



Xeon Platinum 8380 Fedora

2 x Intel Xeon Platinum 8380 testing with a Intel M50CYP2SB2U (SE5C6200.86B.0022.D08.2103221623 BIOS) and ASPEED on Fedora Linux 35 via the Phoronix Test Suite.

Automated Executive Summary

Fedora 35 Beta had the most wins, coming in first place for 36% of the tests.

Based on the geometric mean of all complete results, the fastest (Fedora 35 Beta) was 1.021x the speed of the slowest (Fedora 34). Fedora 34 + Updates was 0.985x the speed of Fedora 35 Beta and Fedora 34 was 0.994x the speed of Fedora 34 + Updates.

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

Stress-NG (Test: Memory Copying) at 1.535x
Apache HTTP Server (Concurrent Requests: 100) at 1.479x
Timed Godot Game Engine Compilation (Time To Compile) at 1.268x
nginx (Concurrent Requests: 100) at 1.26x
PyPerformance (Benchmark: float) at 1.18x
Stress-NG (Test: Forking) at 1.151x
Stress-NG (Test: MEMFD) at 1.12x
nginx (Concurrent Requests: 200) at 1.113x

nginx (Concurrent Requests: 500) at 1.107x

PyPerformance (Benchmark: chaos) at 1.106x.

Test Systems:

Fedora 34

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 34, Kernel: 5.11.12-300.fc34.x86_64 (x86_64), Compiler: GCC 11.2.1 20210728, File-System: xfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise

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-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --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: 0xd000270

Java Notes: OpenJDK Runtime Environment 18.9 (build 11.0.12+7)

Python Notes: Python 3.9.7

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 + srbds: Not affected + tsx_async_abort: Not affected

Fedora 34 + Updates

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 34, Kernel: 5.13.19-200.fc34.x86_64 (x86_64), Compiler: GCC 11.2.1 20210728, File-System: xfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise

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-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-gcc-major-version-only --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver

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 3.9.7

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 + srbds: Not affected + tsx_async_abort: Not affected

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

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,obj-c++,ada,go,d,lt --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 + 11tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbsds: Not affected + tsx_async_abort: Not affected

	Fedora 34	Fedora 34 + Updates	Fedora 35 Beta
High Performance Conjugate Gradient (GFLOP/s)	40.4174	40.4429	39.6784
Normalized	99.94%	100%	98.11%
Standard Deviation	0.1%	0.1%	0.3%
NAS Parallel Benchmarks - BT.C (Mop/s)	48340	48168	48296
Normalized	100%	99.64%	99.91%
Standard Deviation	0.3%	0.6%	0.5%
NAS Parallel Benchmarks - CG.C (Mop/s)	20949	20886	20483
Normalized	100%	99.7%	97.77%
Standard Deviation	3.1%	2.4%	1.4%
NAS Parallel Benchmarks - EP.D (Mop/s)	2792	2718	2725
Normalized	100%	97.32%	97.59%
Standard Deviation	2.2%	1.9%	0.1%
NAS Parallel Benchmarks - FT.C (Mop/s)	36064	36487	36258
Normalized	98.84%	100%	99.37%
Standard Deviation	1.6%	0.6%	0.3%
NAS Parallel Benchmarks - LU.C (Mop/s)	38535	38776	38573
Normalized	99.38%	100%	99.48%
Standard Deviation	0.7%	0.3%	0.7%
NAS Parallel Benchmarks - MG.C (Mop/s)	36812	36311	35006
Normalized	100%	98.64%	95.09%
Standard Deviation	3%	2.4%	2.2%
NAS Parallel Benchmarks - SP.B (Mop/s)	22214	21909