: Mobilenet Quant



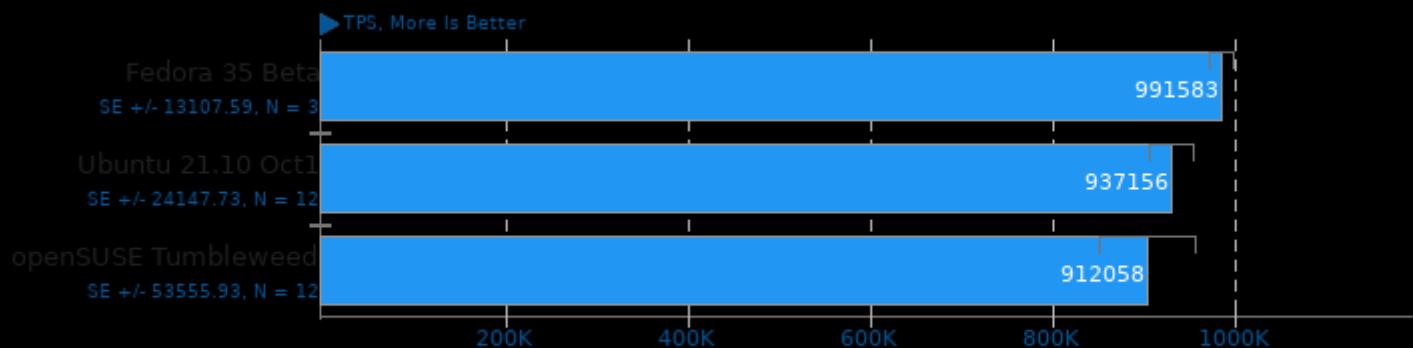
TensorFlow Lite 2020-08-23

Model: Inception ResNet V2



PostgreSQL pgbench 13.0

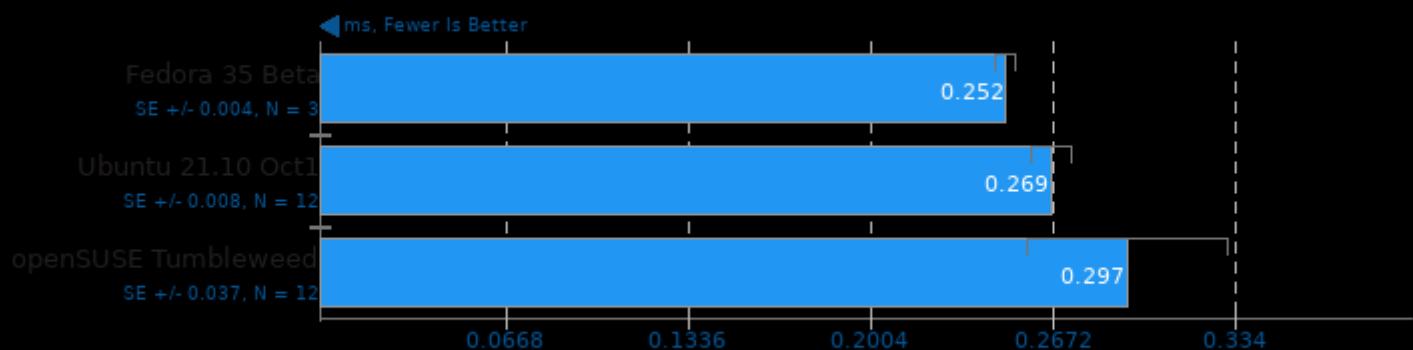
Scaling Factor: 100 - Clients: 250 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lm

PostgreSQL pgbench 13.0

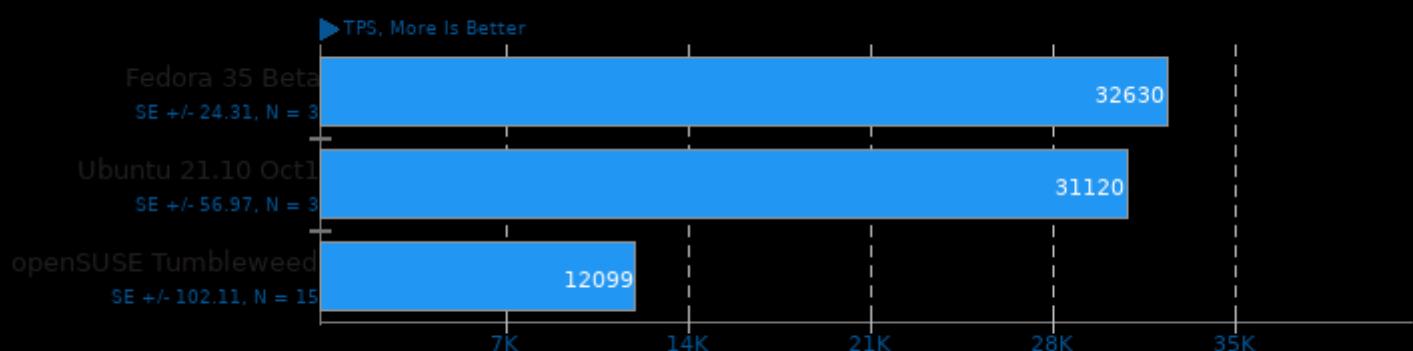
Scaling Factor: 100 - Clients: 250 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lm

PostgreSQL pgbench 13.0

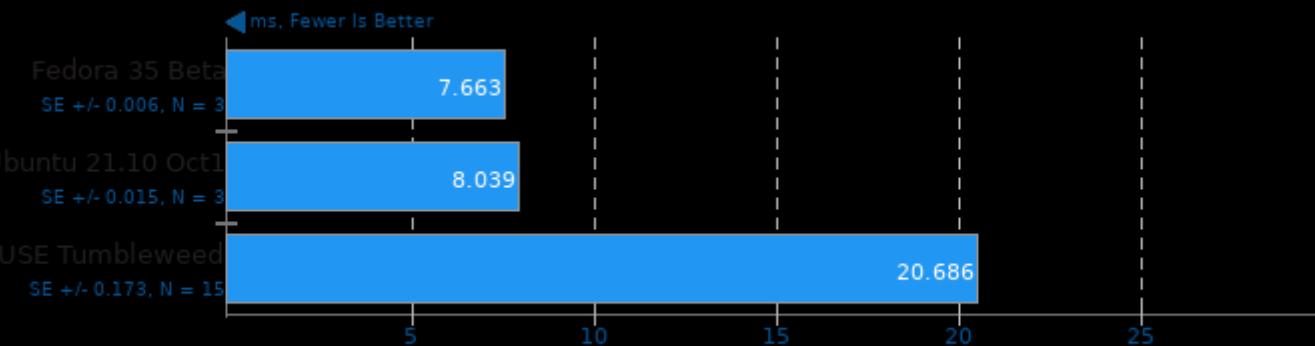
Scaling Factor: 100 - Clients: 250 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lm

PostgreSQL pgbench 13.0

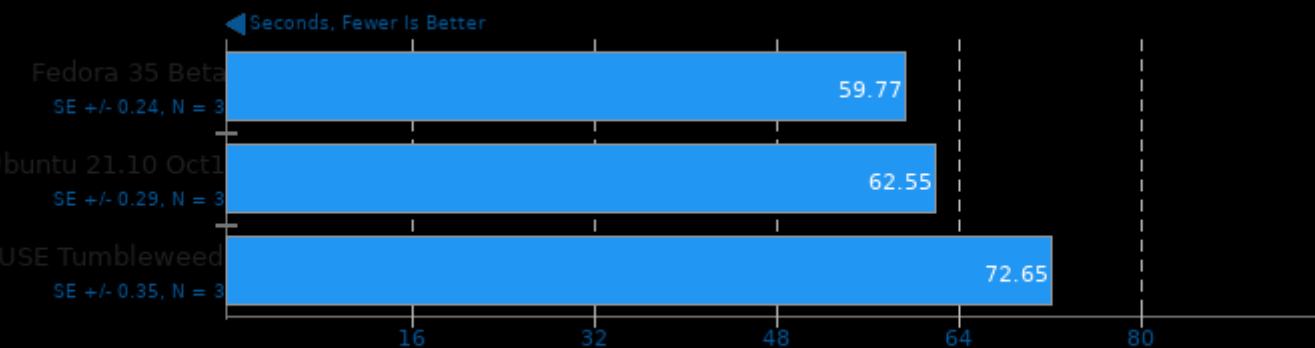
Scaling Factor: 100 - Clients: 250 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lm

SQLite Speedtest 3.30

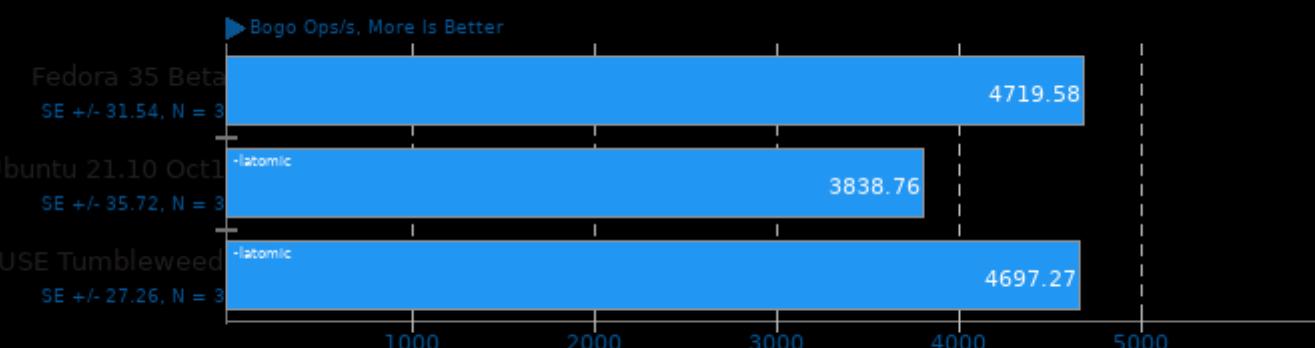
Timed Time - Size 1,000



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

Stress-NG 0.13.02

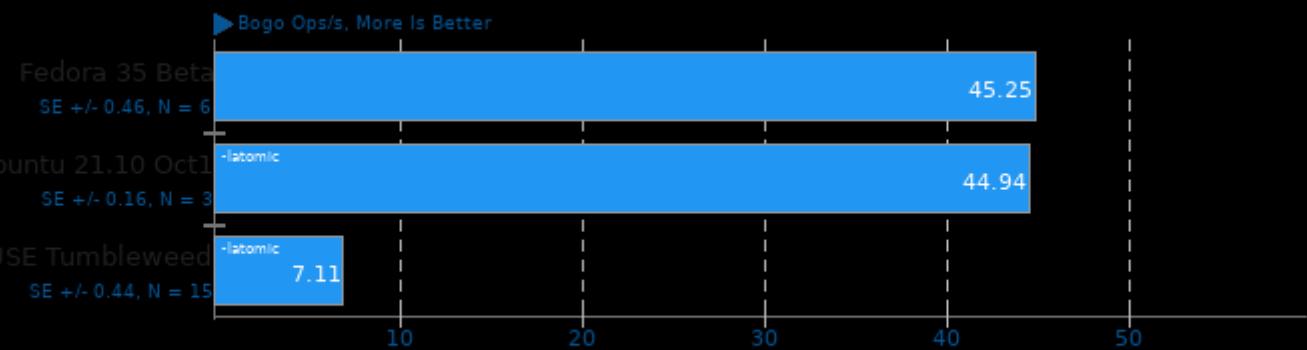
Test: MMAP



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

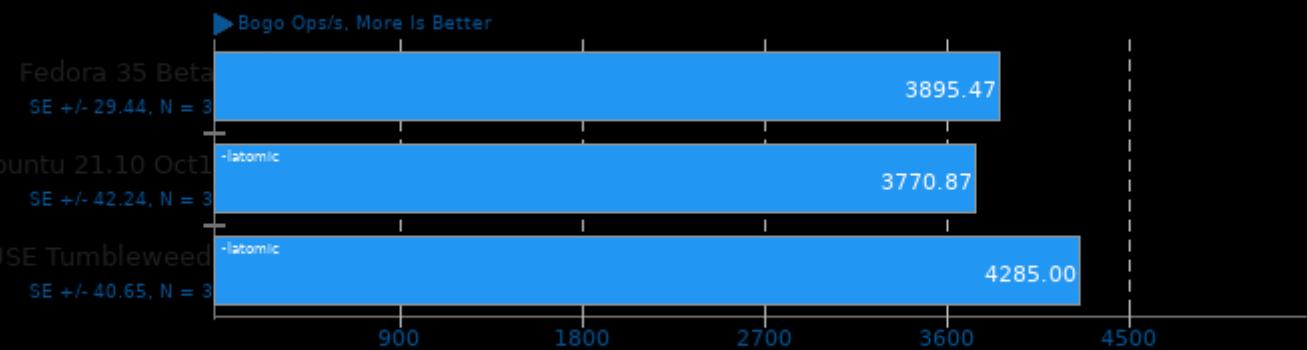
Test: NUMA



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

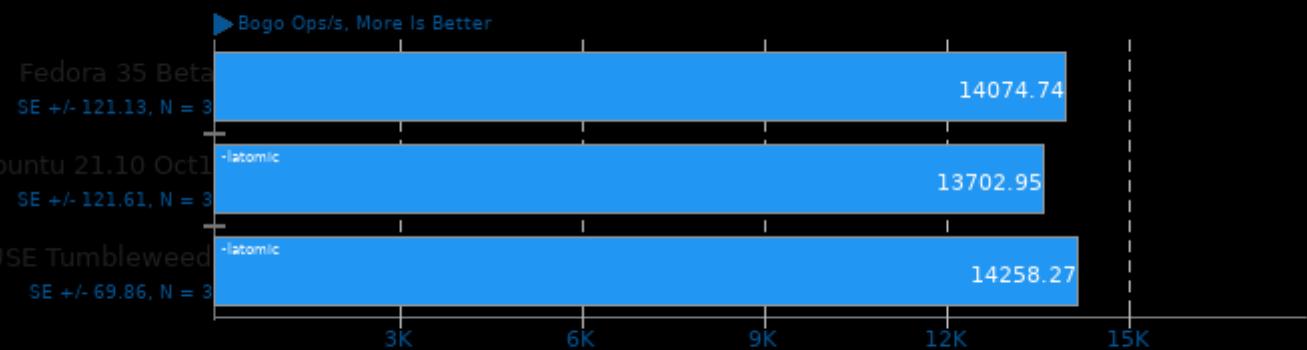
Test: MEMFD



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

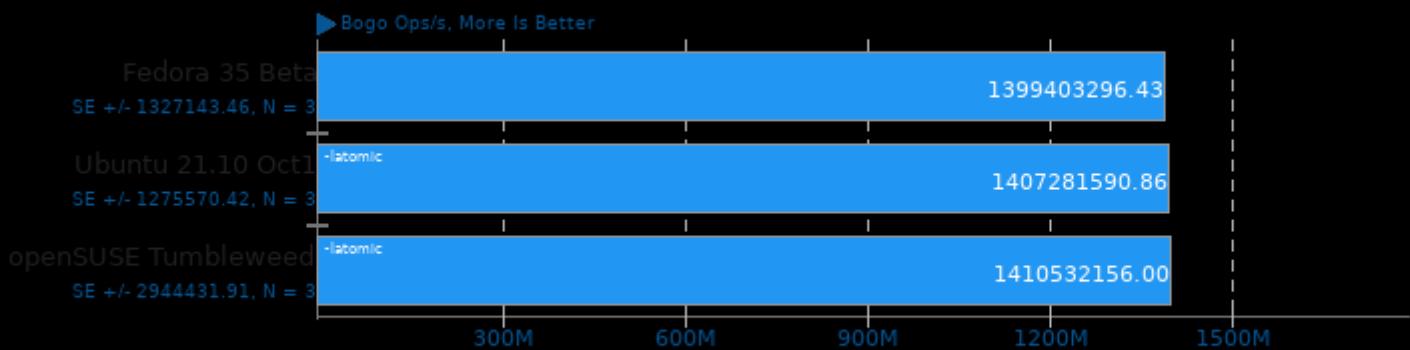
Test: Crypto



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

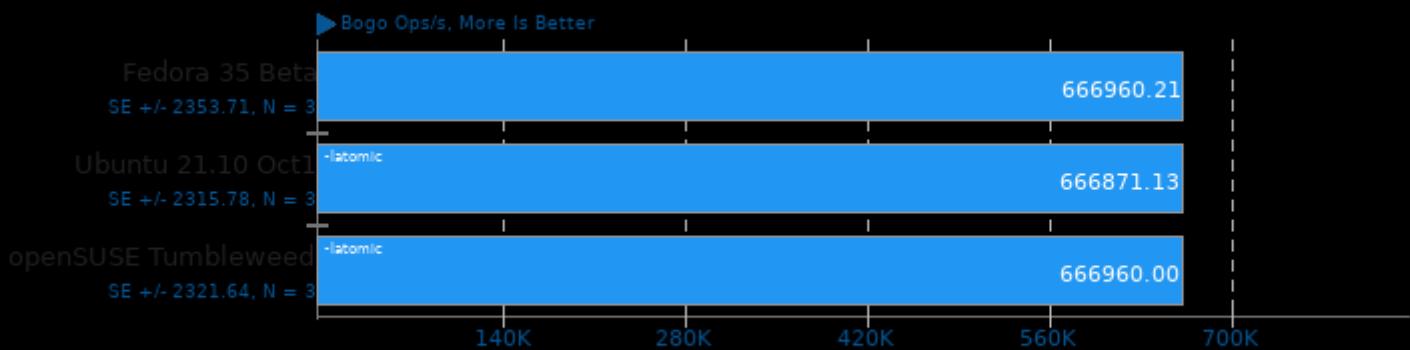
Test: Malloc



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

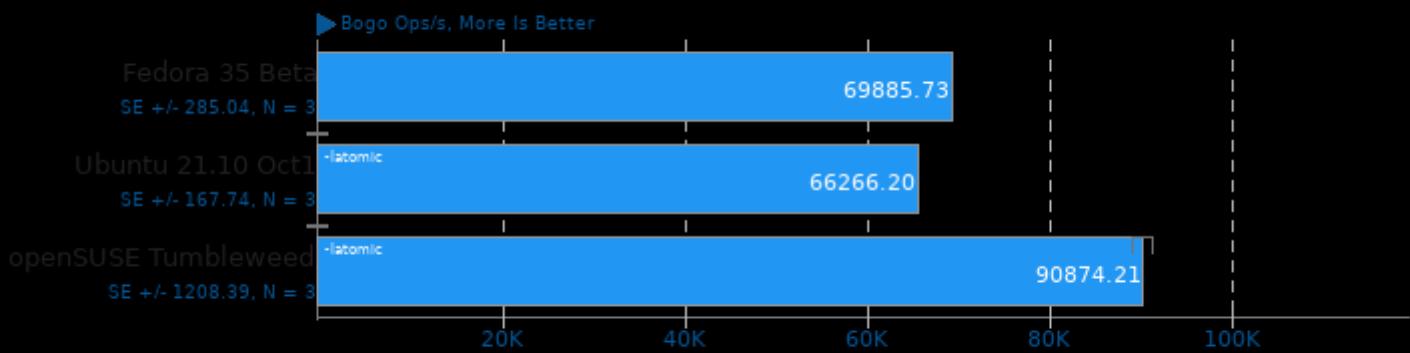
Test: RdRand



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

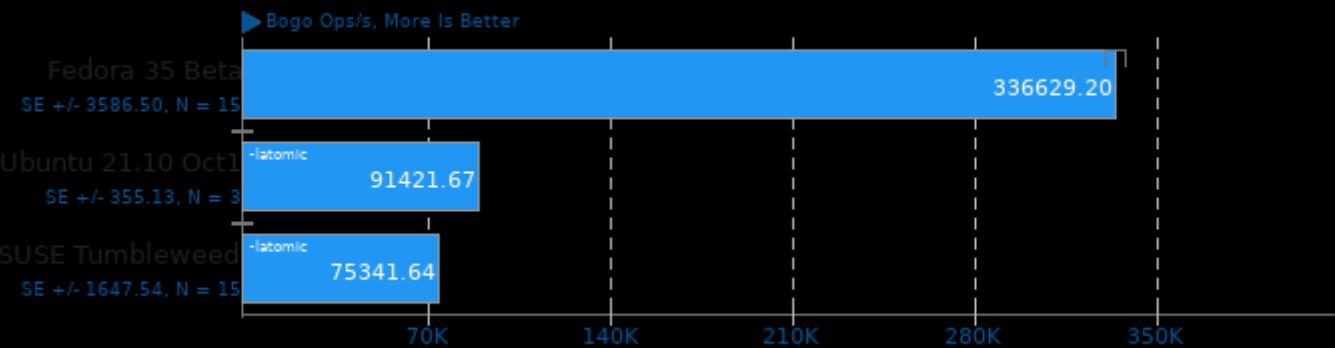
Test: Forking



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

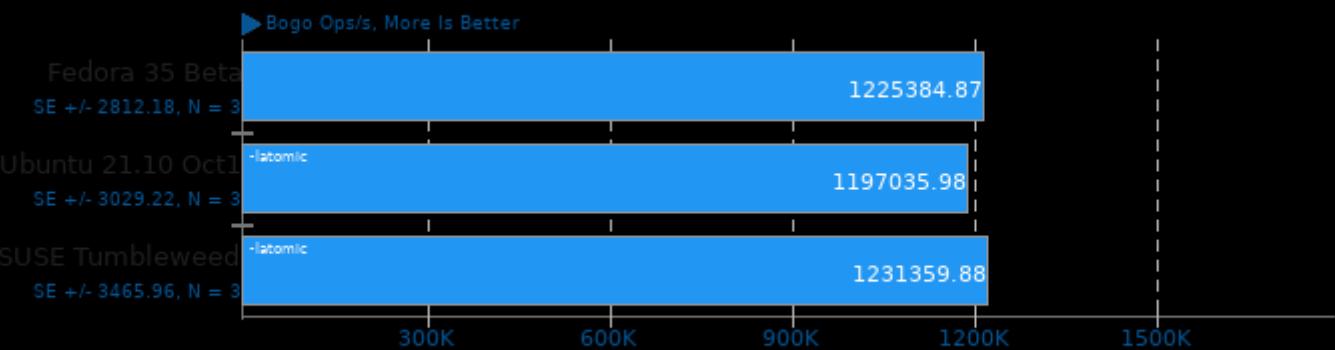
Test: IO_uring



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

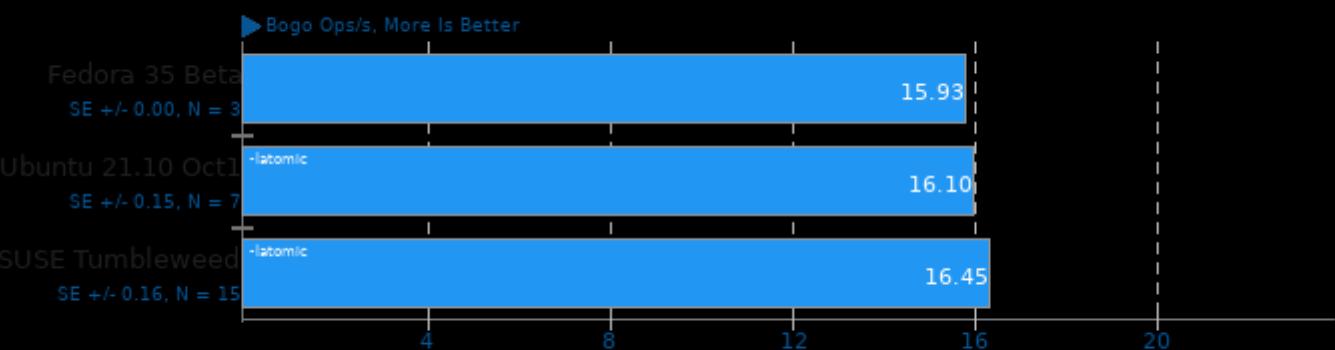
Test: SENDFILE



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

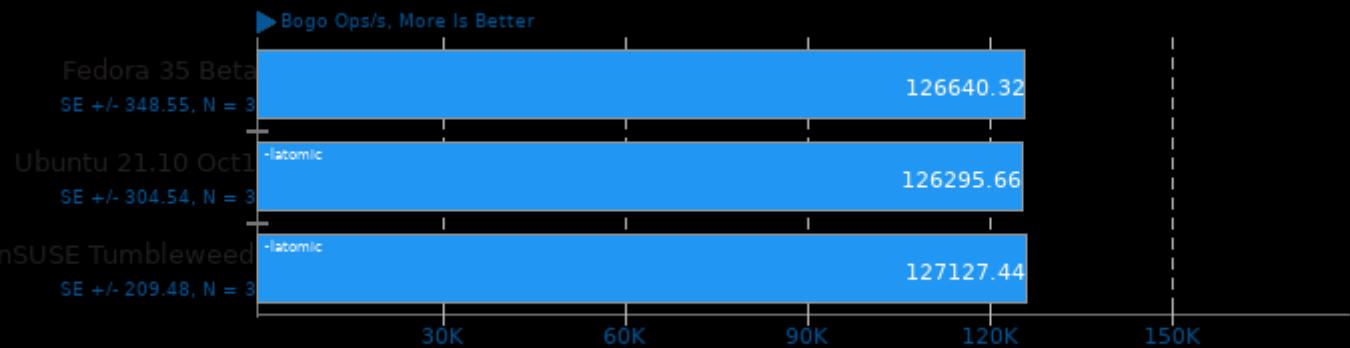
Test: CPU Cache



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

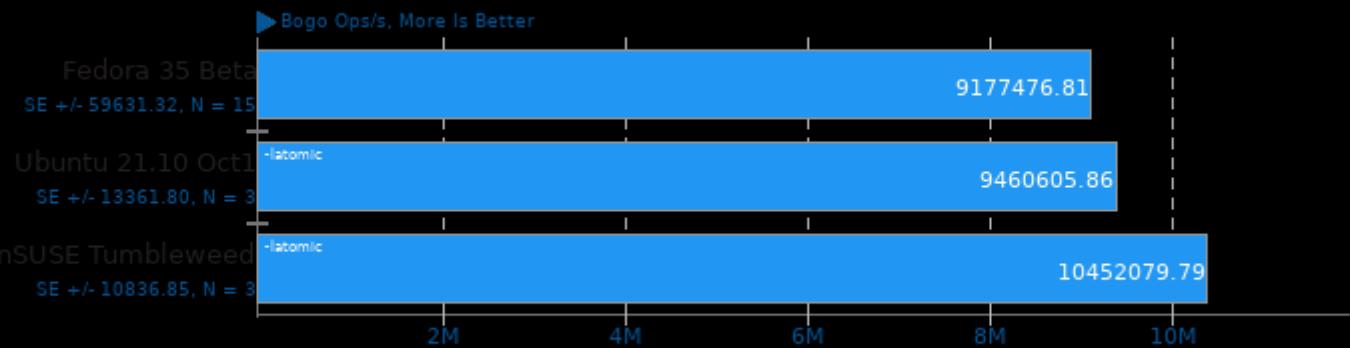
Test: CPU Stress



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

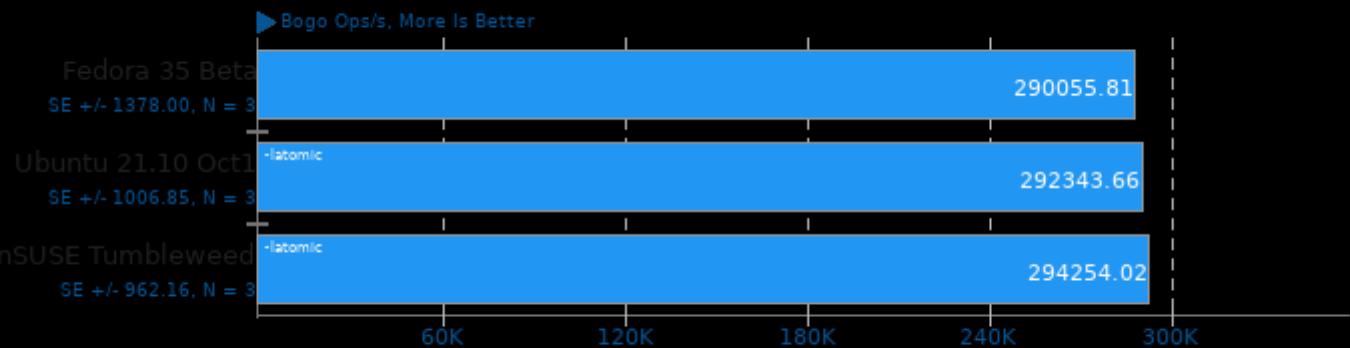
Test: Semaphores



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

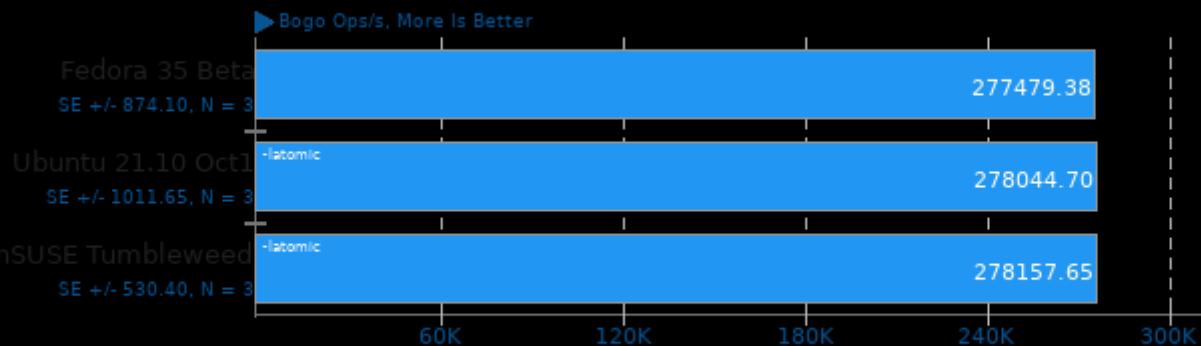
Test: Matrix Math



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

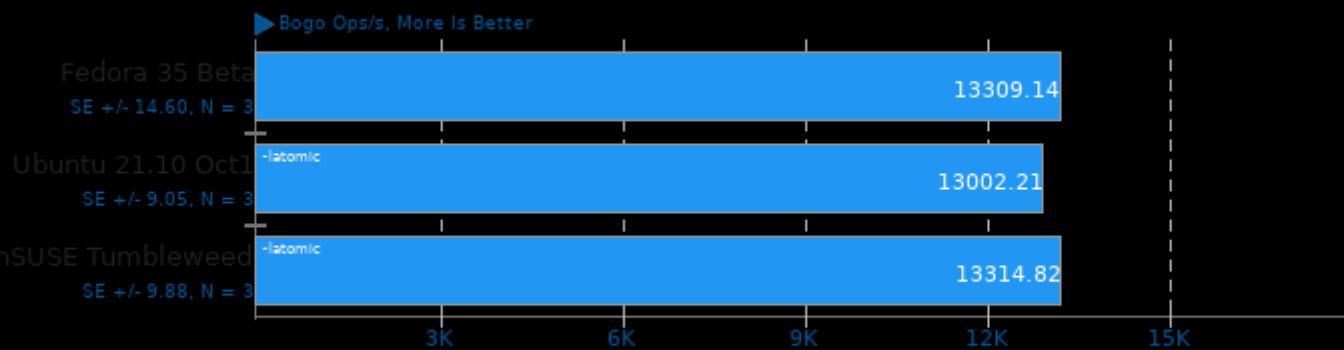
Test: Vector Math



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

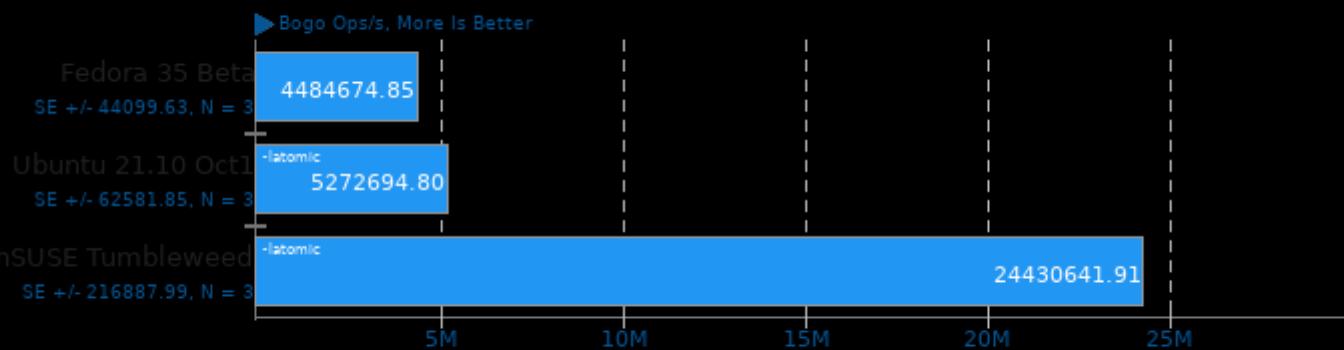
Test: Memory Copying



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

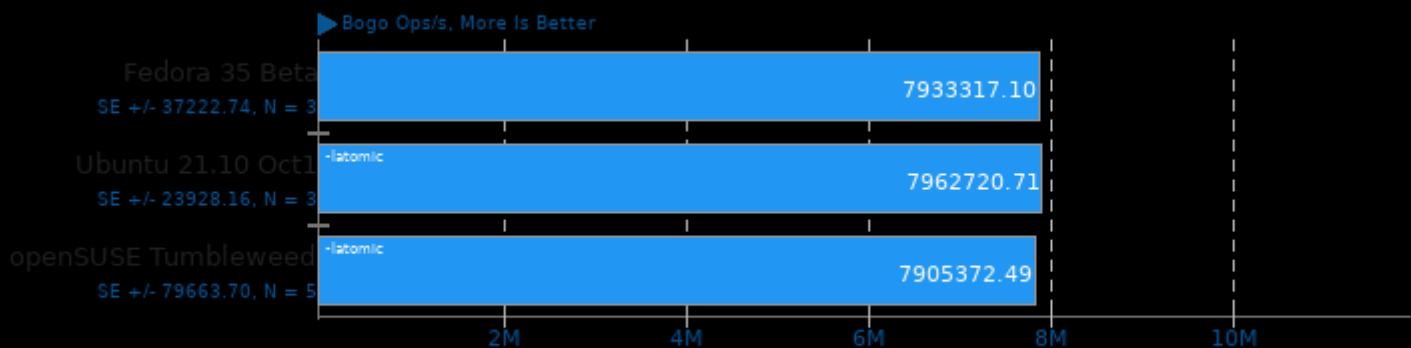
Test: Context Switching



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

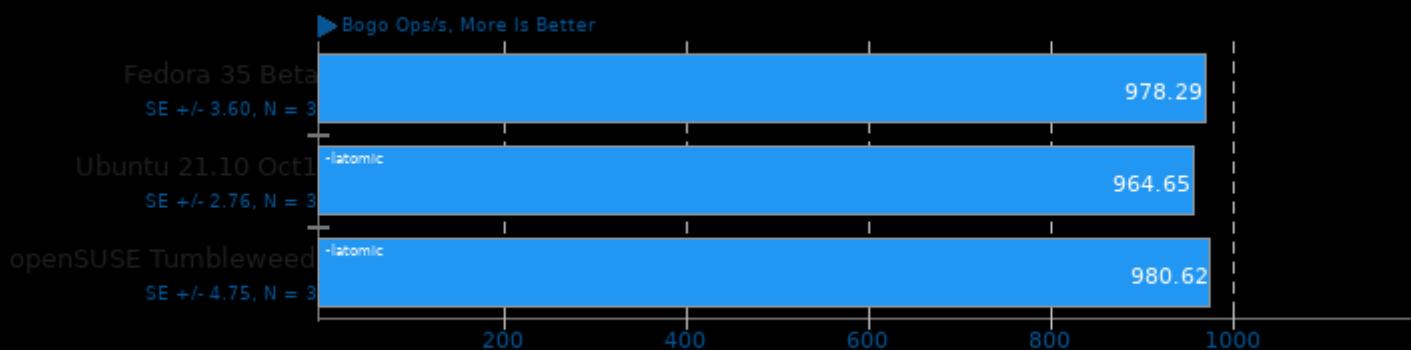
Test: Glibc C String Functions



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

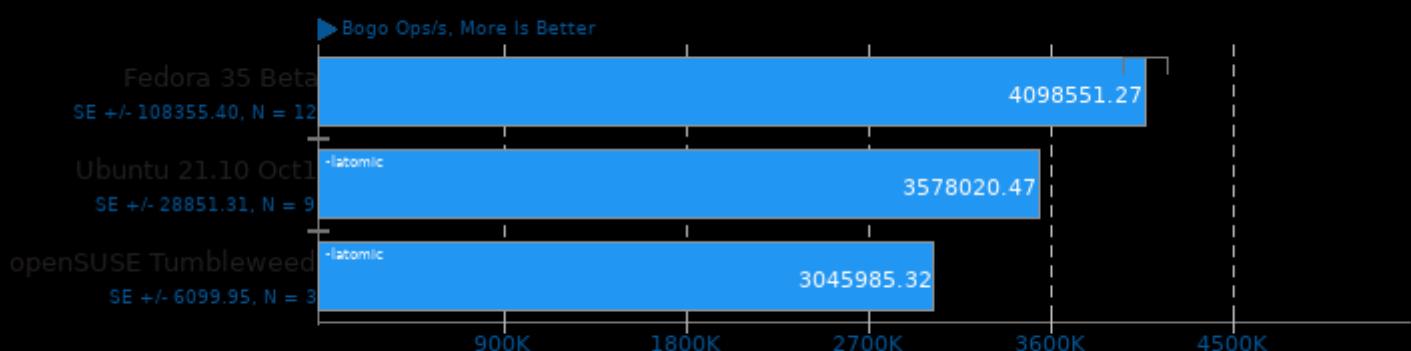
Test: Glibc Qsort Data Sorting



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Stress-NG 0.13.02

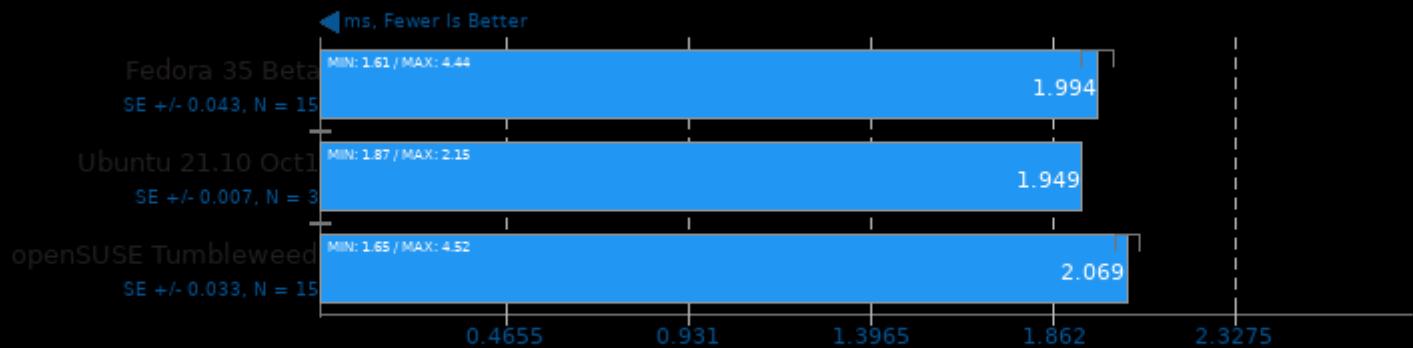
Test: System V Message Passing



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -pthread -lc

Mobile Neural Network 1.2

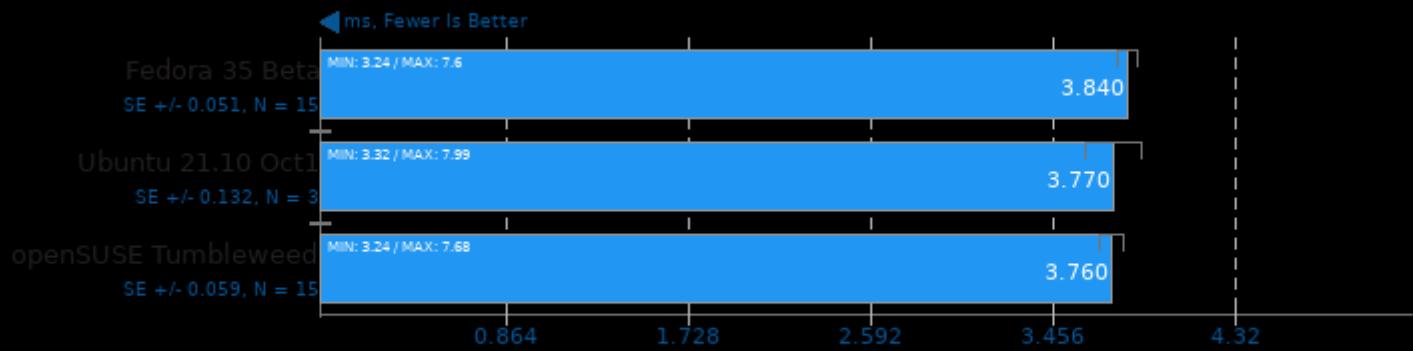
Model: mobilenetV3



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr

Mobile Neural Network 1.2

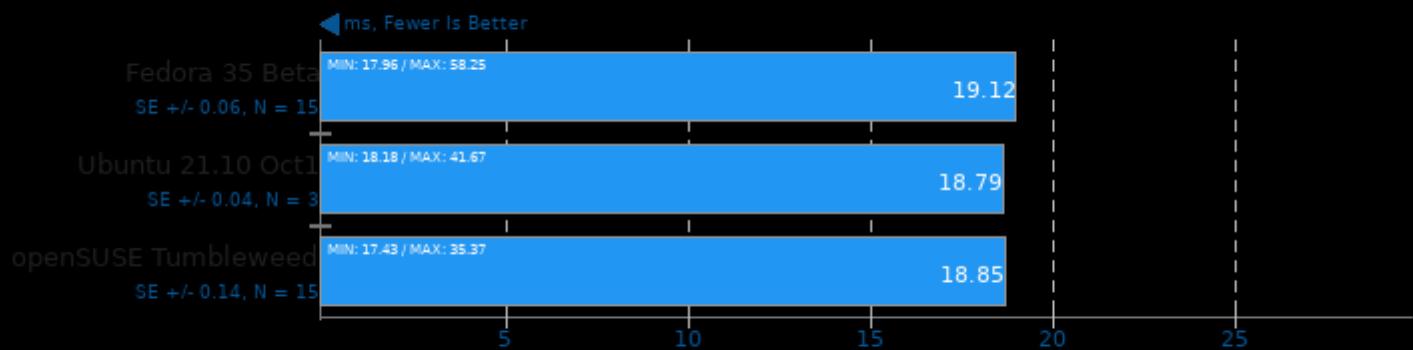
Model: squeezenetv1.1



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr

Mobile Neural Network 1.2

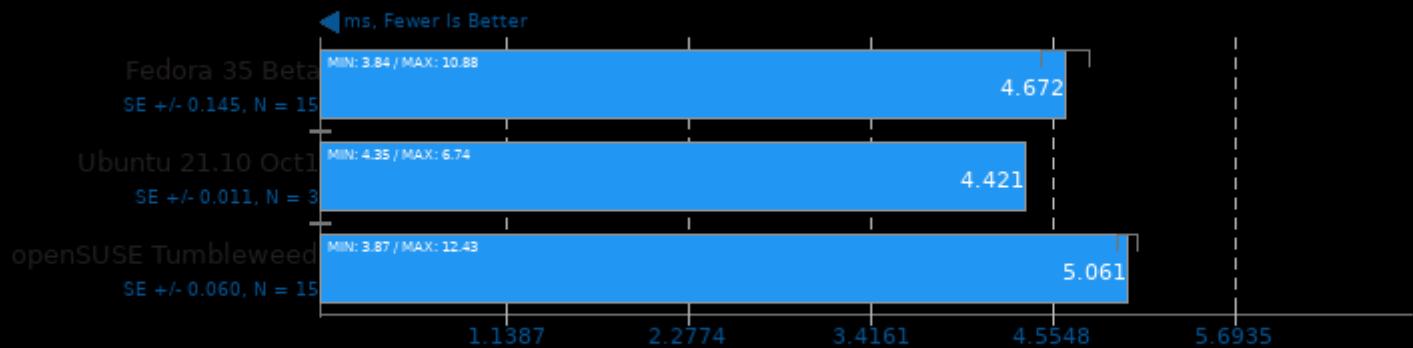
Model: resnet-v2-50



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr

Mobile Neural Network 1.2

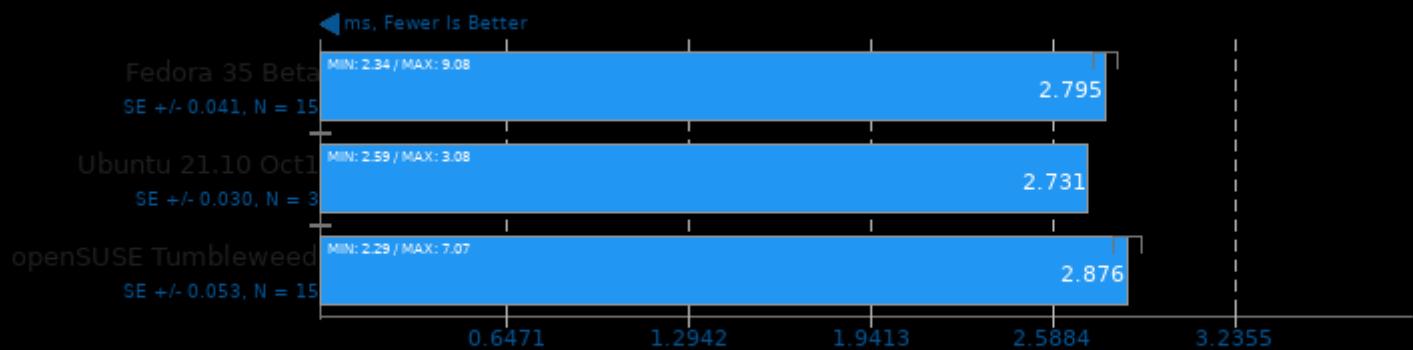
Model: SqueezeNetV1.0



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr

Mobile Neural Network 1.2

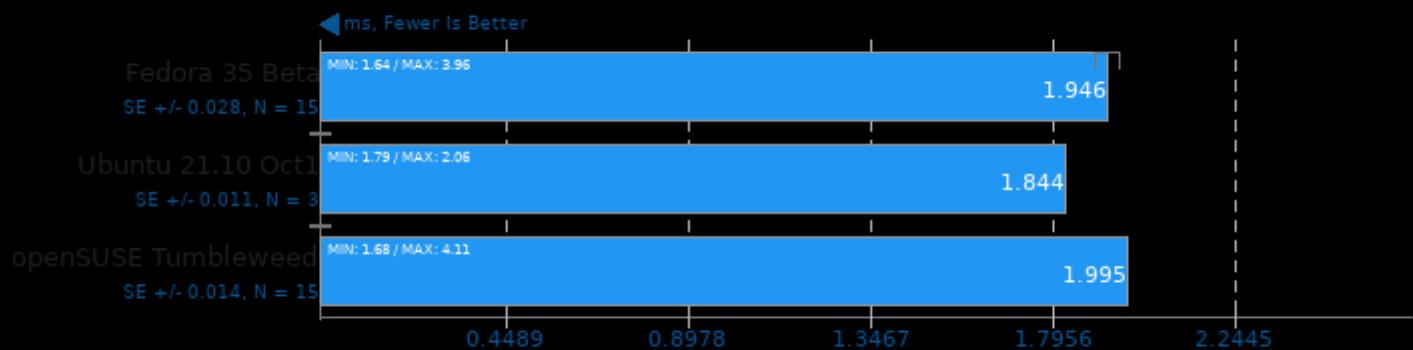
Model: MobileNetV2_224



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr

Mobile Neural Network 1.2

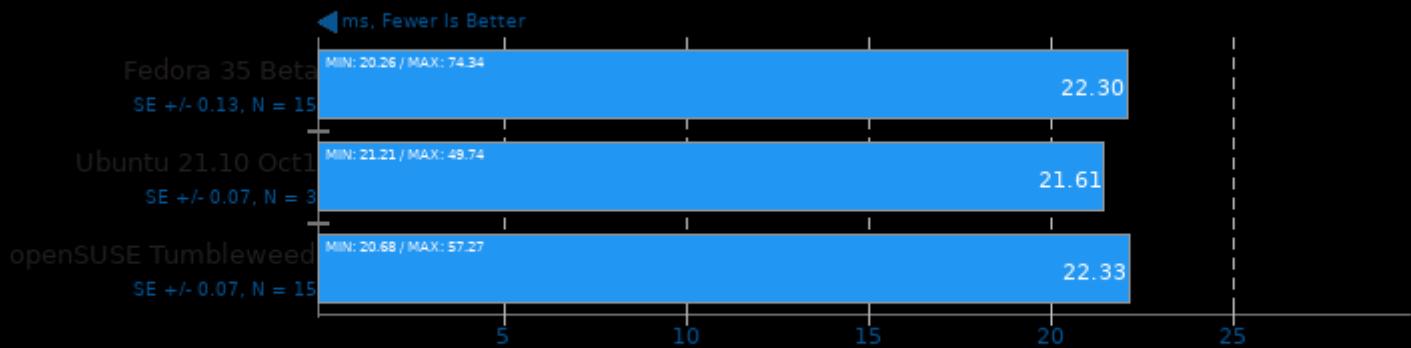
Model: mobilenet-v1-1.0



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr

Mobile Neural Network 1.2

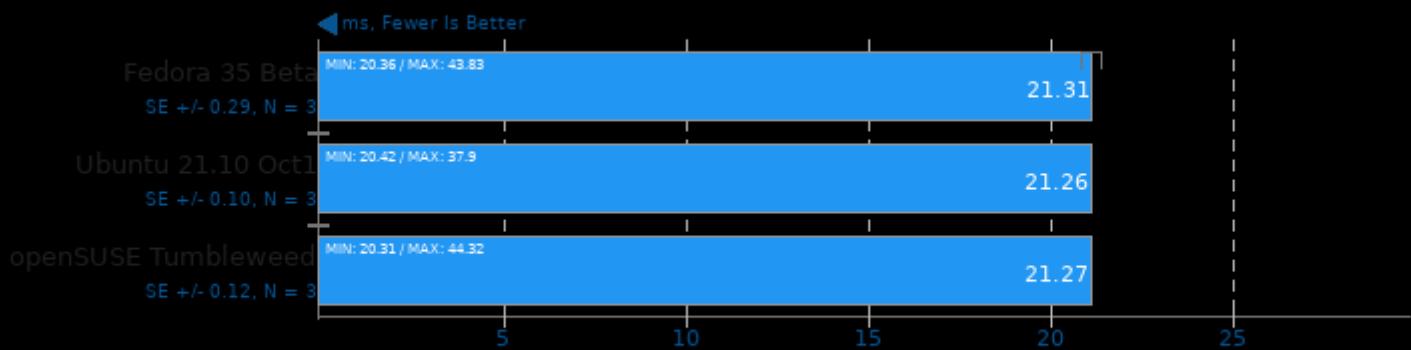
Model: inception-v3



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -frtti

NCNN 20210720

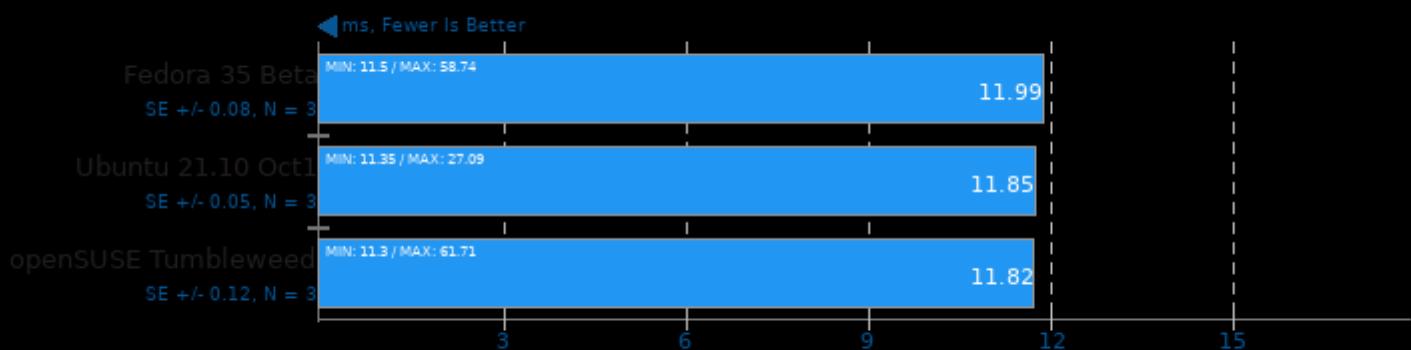
Target: CPU - Model: mobilenet



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

NCNN 20210720

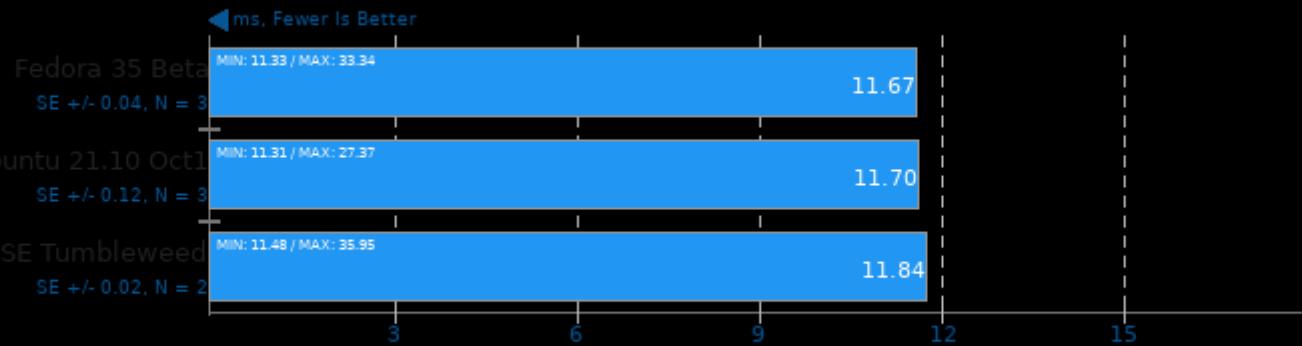
Target: CPU-v2-v2 - Model: mobilenet-v2



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

NCNN 20210720

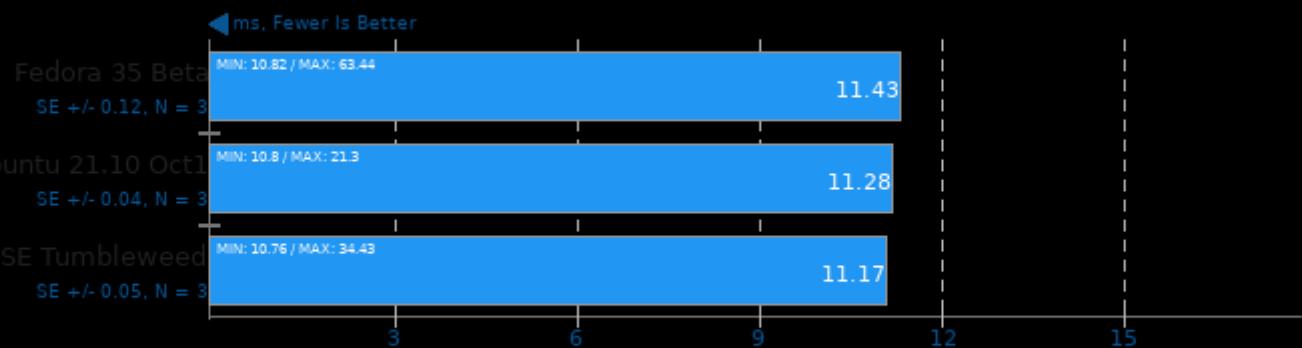
Target: CPU - Model: shufflenet-v2



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

NCNN 20210720

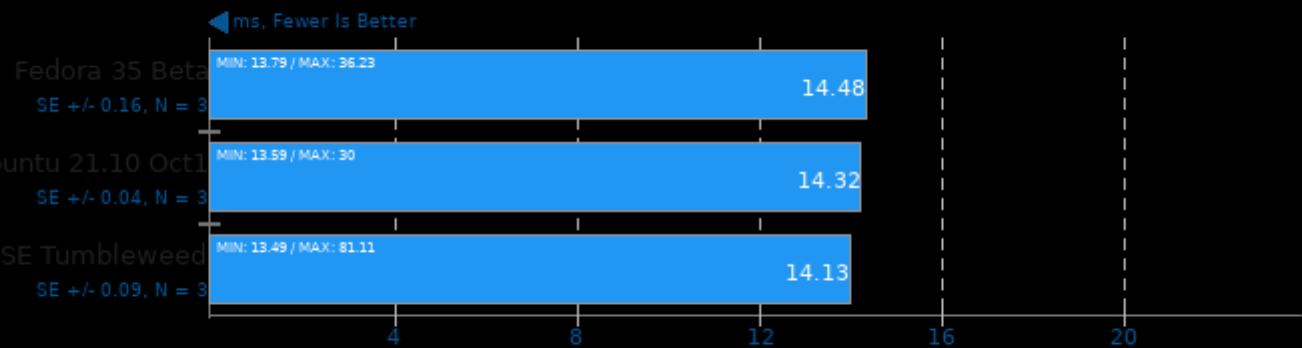
Target: CPU - Model: mnasnet



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

NCNN 20210720

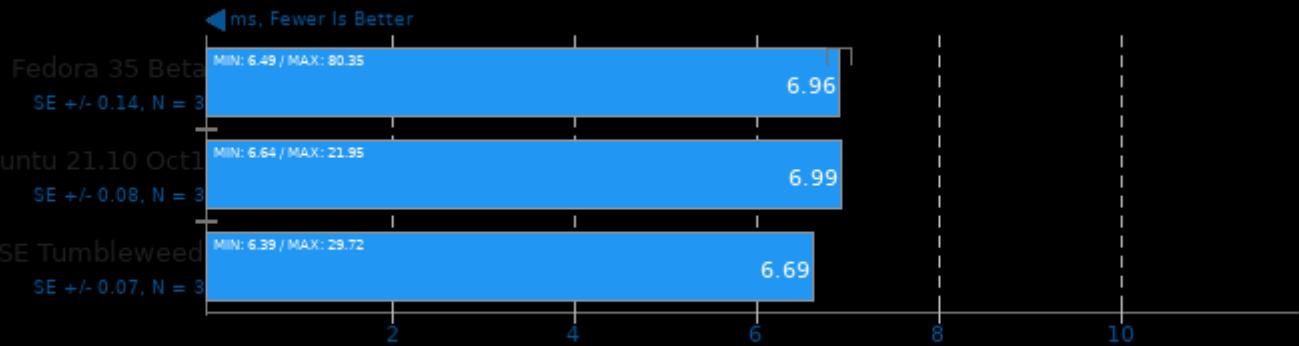
Target: CPU - Model: efficientnet-b0



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

NCNN 20210720

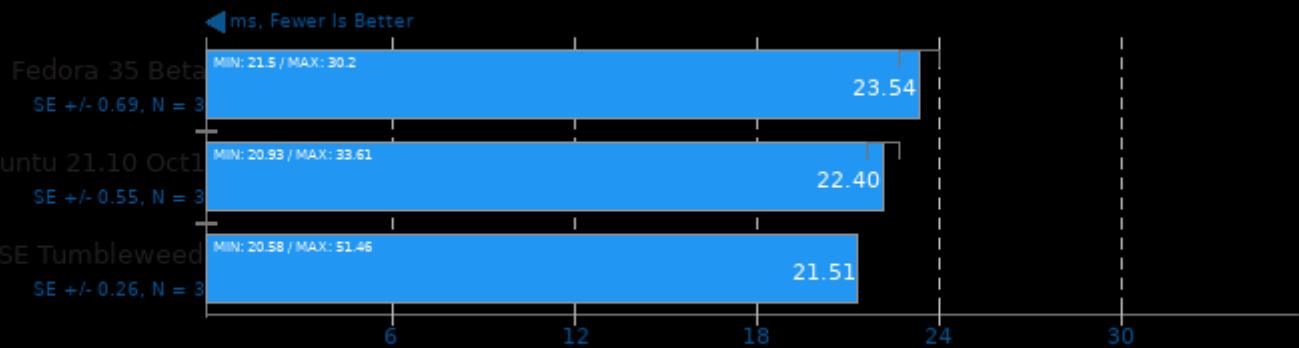
Target: CPU - Model: blazeface



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

NCNN 20210720

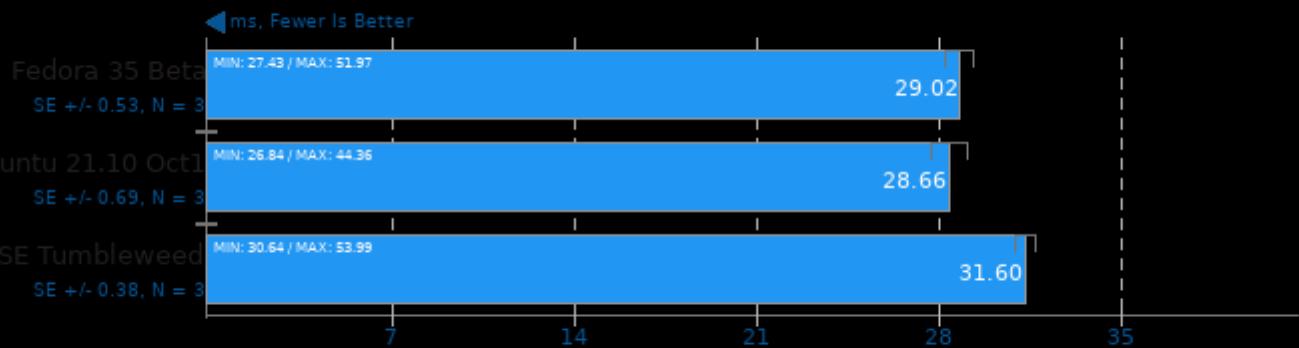
Target: CPU - Model: googlenet



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

NCNN 20210720

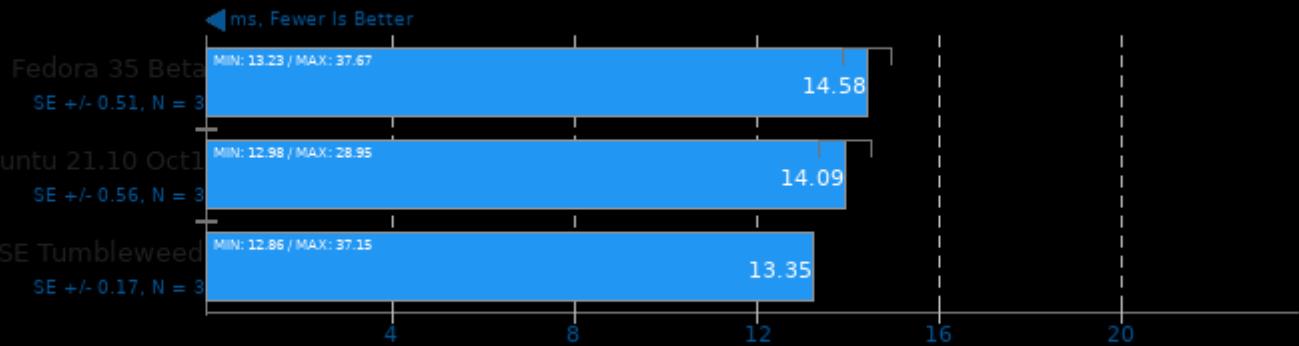
Target: CPU - Model: vgg16



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

NCNN 20210720

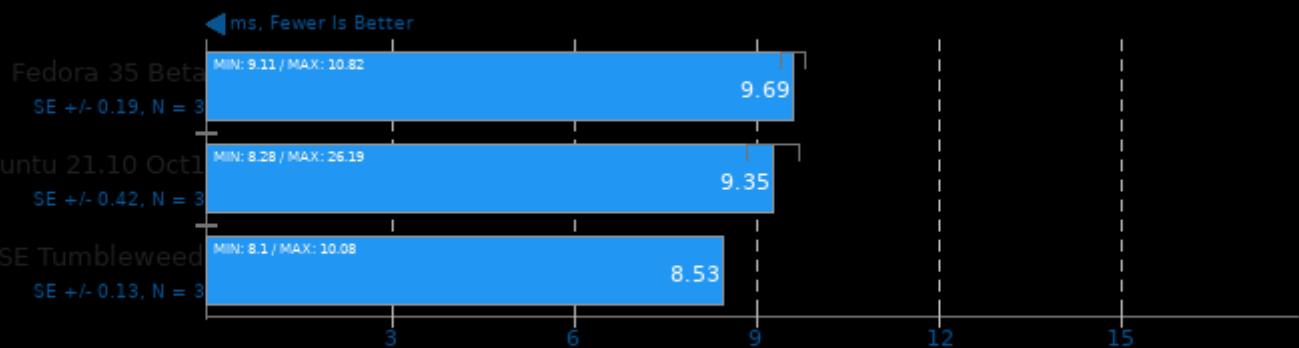
Target: CPU - Model: resnet18



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

NCNN 20210720

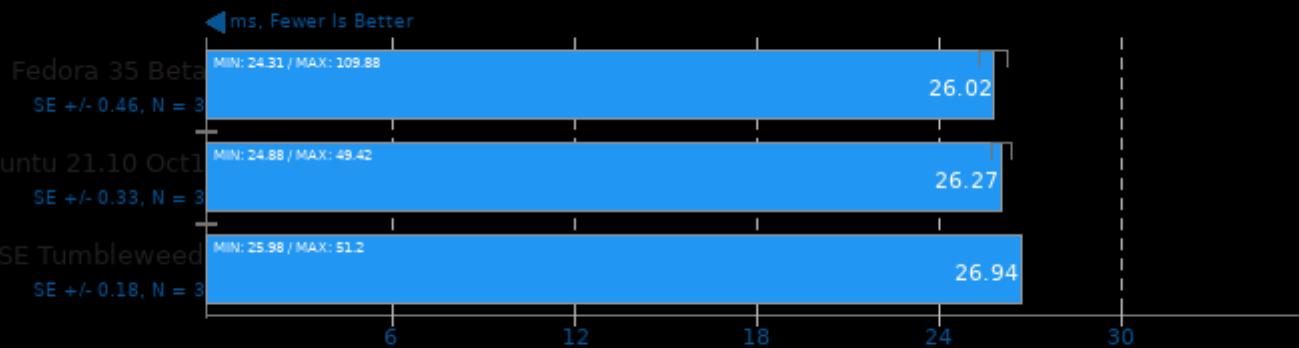
Target: CPU - Model: alexnet



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

NCNN 20210720

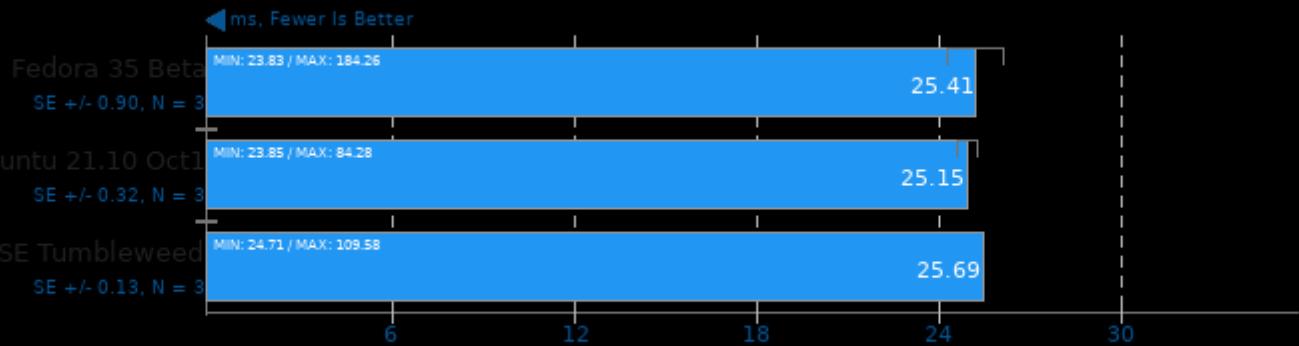
Target: CPU - Model: resnet50



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

NCNN 20210720

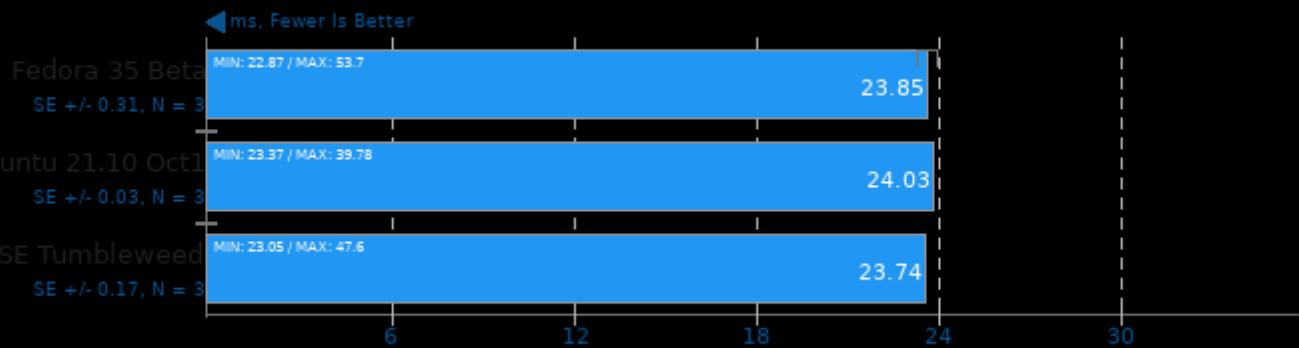
Target: CPU - Model: yolov4-tiny



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

NCNN 20210720

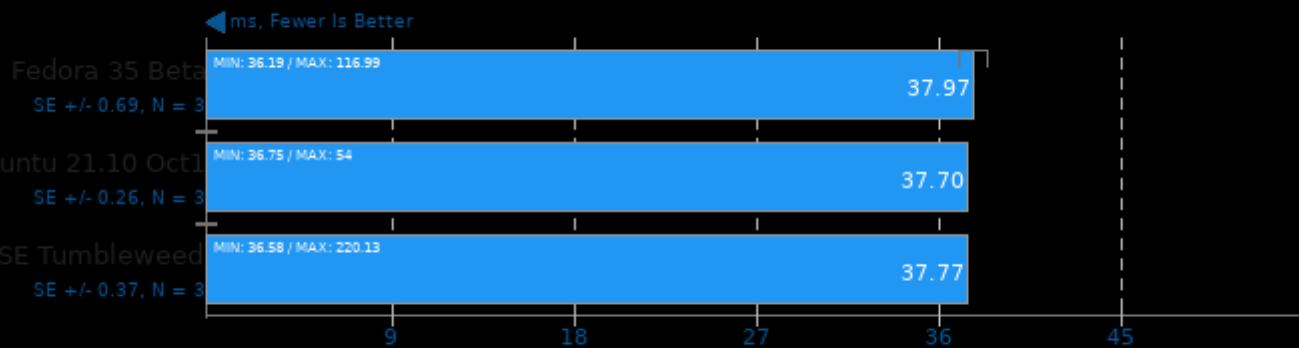
Target: CPU - Model: squeezenet_ssdlite



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

NCNN 20210720

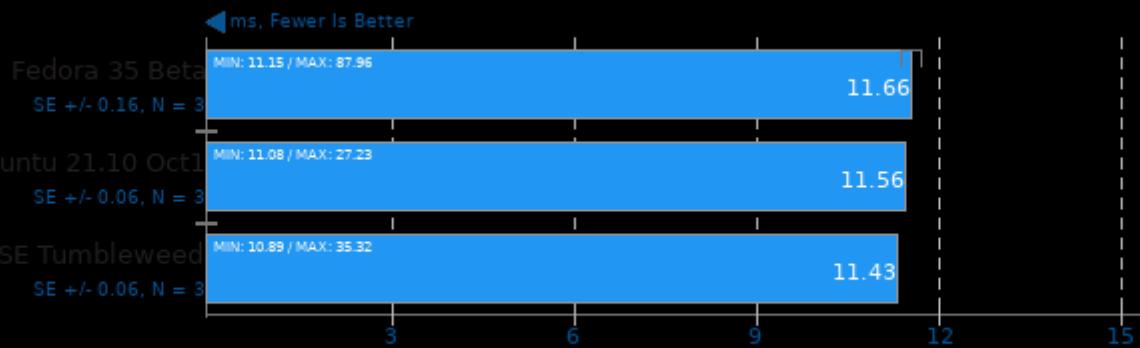
Target: CPU - Model: regnetx_400m



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

NCNN 20210720

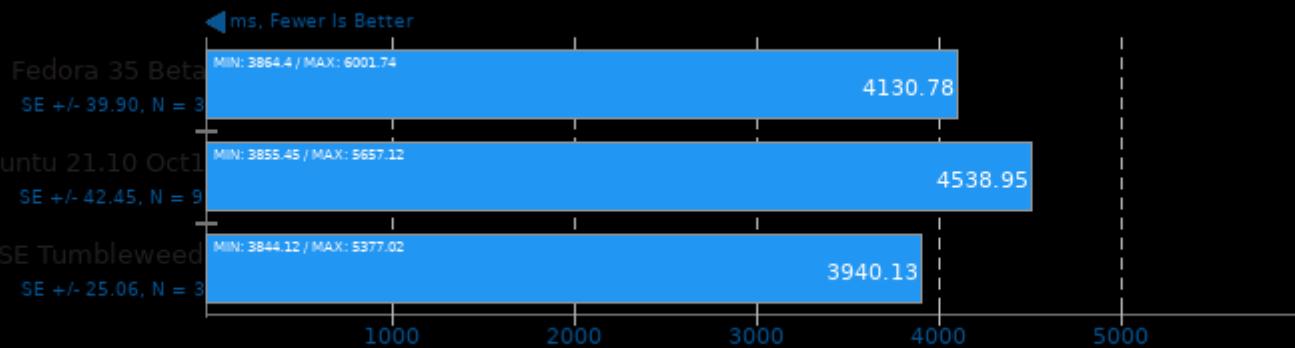
Target: CPU-v3-v3 - Model: mobilenet-v3



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

TNN 0.3

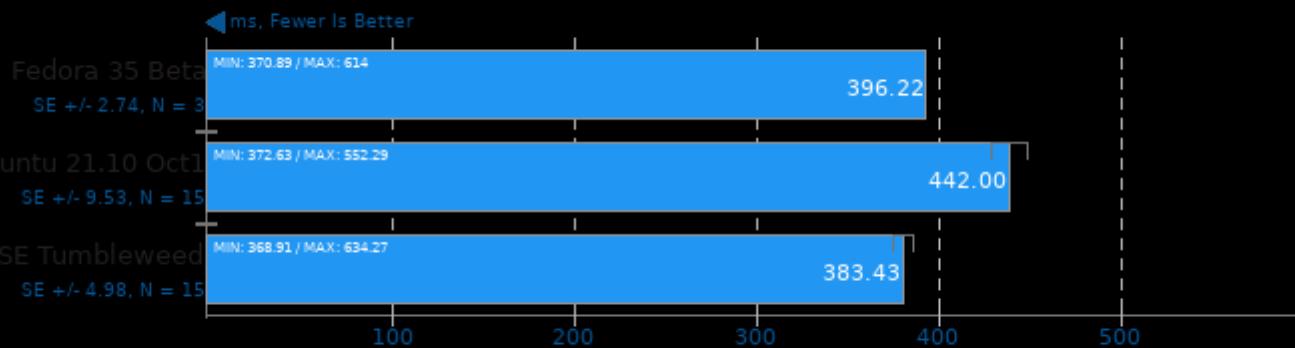
Target: CPU - Model: DenseNet



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

TNN 0.3

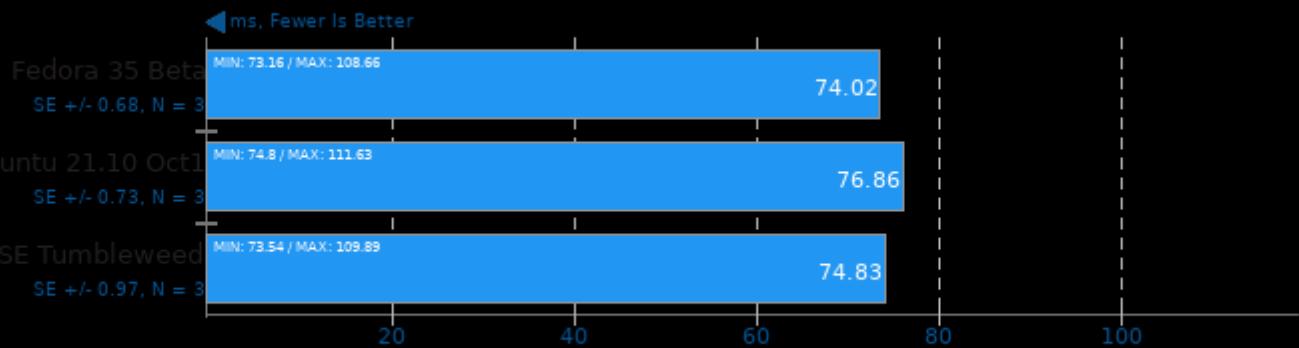
Target: CPU - Model: MobileNet v2



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

TNN 0.3

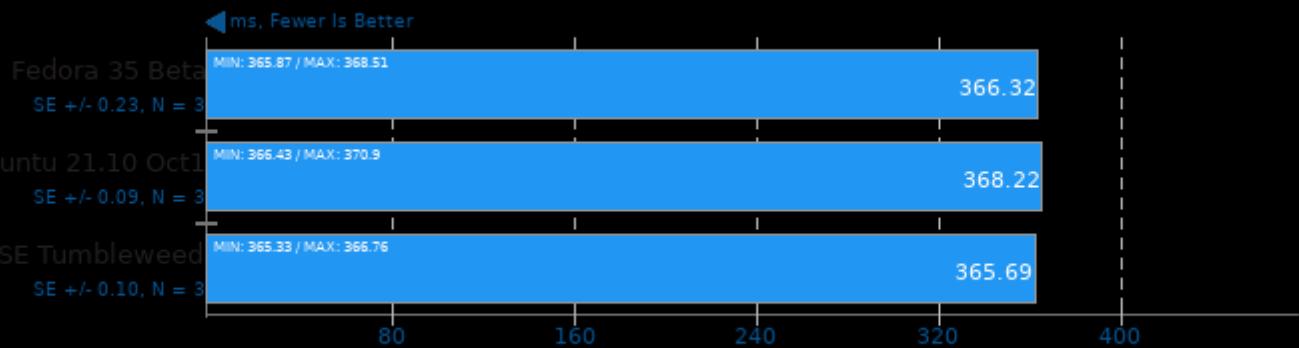
Target: CPU - Model: SqueezeNet v2



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

TNN 0.3

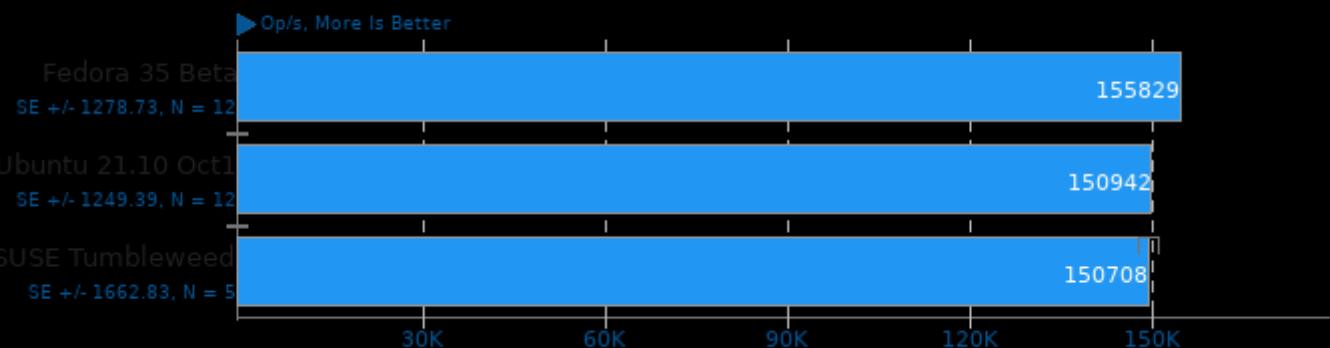
Target: CPU - Model: SqueezeNet v1.1



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

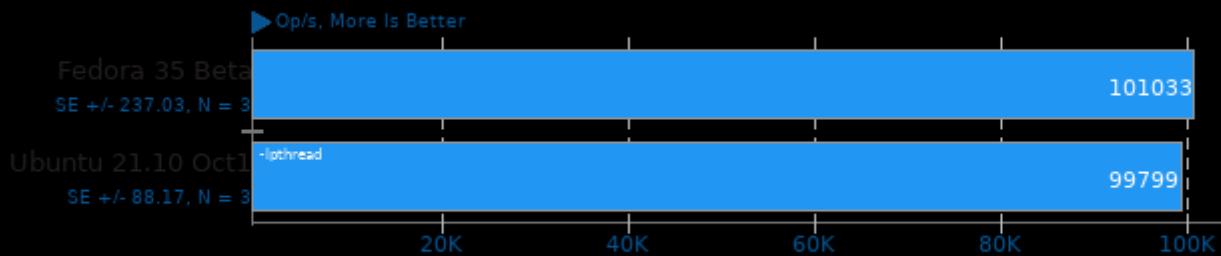
Apache Cassandra 4.0

Test: Writes



Facebook RocksDB 6.22.1

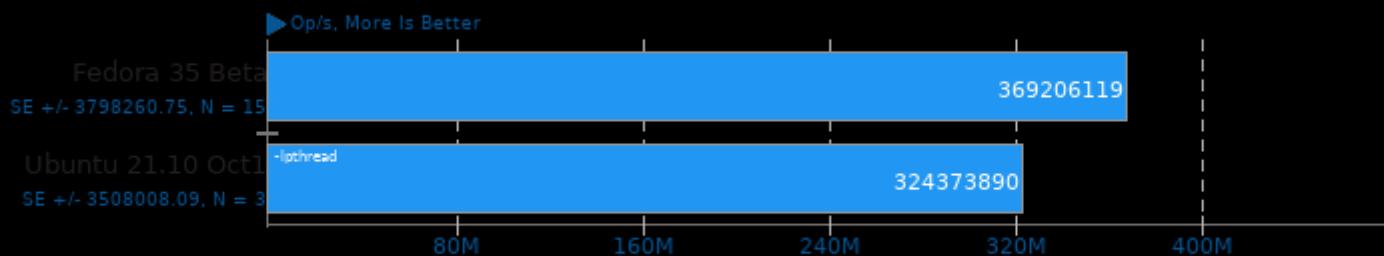
Test: Random Fill



1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti

Facebook RocksDB 6.22.1

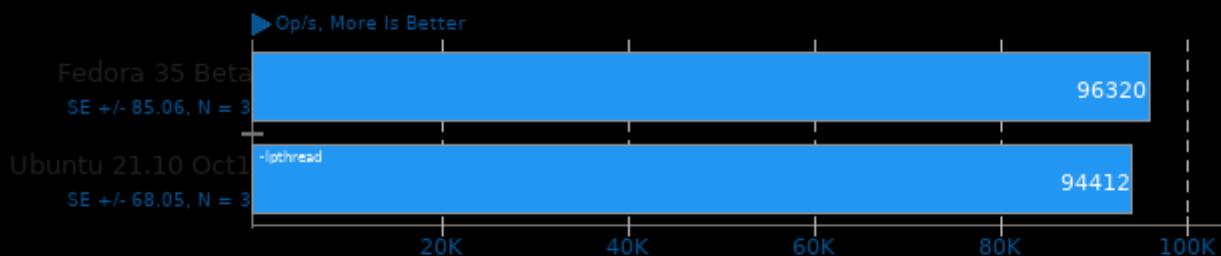
Test: Random Read



1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti

Facebook RocksDB 6.22.1

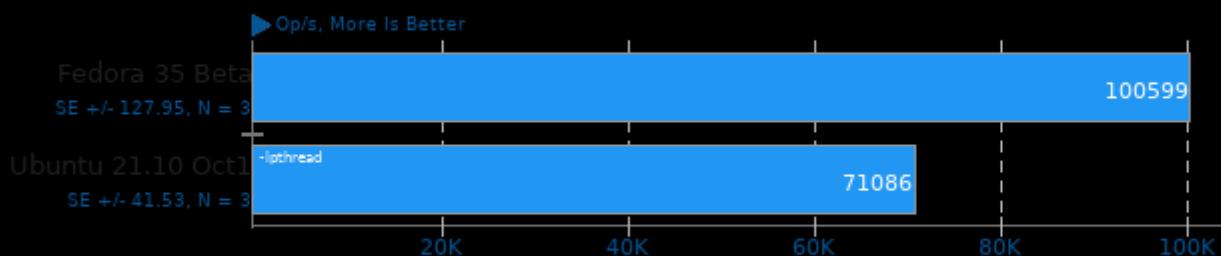
Test: Update Random



1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti

Facebook RocksDB 6.22.1

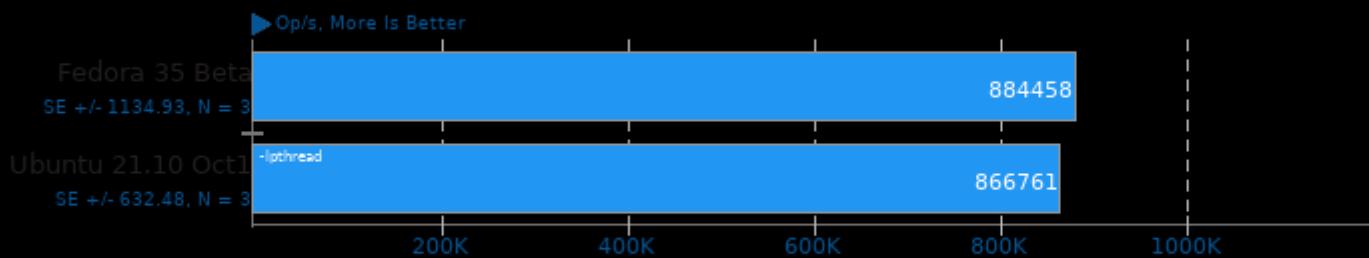
Test: Random Fill Sync



1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti

Facebook RocksDB 6.22.1

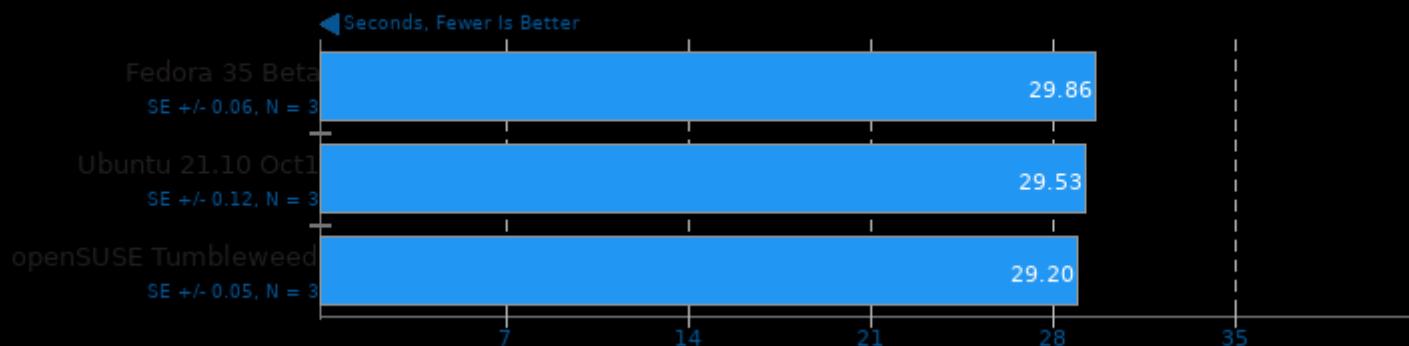
Test: Read Random Write Random



1. (CXX) g++ options: -O3 -march=native -pthread -fno-built-in-memcmp -fno-rtti

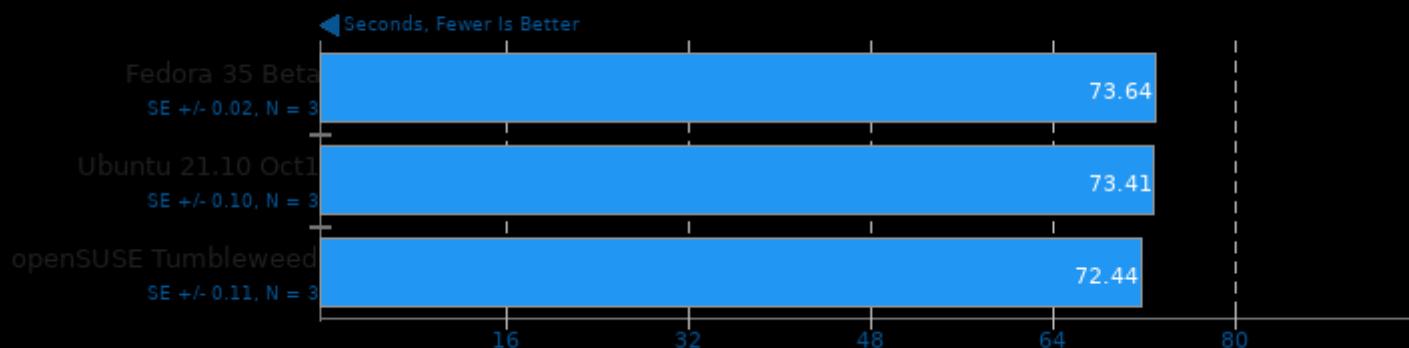
Blender 2.92

Blend File: BMW27 - Compute: CPU-Only



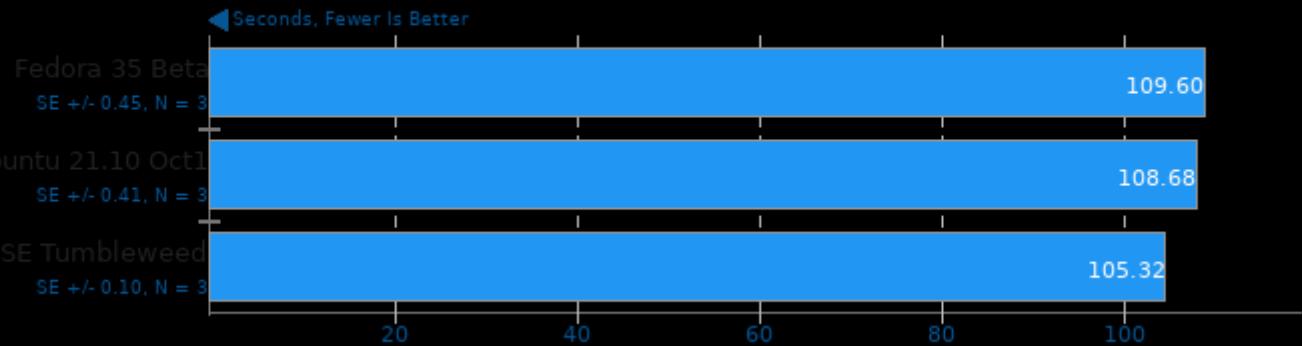
Blender 2.92

Blend File: Classroom - Compute: CPU-Only



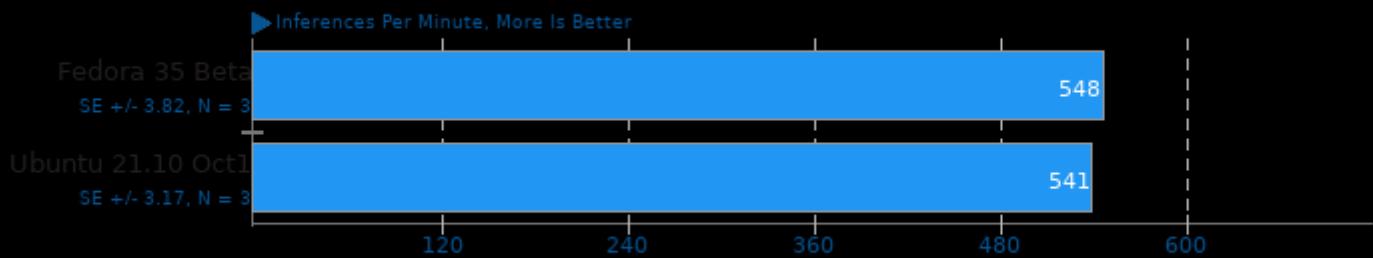
Blender 2.92

Blend File: Barbershop - Compute: CPU-Only



ONNX Runtime 1.8.2

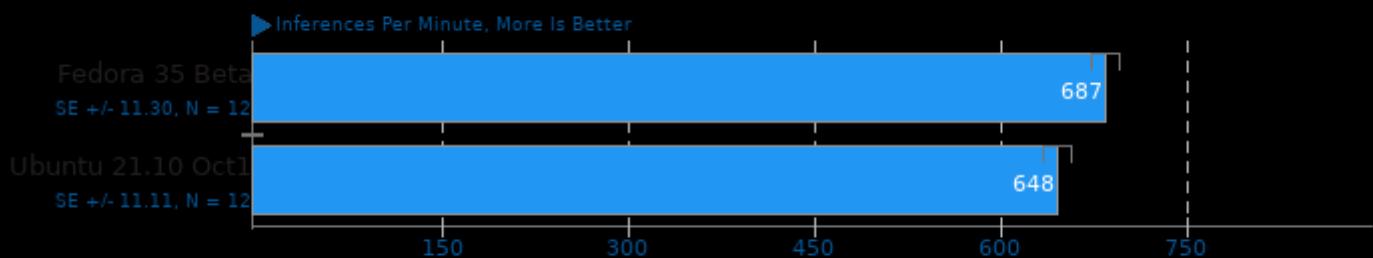
Model: yolov4 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -ffunction-sections -O3 -ldl -lrt

ONNX Runtime 1.8.2

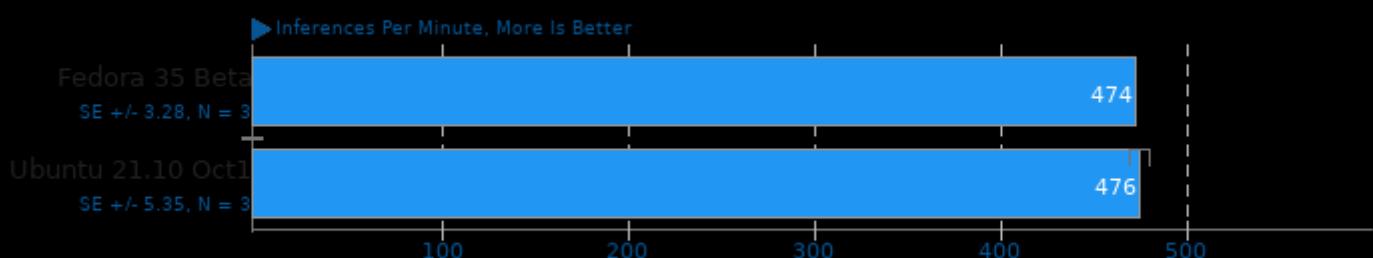
Model: bertsquad-10 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -ffunction-sections -O3 -ldl -lrt

ONNX Runtime 1.8.2

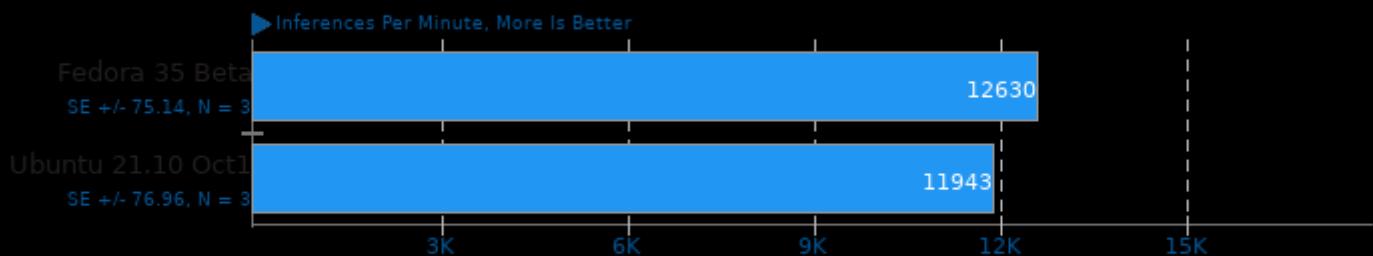
Model: fcn-resnet101-11 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -ffunction-sections -O3 -ldl -lrt

ONNX Runtime 1.8.2

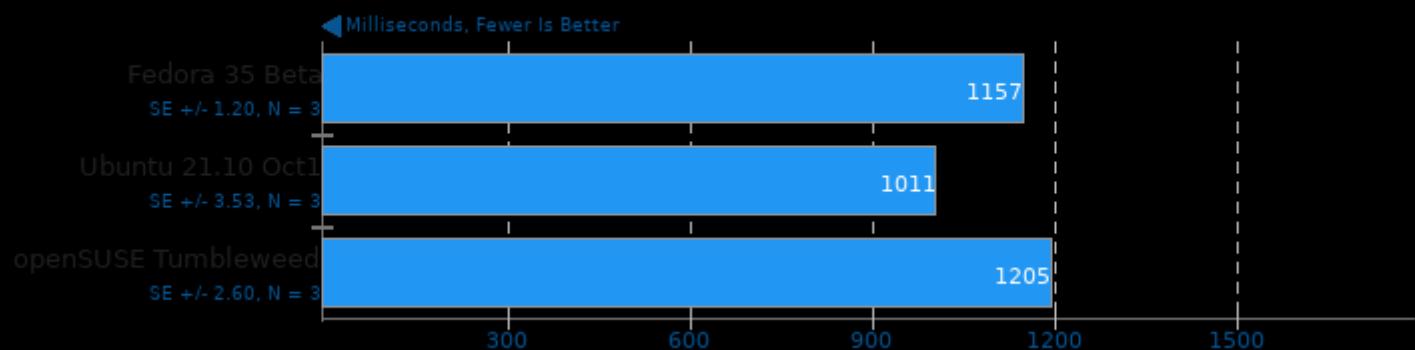
Model: shufflenet-v2-10 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -ffunction-sections -O3 -ldl -lrt

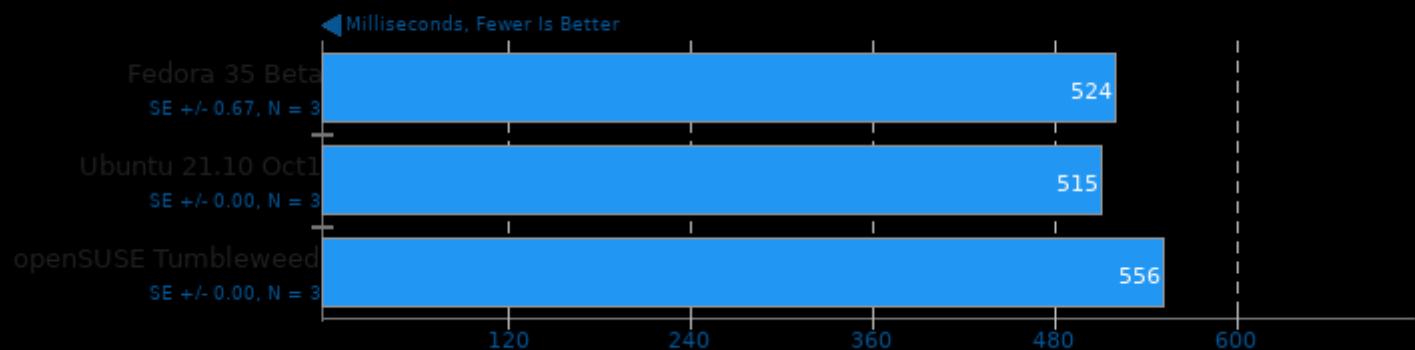
PyBench 2018-02-16

Total For Average Test Times



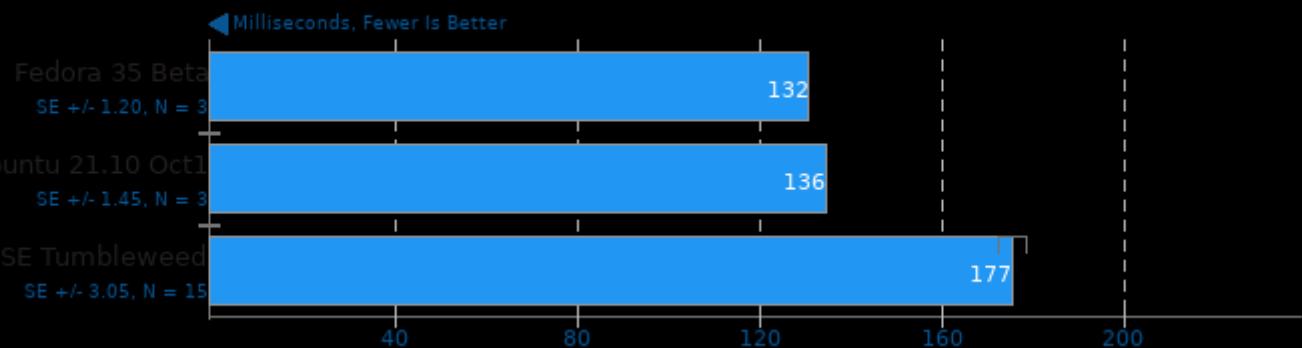
PyPerformance 1.0.0

Benchmark: 2to3



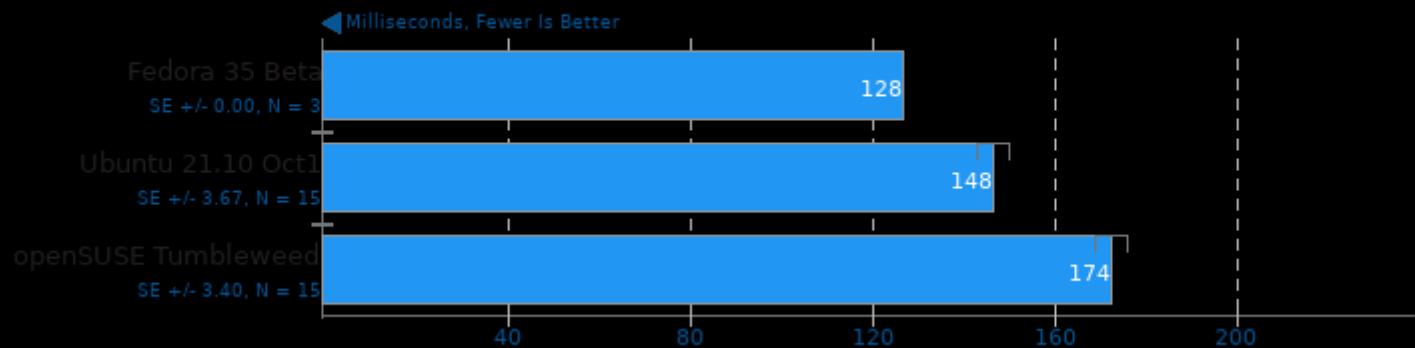
PyPerformance 1.0.0

Benchmark: chaos



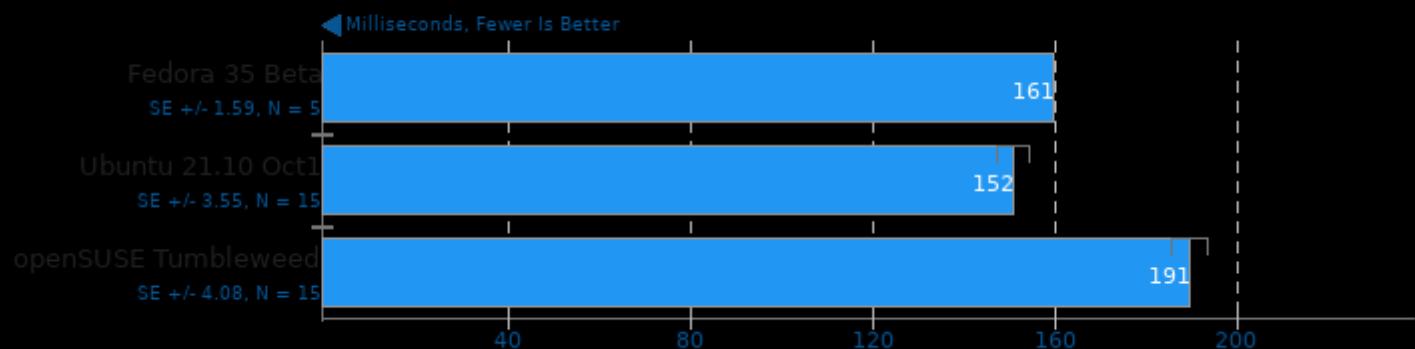
PyPerformance 1.0.0

Benchmark: float



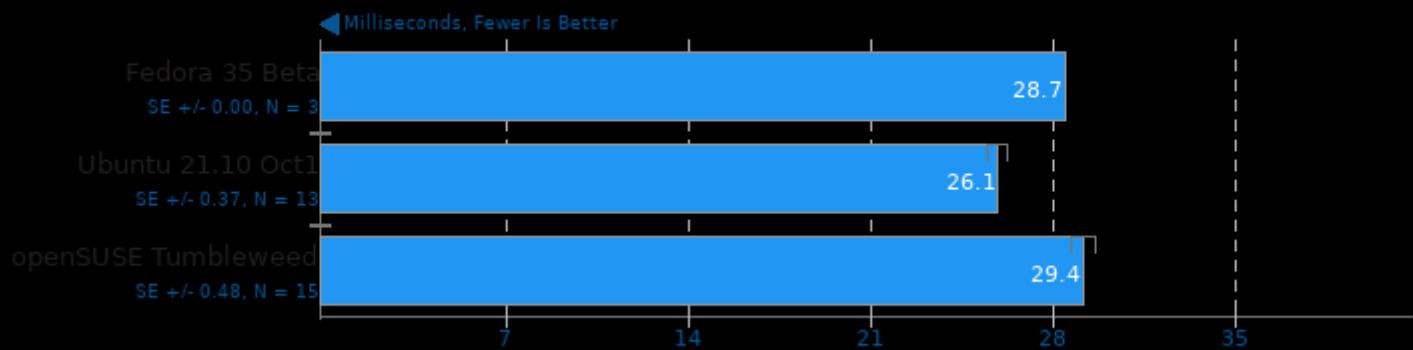
PyPerformance 1.0.0

Benchmark: nbody



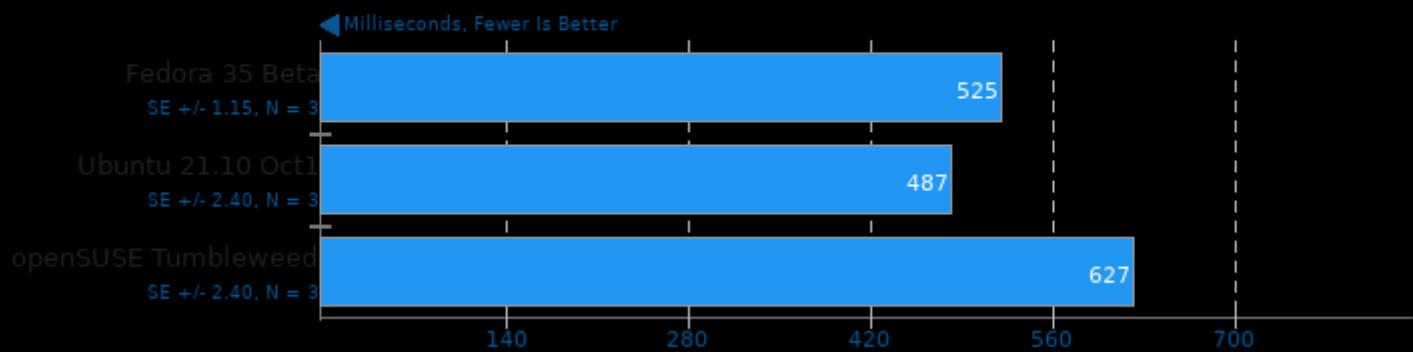
PyPerformance 1.0.0

Benchmark: pathlib



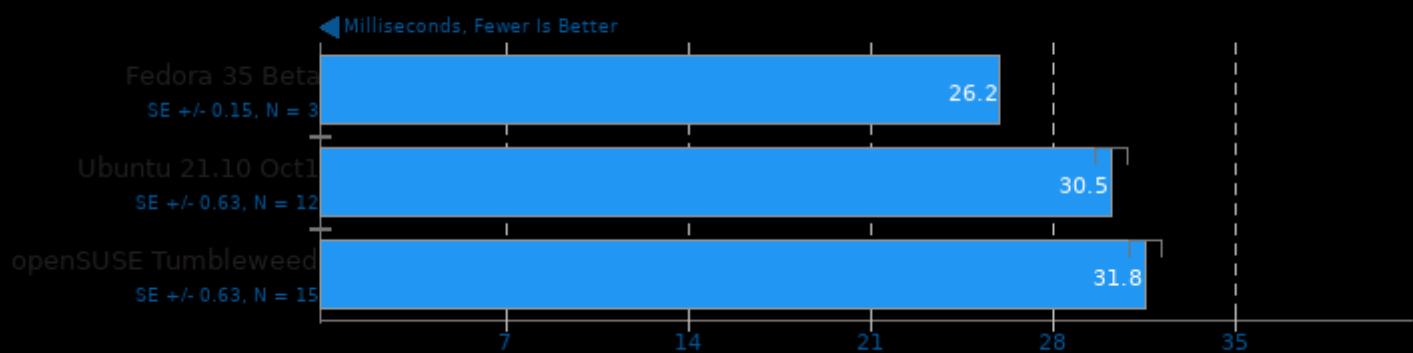
PyPerformance 1.0.0

Benchmark: raytrace



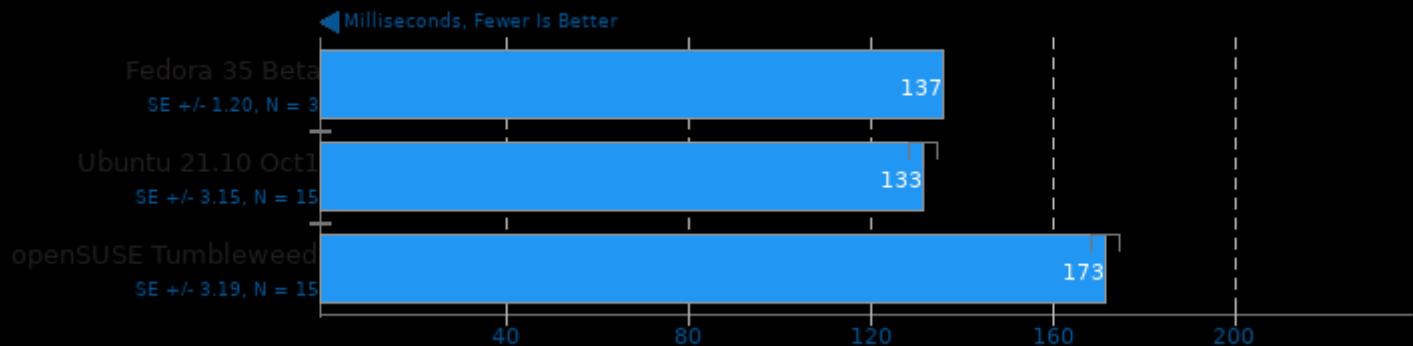
PyPerformance 1.0.0

Benchmark: json.loads



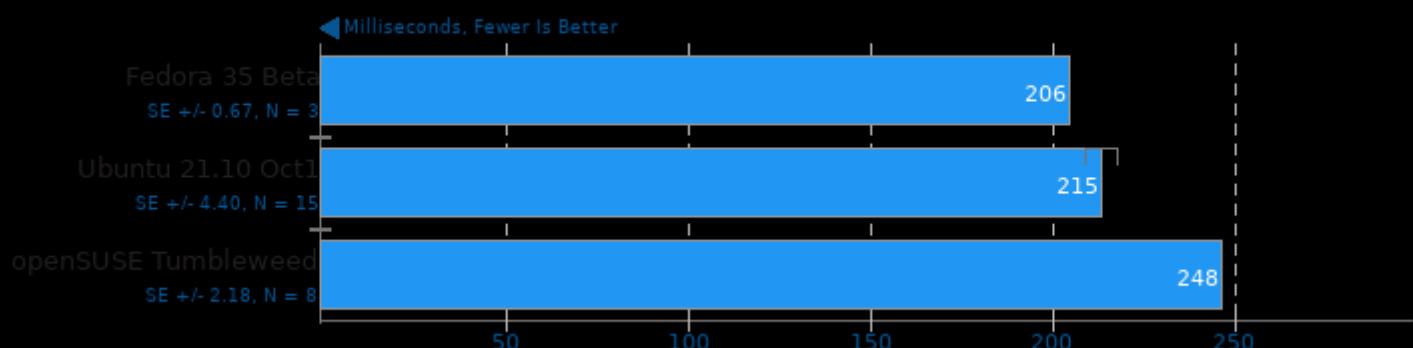
PyPerformance 1.0.0

Benchmark: crypto_pyaes



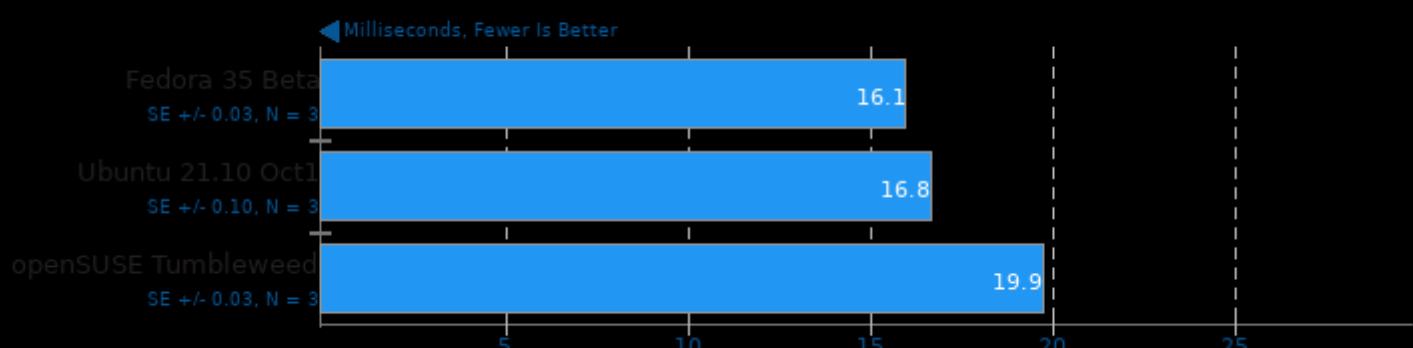
PyPerformance 1.0.0

Benchmark: regex_compile



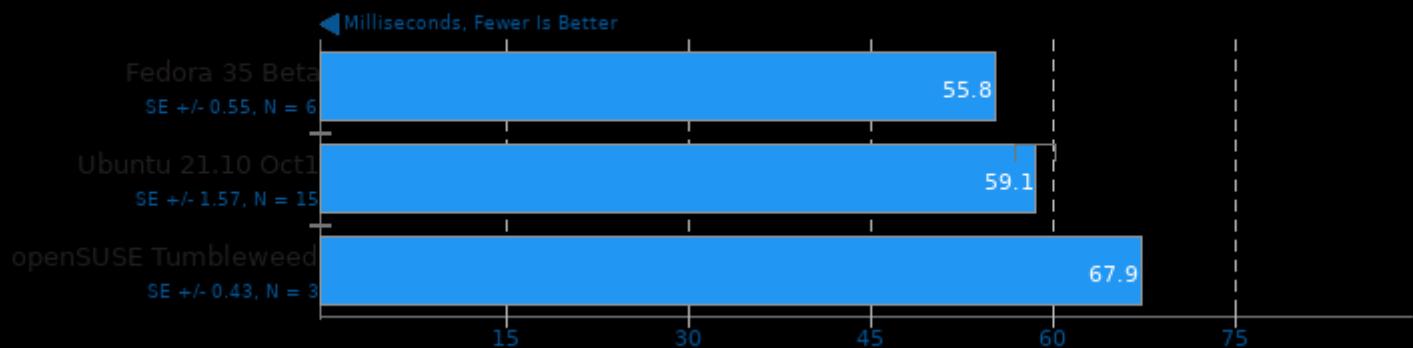
PyPerformance 1.0.0

Benchmark: python_startup



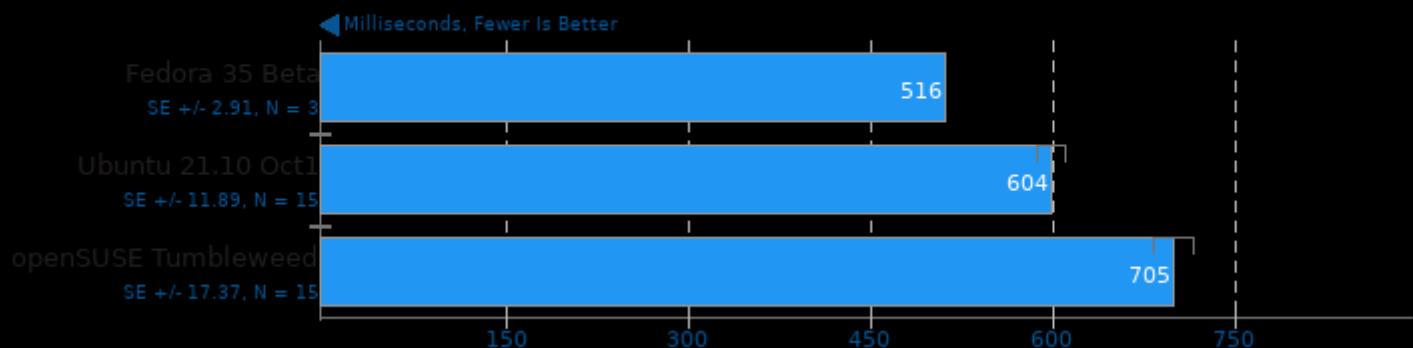
PyPerformance 1.0.0

Benchmark: django_template



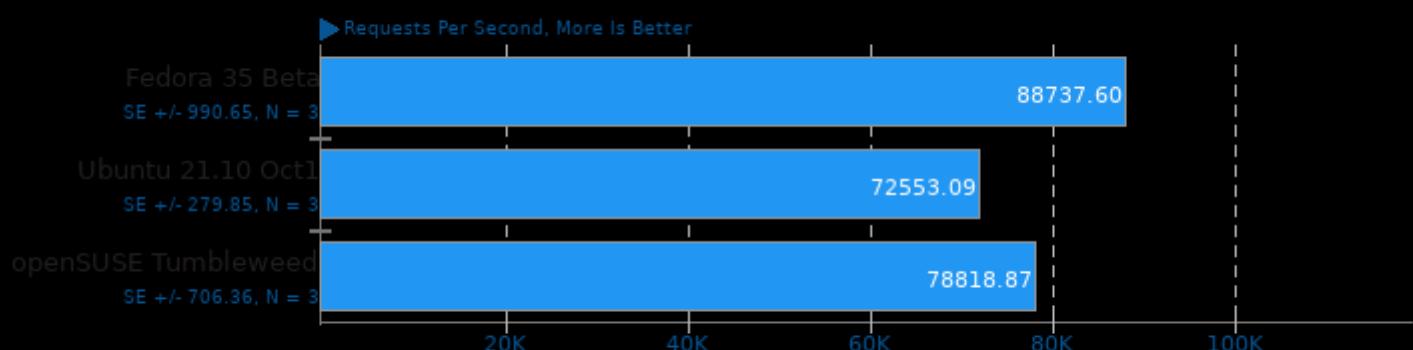
PyPerformance 1.0.0

Benchmark: pickle_pure_python



nginx 1.21.1

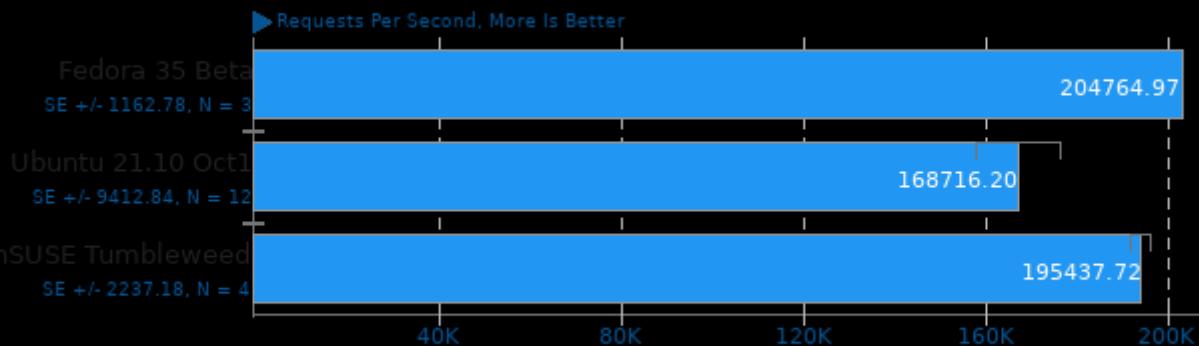
Concurrent Requests: 100



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

nginx 1.21.1

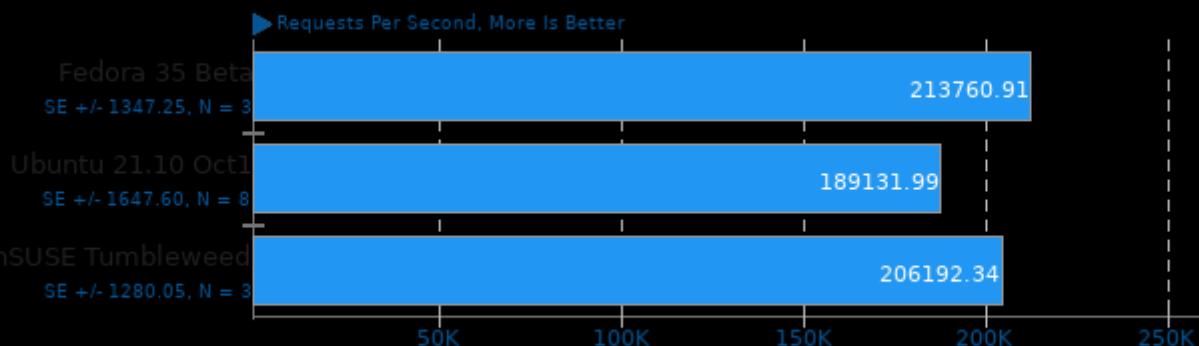
Concurrent Requests: 200



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

nginx 1.21.1

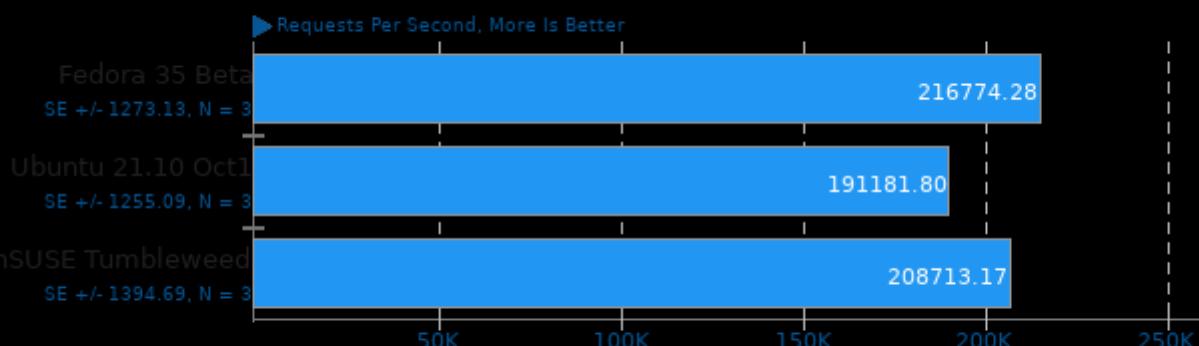
Concurrent Requests: 500



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

nginx 1.21.1

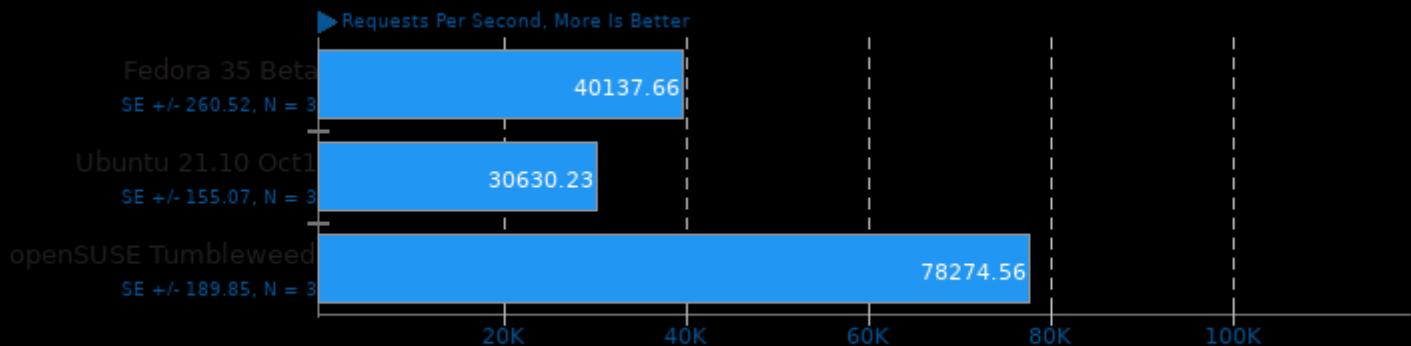
Concurrent Requests: 1000



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

Apache HTTP Server 2.4.48

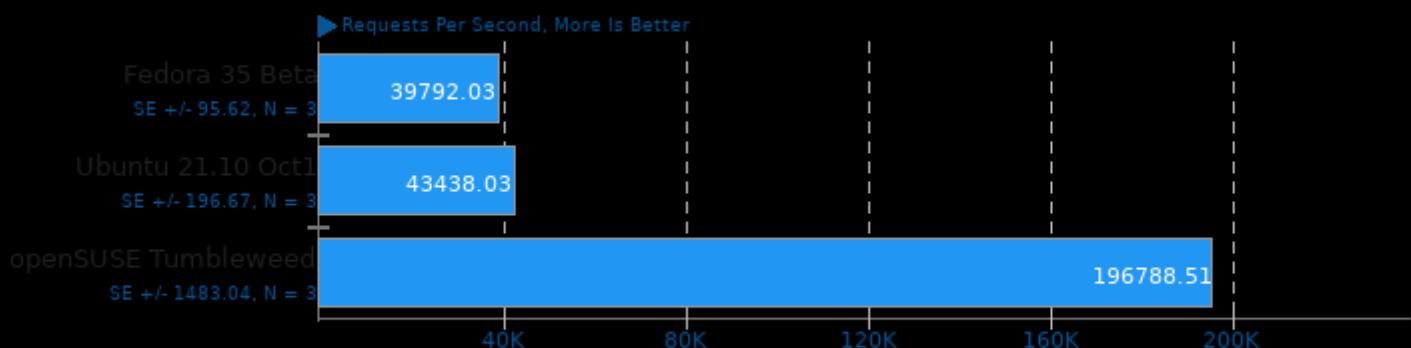
Concurrent Requests: 100



1. (CC) gcc options: -shared -fPIC -O2

Apache HTTP Server 2.4.48

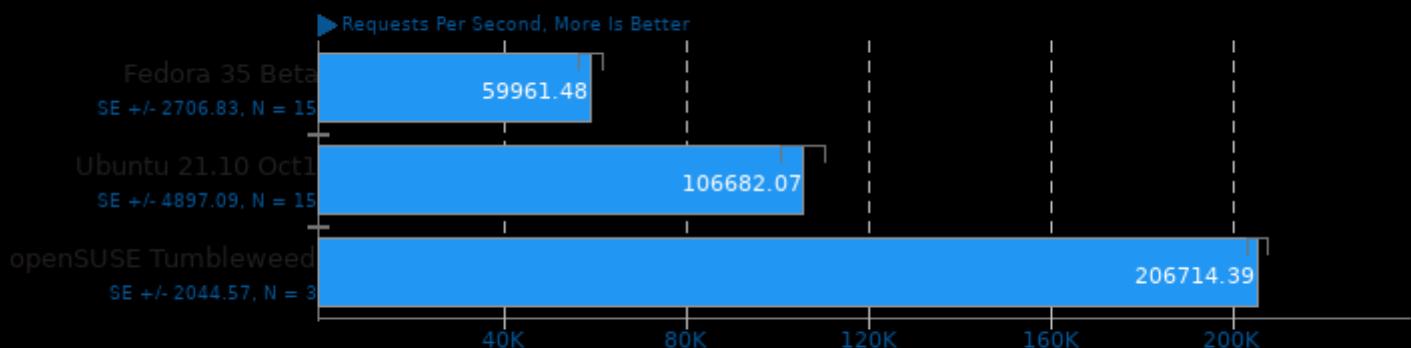
Concurrent Requests: 200



1. (CC) gcc options: -shared -fPIC -O2

Apache HTTP Server 2.4.48

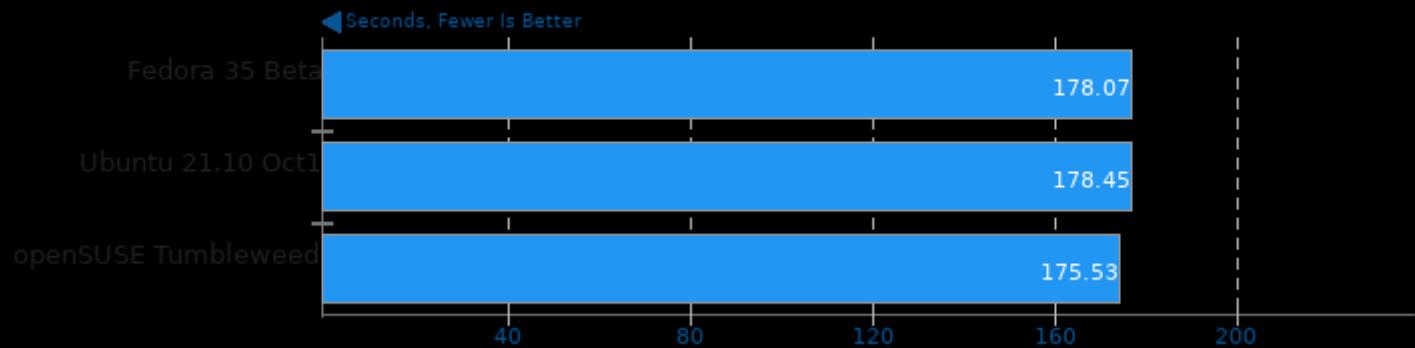
Concurrent Requests: 1000



1. (CC) gcc options: -shared -fPIC -O2

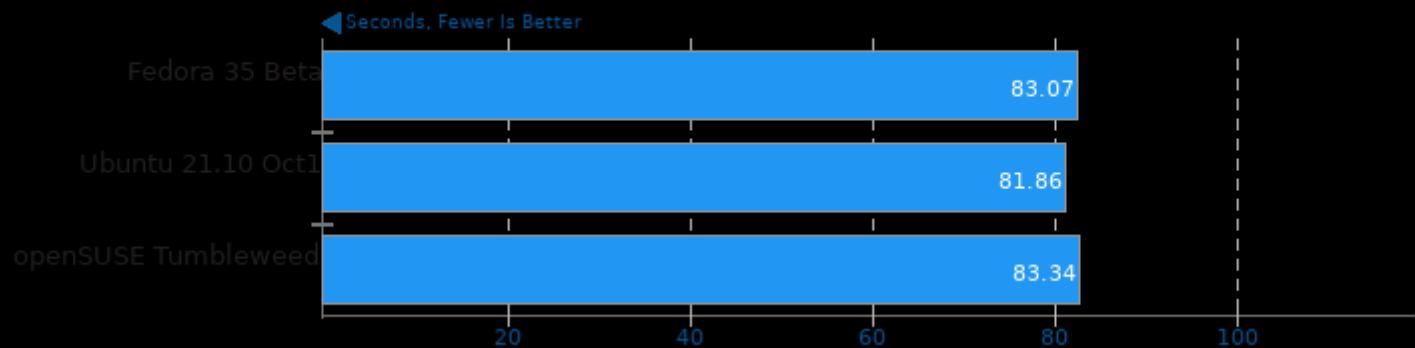
Appleseed 2.0 Beta

Scene: Emily



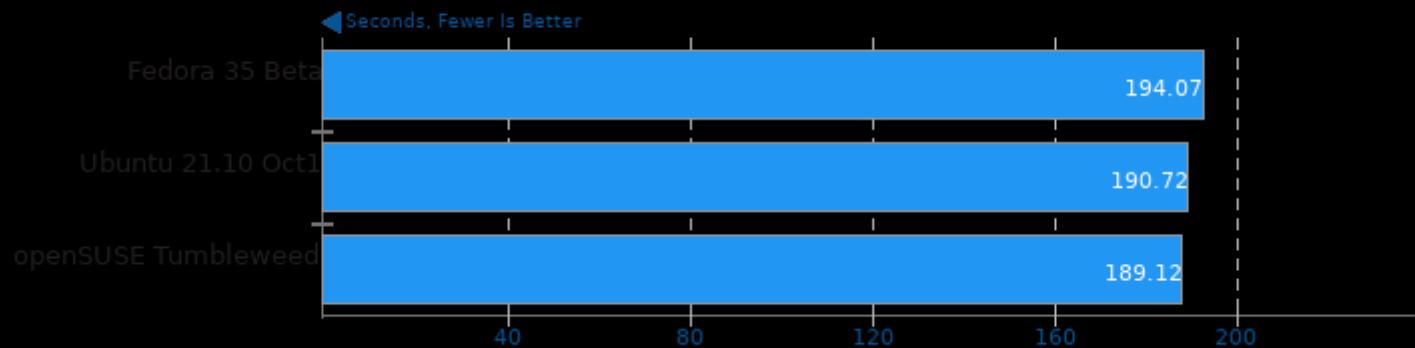
Appleseed 2.0 Beta

Scene: Disney Material



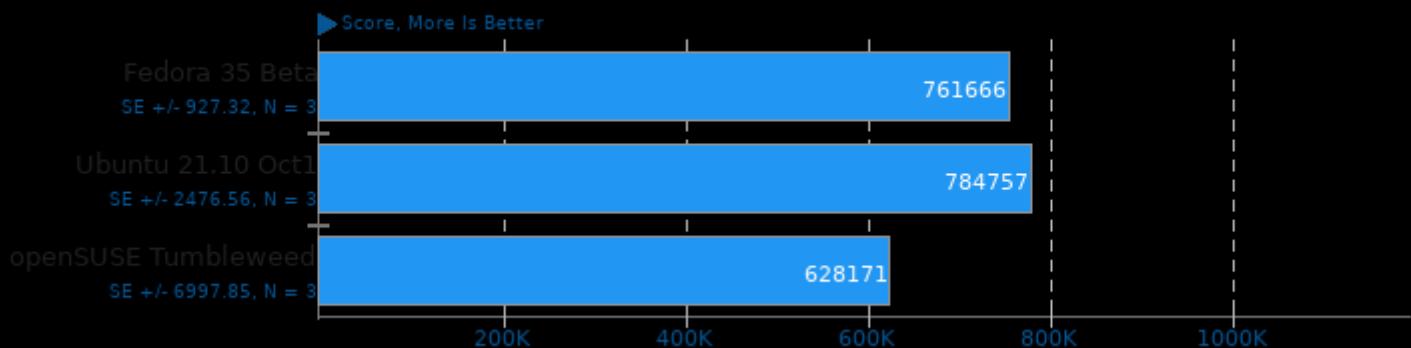
Appleseed 2.0 Beta

Scene: Material Tester



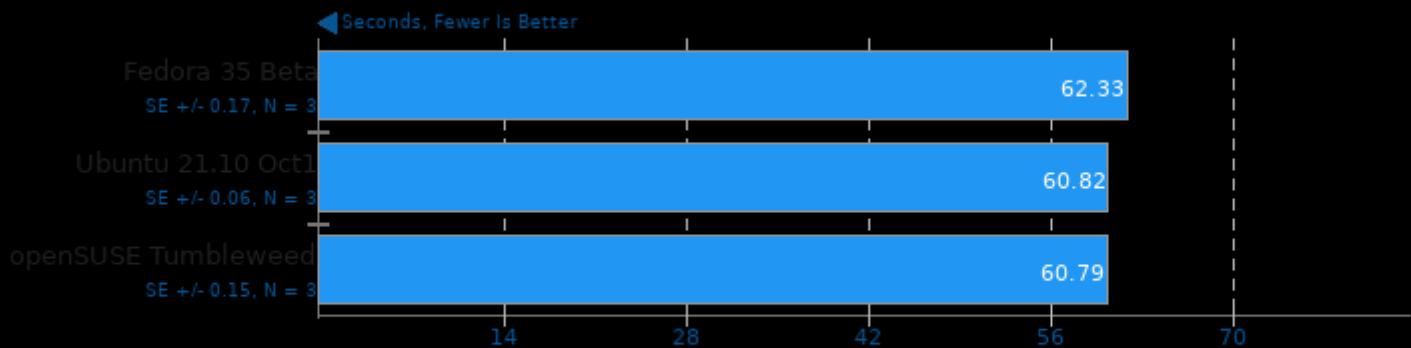
PHPBench 0.8.1

PHP Benchmark Suite



Git

Time To Complete Common Git Commands



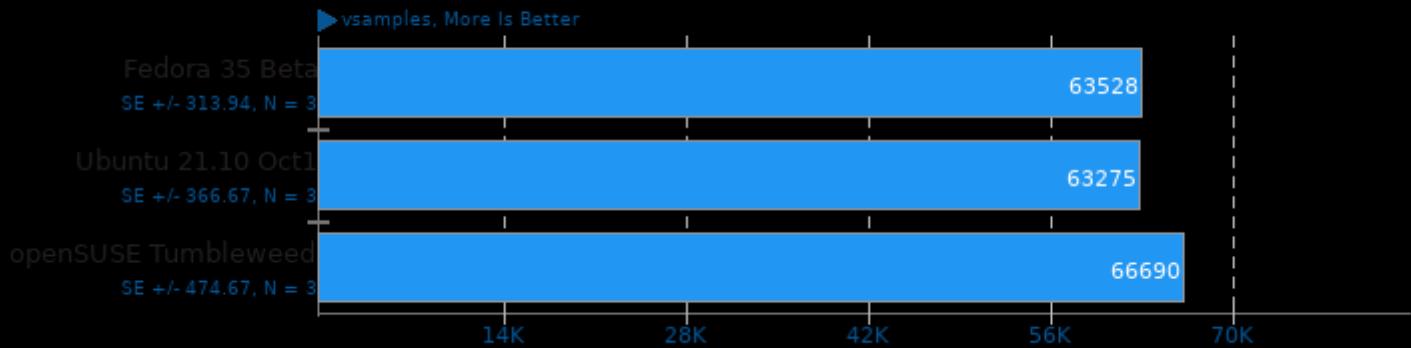
1. Fedora 35 Beta: git version 2.32.0

2. Ubuntu 21.10 Oct1: git version 2.32.0

3. openSUSE Tumbleweed: git version 2.33.0

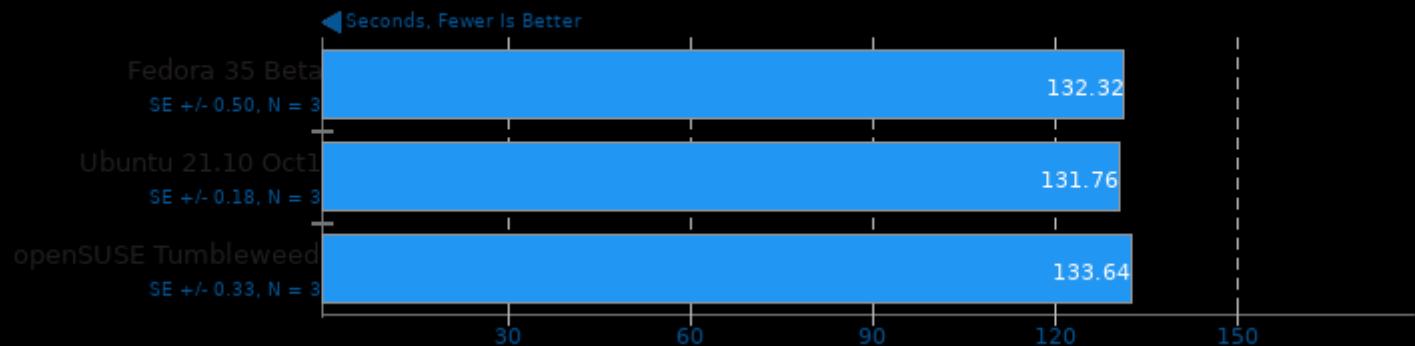
Chaos Group V-RAY 5

Mode: CPU



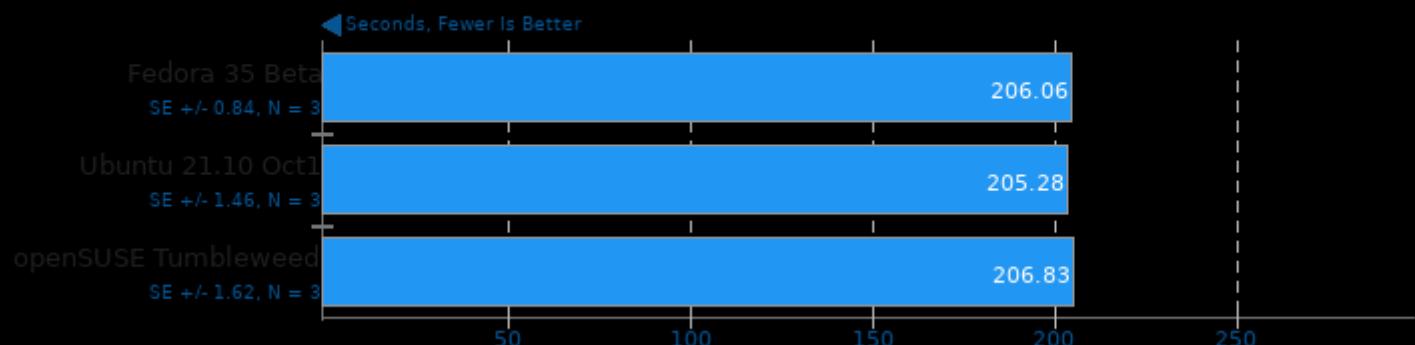
Timed LLVM Compilation 13.0

Build System: Ninja



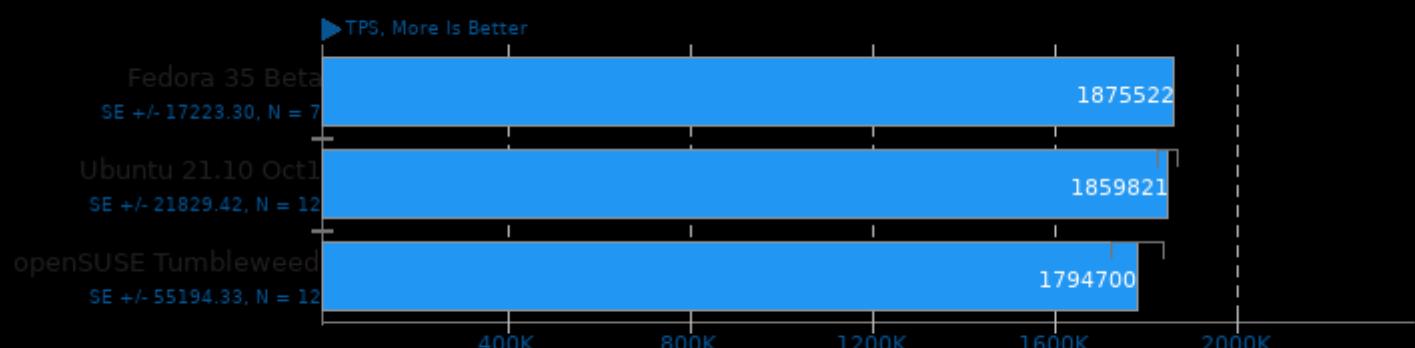
Timed LLVM Compilation 13.0

Build System: Unix Makefiles



PostgreSQL pgbench 14.0

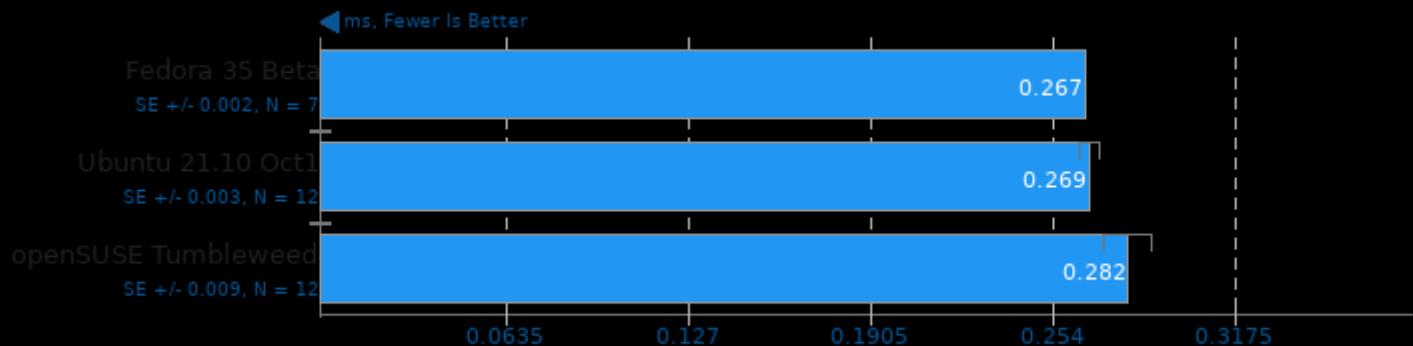
Scaling Factor: 100 - Clients: 500 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpqcommon -lpqport -lpq -lm

PostgreSQL pgbench 14.0

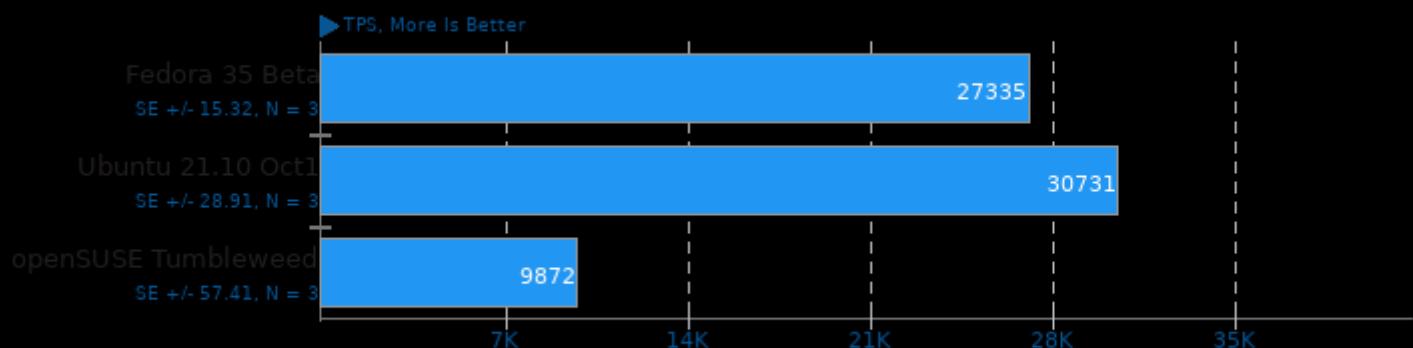
Scaling Factor: 100 - Clients: 500 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lm

PostgreSQL pgbench 14.0

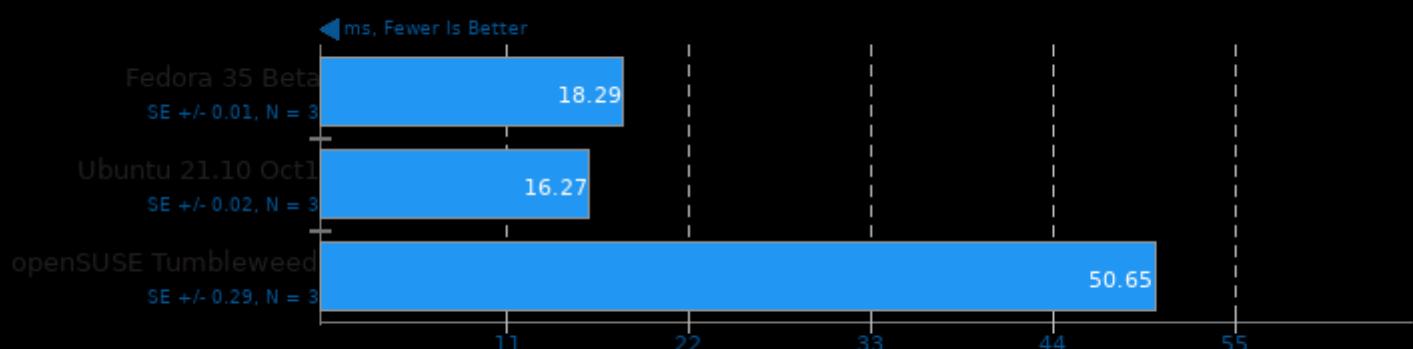
Scaling Factor: 100 - Clients: 500 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lm

PostgreSQL pgbench 14.0

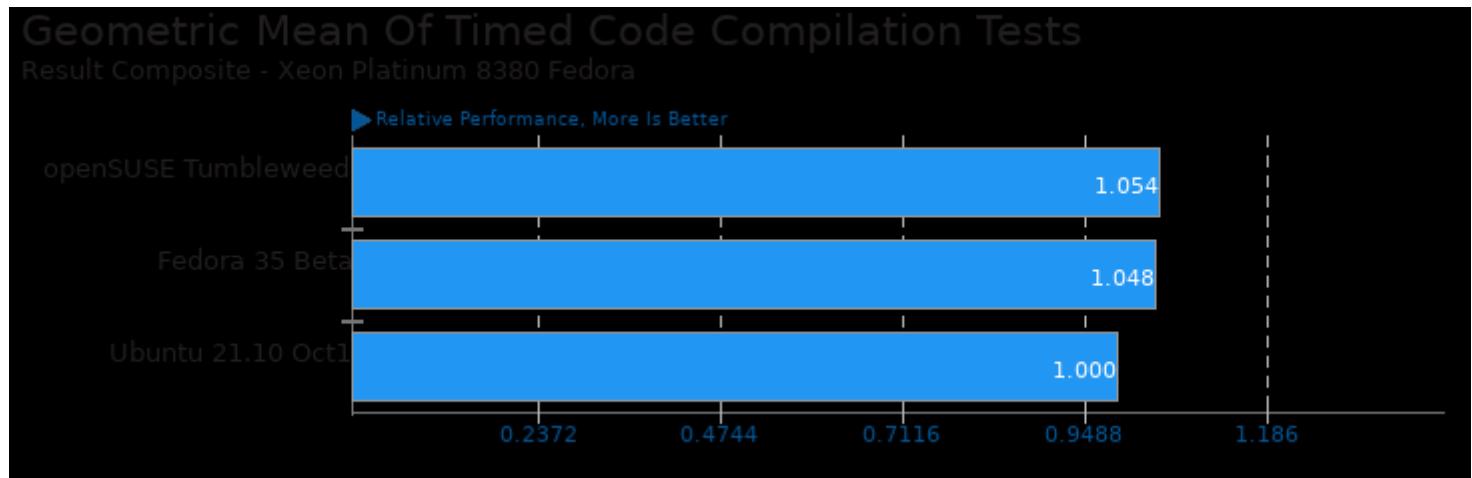
Scaling Factor: 100 - Clients: 500 - Mode: Read Write - Average Latency



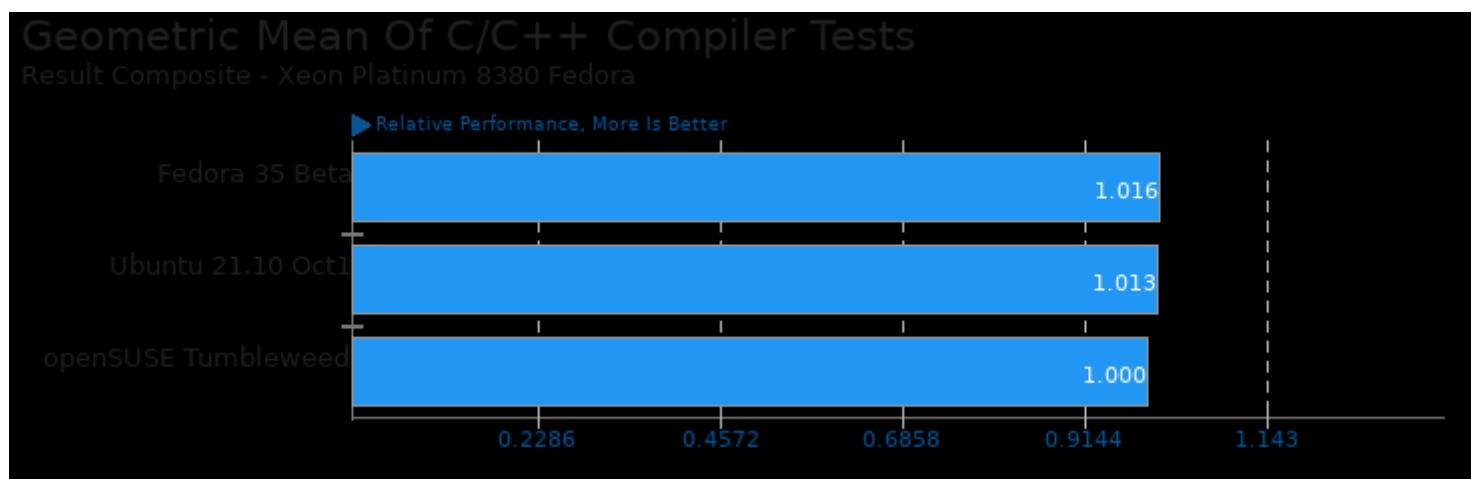
1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lm

Xeon Platinum 8380 Fedora

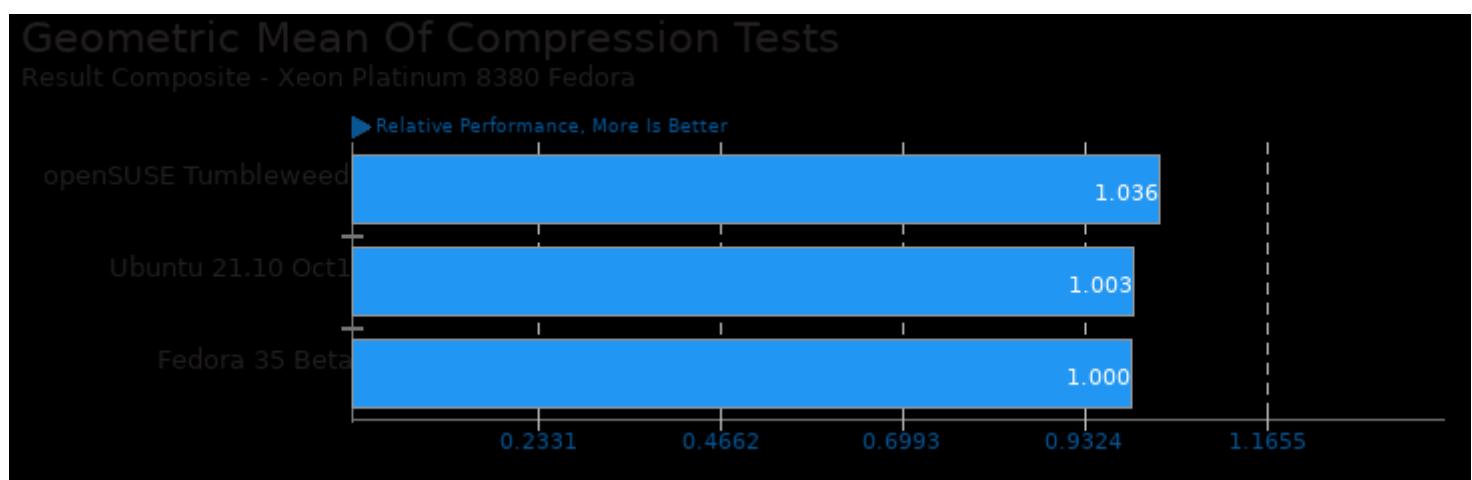
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/build-linux-kernel, pts/build-llvm, pts/build-godot, pts/build-wasmer and pts/build-nodejs



Geometric mean based upon tests: pts/stockfish, pts/build-llvm, pts/compress-7zip, pts/pgbench, pts/apache, pts/sqlite-speedtest, pts/x265, pts/compress-zstd, pts/openssl, pts/nginx, pts/svt-av1, pts/svt-vp9, pts/gromacs and pts/leveldb

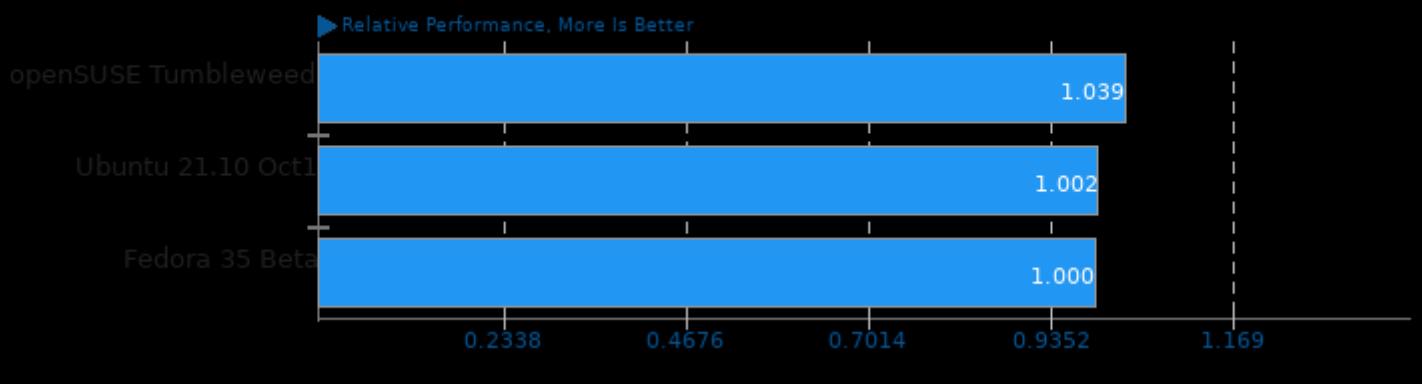


Geometric mean based upon tests: pts/compress-7zip, pts/compress-zstd and pts/compress-lz4

Xeon Platinum 8380 Fedora

Geometric Mean Of Creator Workloads Tests

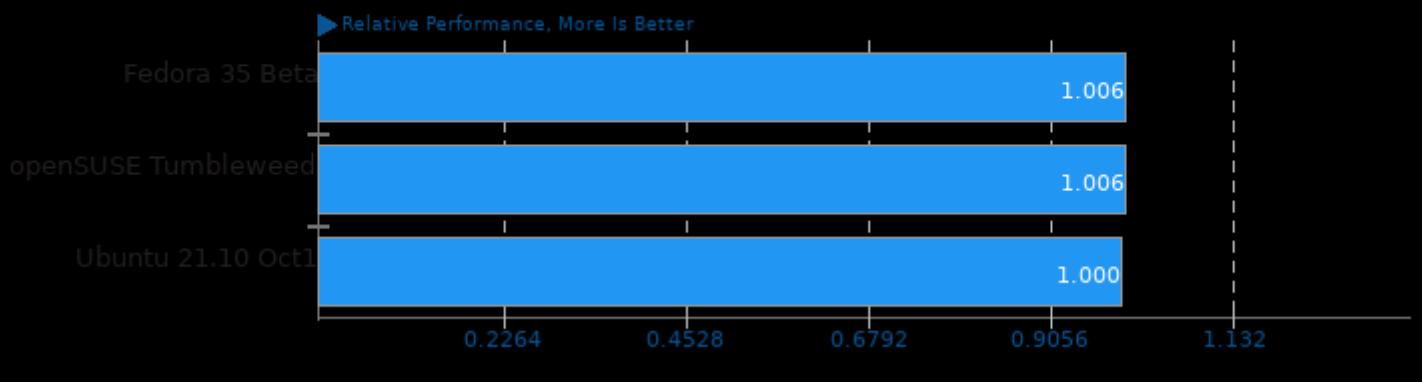
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/ospray, pts/blender, pts/appleseed, pts/v-ray, pts/svt-vp9, pts/svt-hevc, pts/x265, pts/svt-av1, pts/jpegxl, pts/embree, pts/onnednn, pts/oidn, pts/openvkl, pts/build-godot and pts/synthmark

Geometric Mean Of Cryptography Tests

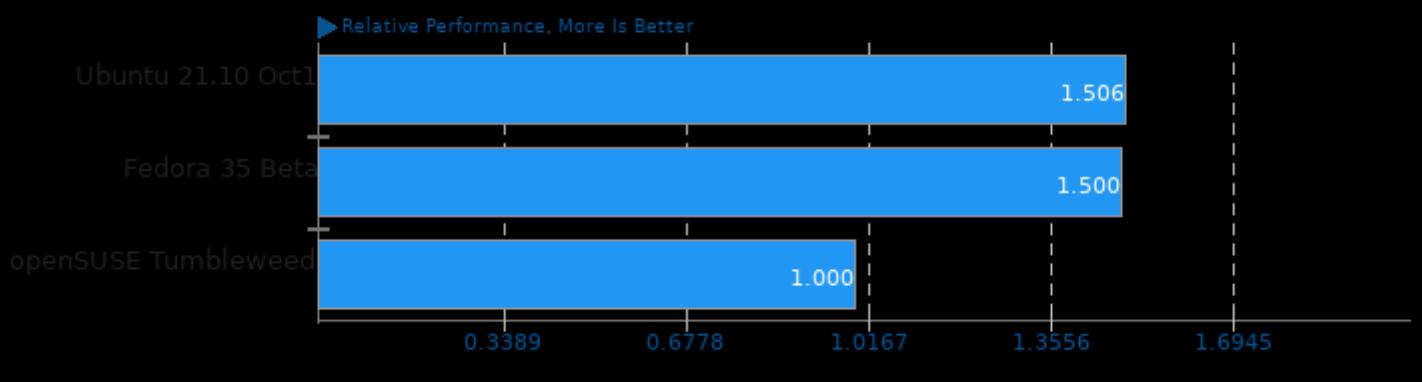
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/openssl and pts/securemark

Geometric Mean Of Database Test Suite

Result Composite - Xeon Platinum 8380 Fedora

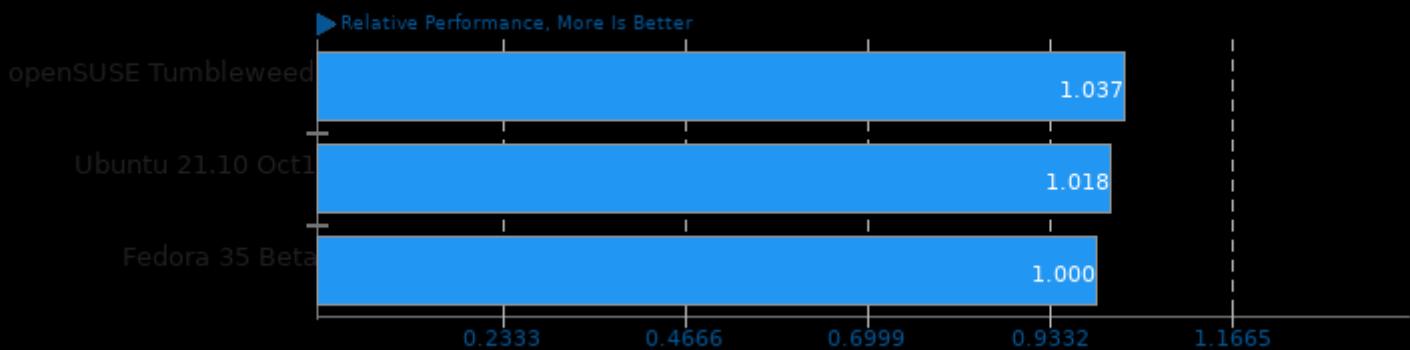


Geometric mean based upon tests: pts/sqlite-speedtest, pts/leveldb, pts/rocksdb, pts/cassandra and pts/pgbench

Xeon Platinum 8380 Fedora

Geometric Mean Of Encoding Tests

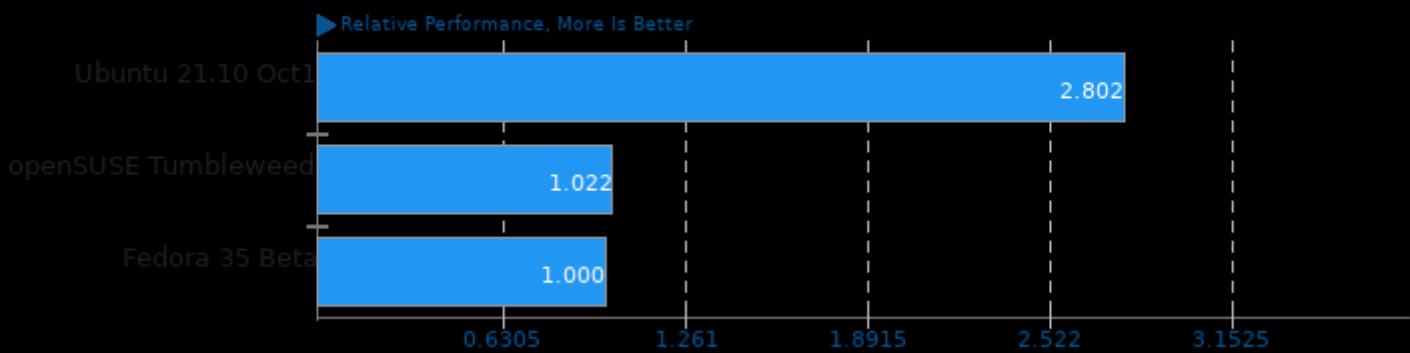
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/svt-vp9, pts/svt-hevc, pts/x265 and pts/svt-av1

Geometric Mean Of Fortran Tests

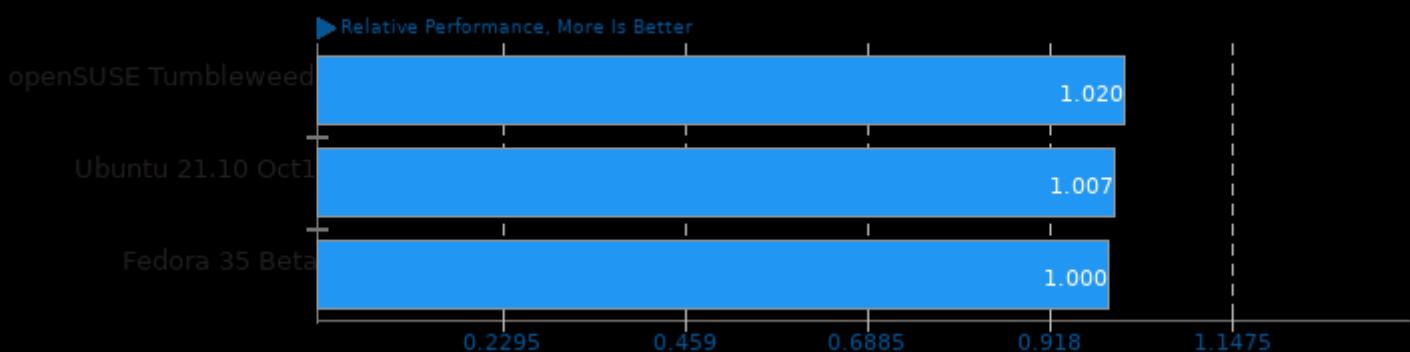
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/hpcg and pts/npb

Geometric Mean Of Game Development Tests

Result Composite - Xeon Platinum 8380 Fedora

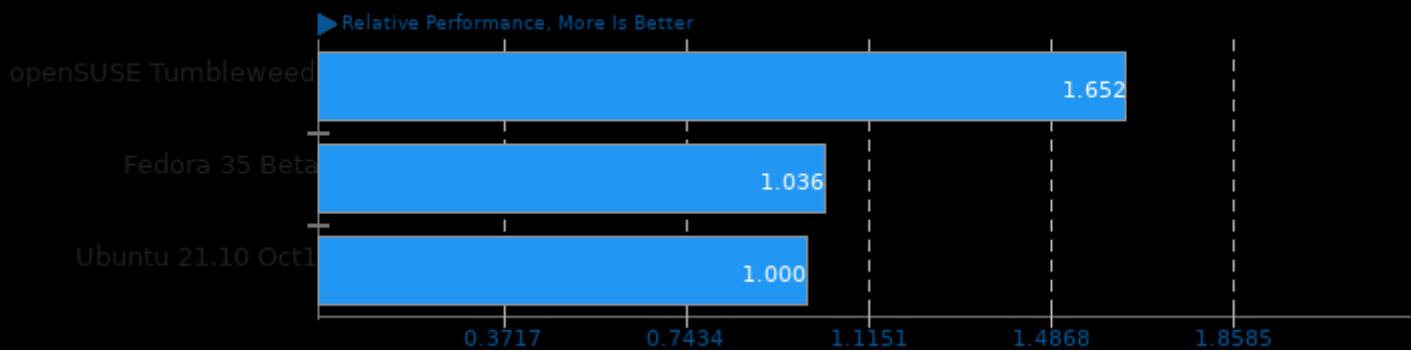


Geometric mean based upon tests: pts/build-godot, pts/blender, pts/oidn and pts/openvkl

Xeon Platinum 8380 Fedora

Geometric Mean Of Go Language Tests

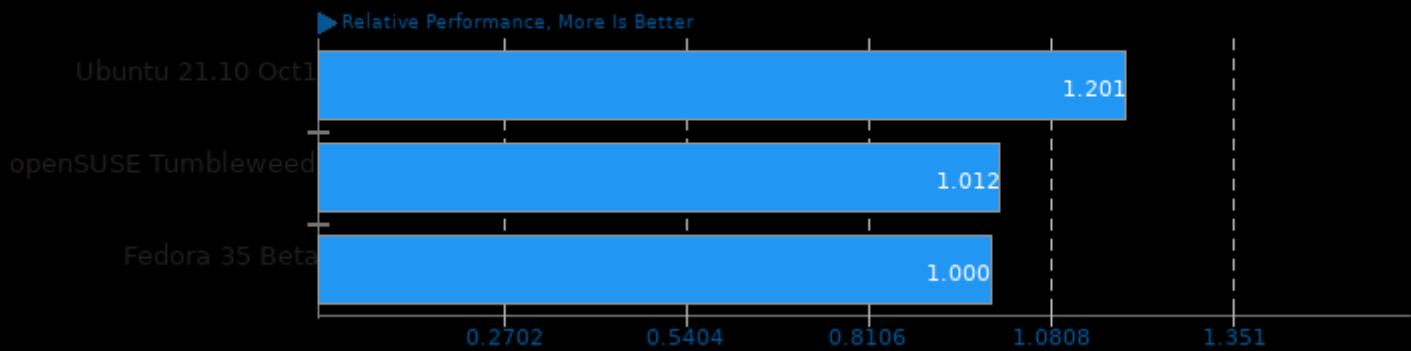
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/nginx and pts/apache

Geometric Mean Of HPC - High Performance Computing Tests

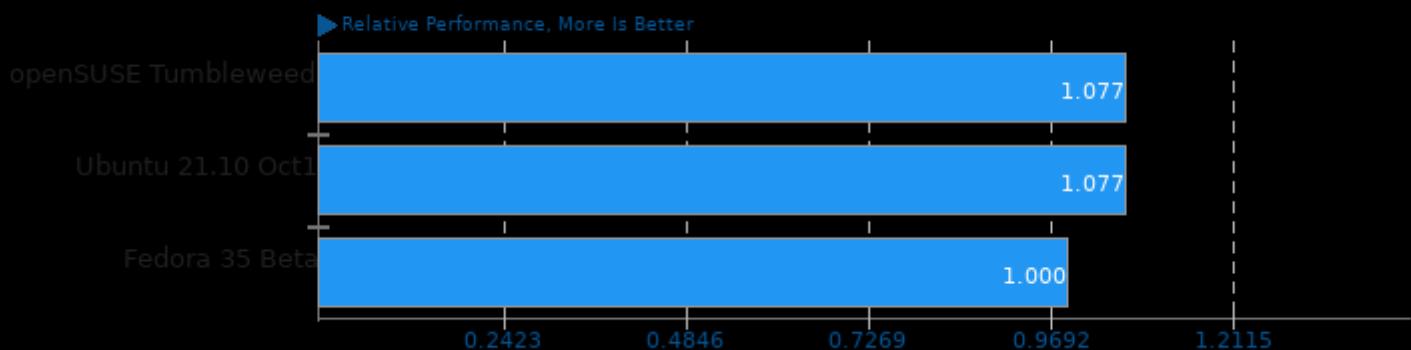
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/npb, pts/rodinia, pts/hpcg, pts/namd, pts/gromacs, pts/mnn, pts/ncnn, pts/tnn, pts/tensorflow-lite, pts/onnednn and pts/onnx

Geometric Mean Of Java Tests

Result Composite - Xeon Platinum 8380 Fedora

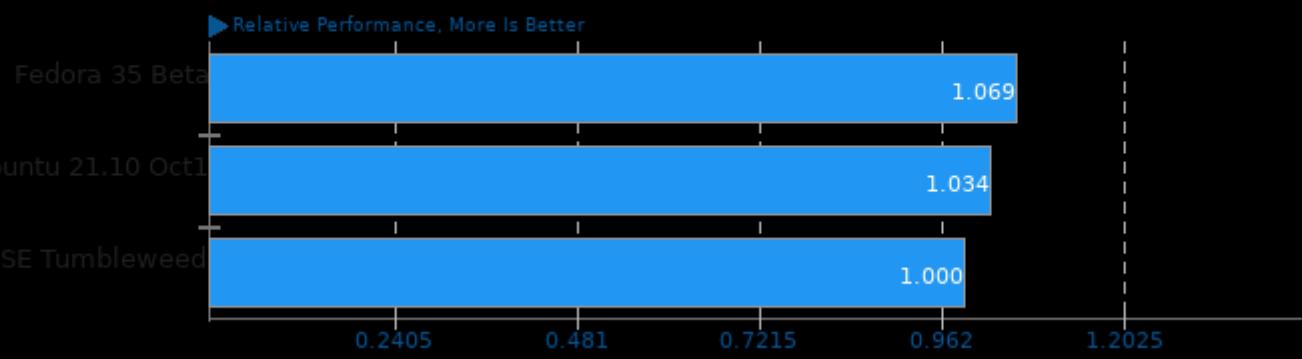


Geometric mean based upon tests: pts/dacapobench and pts/renaissance

Xeon Platinum 8380 Fedora

Geometric Mean Of Common Kernel Benchmarks Tests

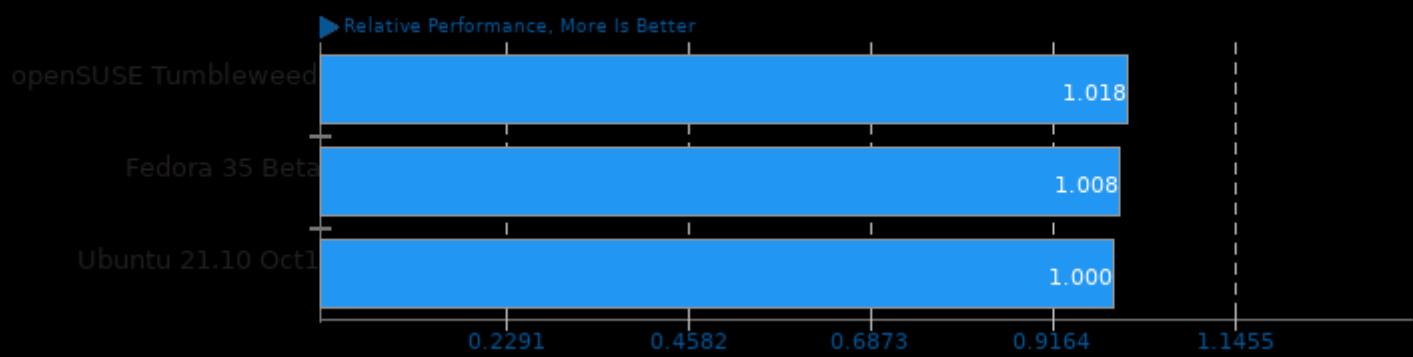
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/apache, pts/sqlite-speedtest, pts/pgbench, pts/openssl, pts/stress-ng, pts/rocksdb and pts/leveldb

Geometric Mean Of Machine Learning Tests

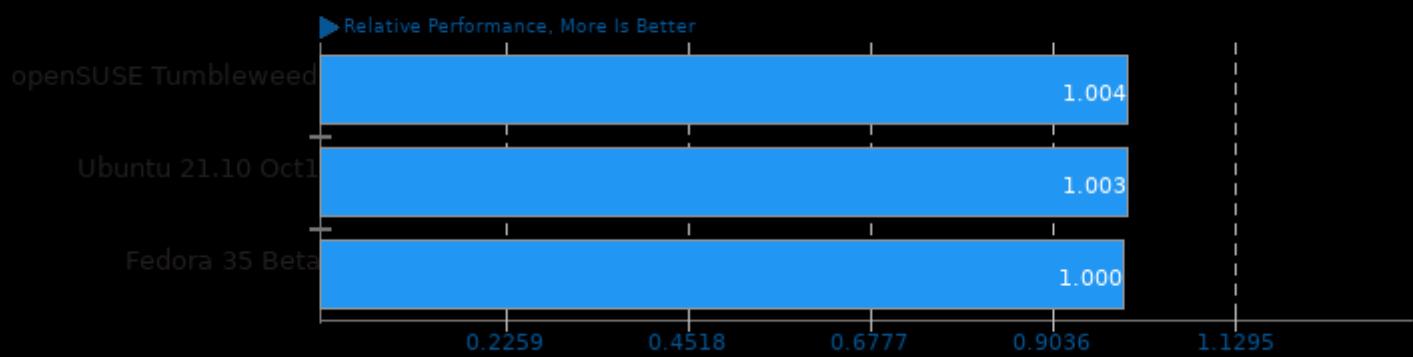
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/mnn, pts/ncnn, pts/tnn, pts/tensorflow-lite, pts/onnednn and pts/onnx

Geometric Mean Of Molecular Dynamics Tests

Result Composite - Xeon Platinum 8380 Fedora

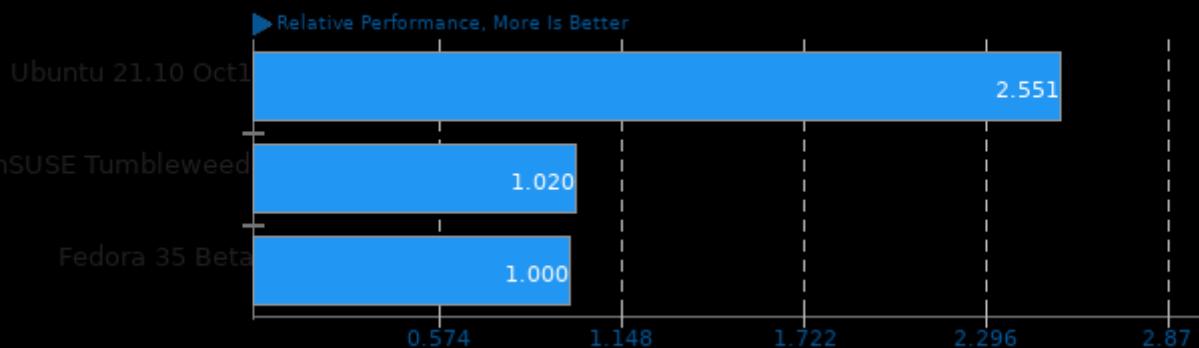


Geometric mean based upon tests: pts/namd and pts/gromacs

Xeon Platinum 8380 Fedora

Geometric Mean Of MPI Benchmarks Tests

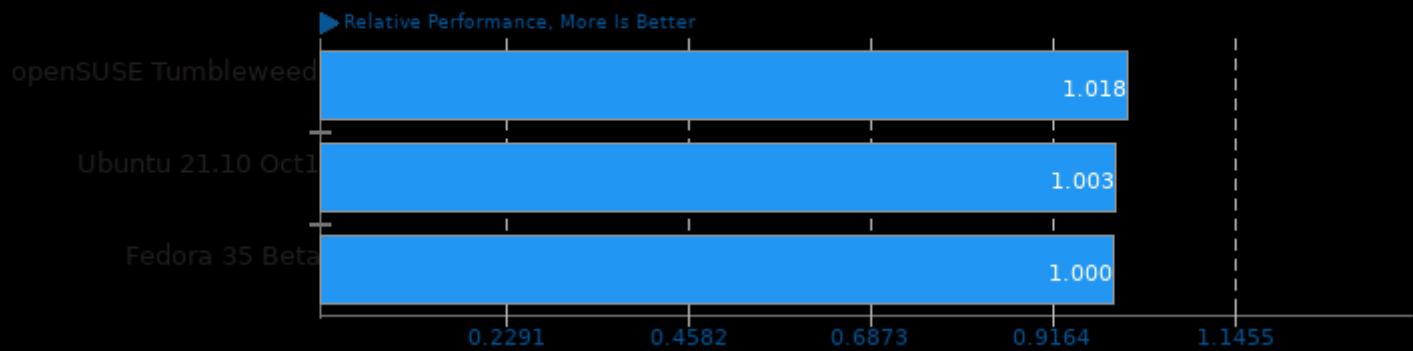
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/gromacs, pts/hpcg and pts/npb

Geometric Mean Of NVIDIA GPU Compute Tests

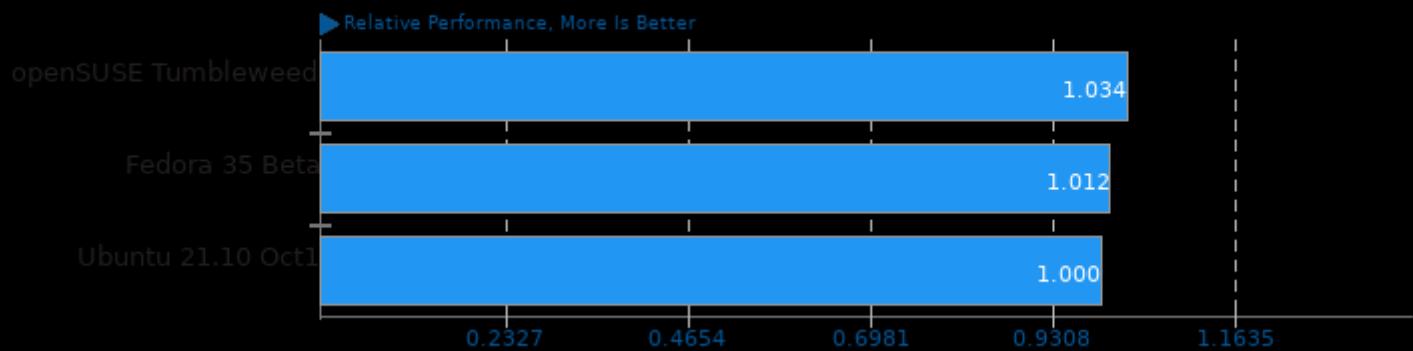
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/gromacs, pts/rodinia, pts/v-ray, pts/blender and pts/ncnn

Geometric Mean Of Intel oneAPI Tests

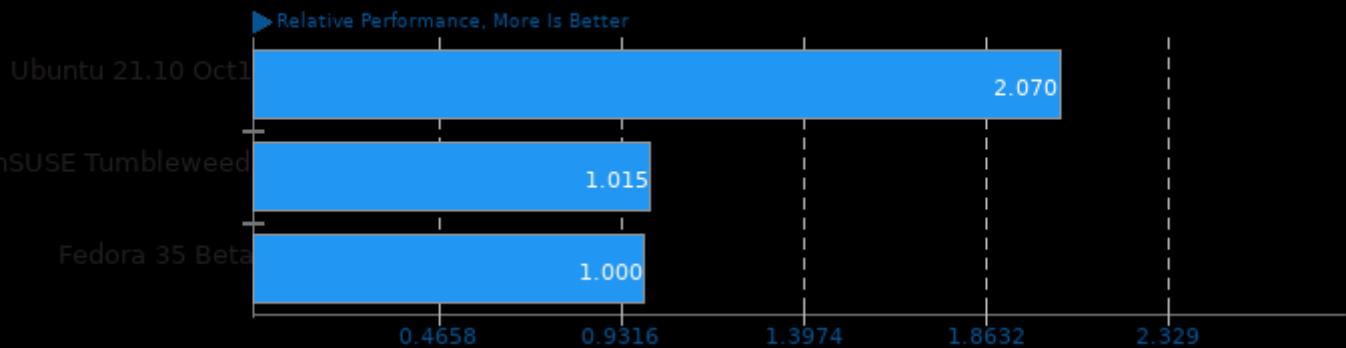
Result Composite - Xeon Platinum 8380 Fedora



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

Geometric Mean Of OpenMPI Tests

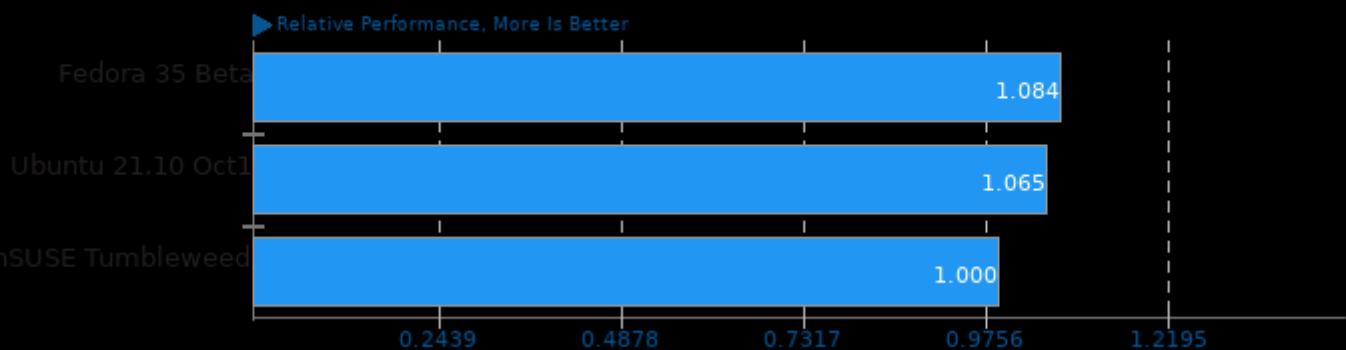
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/hpcg, pts/npb, pts/rodinia and pts/gromacs

Geometric Mean Of Programmer / Developer System Benchmarks Tests

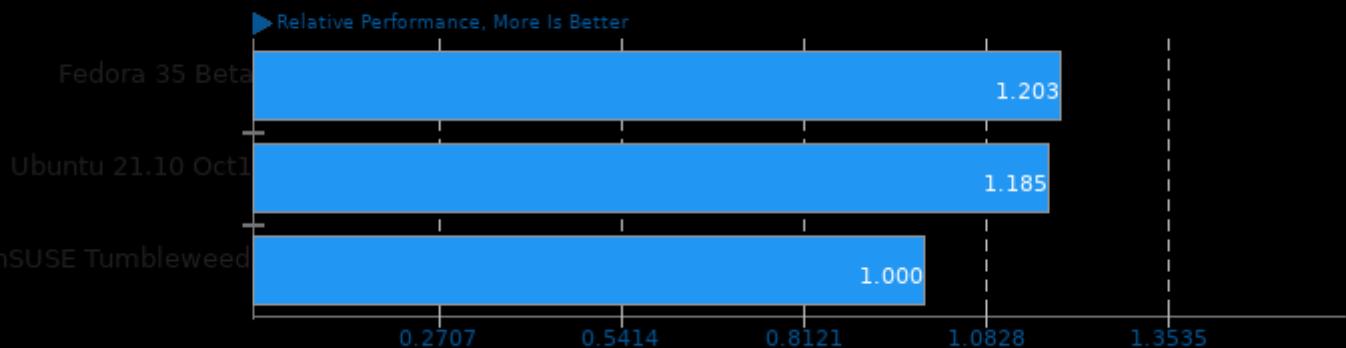
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/simdjson, pts/sqlite-speedtest, pts/git, pts/compress-zstd, pts/pyperformance, pts/pybench, pts/build-linux-kernel, pts/build-llvm, pts/build-godot, pts/build-wasmer and pts/build-nodejs

Geometric Mean Of Python Tests

Result Composite - Xeon Platinum 8380 Fedora

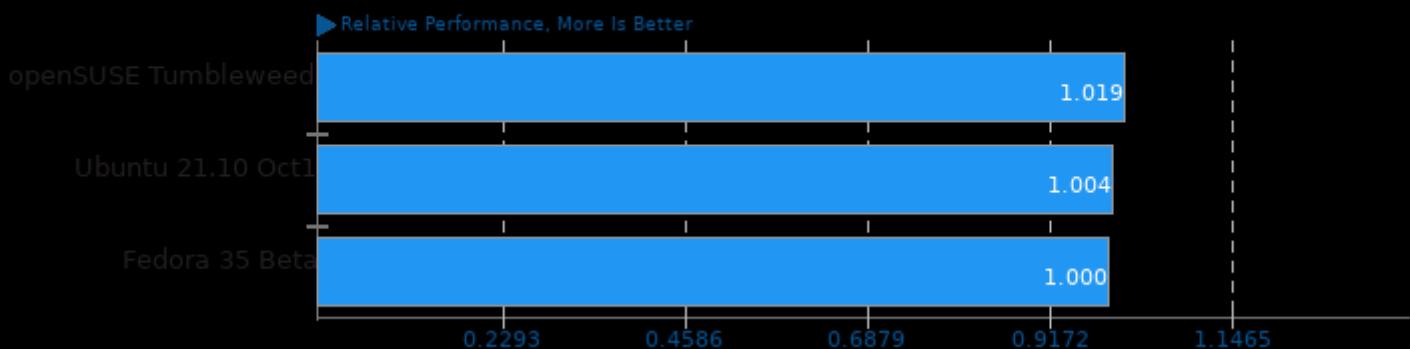


Geometric mean based upon tests: pts/pybench and pts/pyperformance

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Geometric Mean Of Renderers Tests

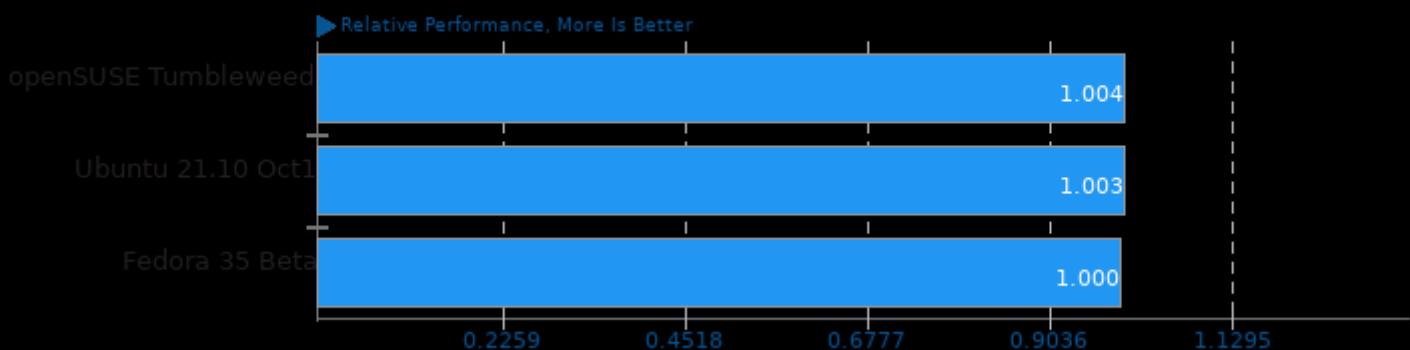
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/ospray, pts/blender, pts/appleseed and pts/v-ray

Geometric Mean Of Scientific Computing Tests

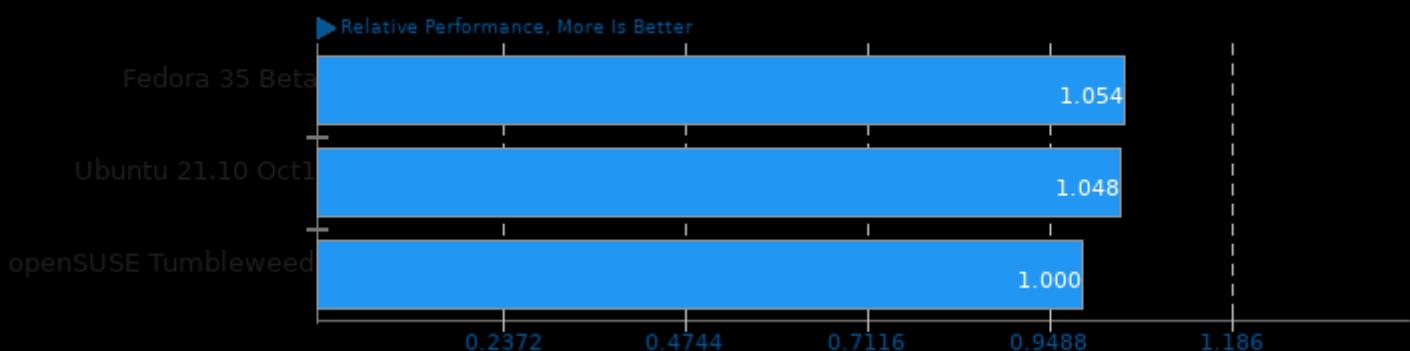
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/namd and pts/gromacs

Geometric Mean Of Server Tests

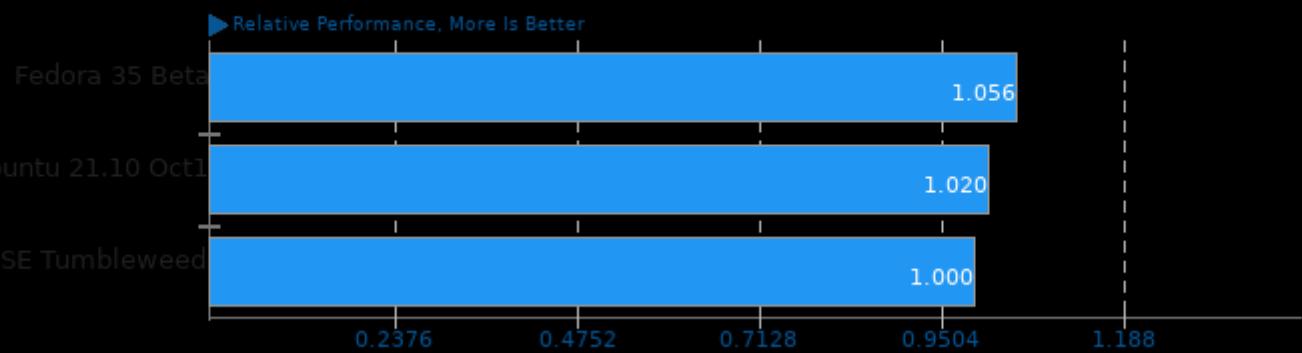
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/apache, pts/nginx, pts/pgbench, pts/cassandra, pts/rocksdb, pts/phpbench, pts/node-express-loadtest, pts/openssl, pts/simjson, pts/sqlite-speedtest and pts/leveldb

Geometric Mean Of Single-Threaded Tests

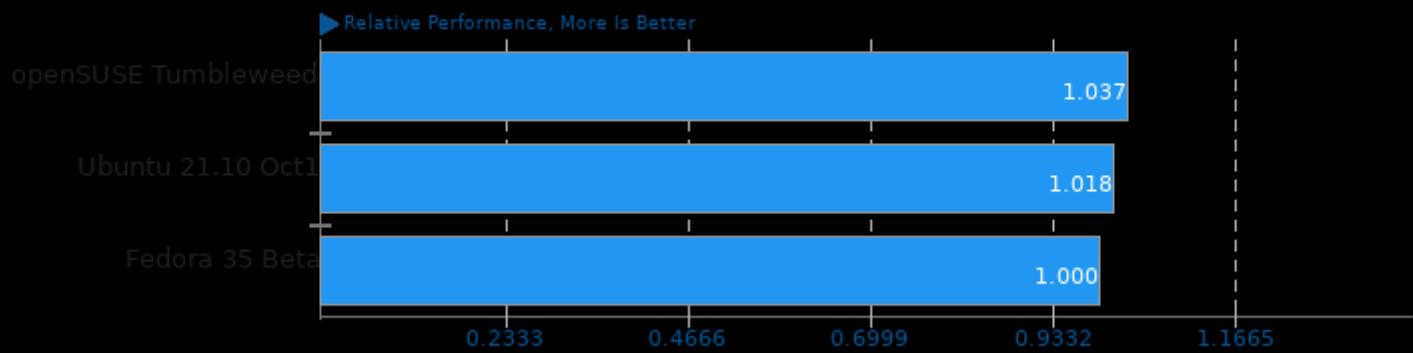
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/gmpbench, pts/node-express-loadtest, pts/pybench, pts/phpbench, pts/nginx and pts/git

Geometric Mean Of Video Encoding Tests

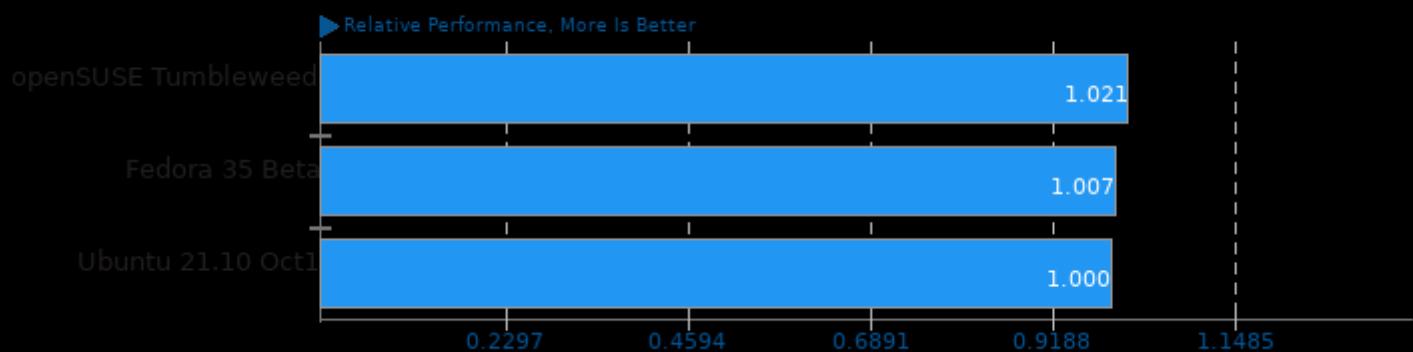
Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/svt-vp9, pts/svt-hevc, pts/x265 and pts/svt-av1

Geometric Mean Of Common Workstation Benchmarks Tests

Result Composite - Xeon Platinum 8380 Fedora



Geometric mean based upon tests: pts/blender, pts/rodinia, pts/x265 and pts/git

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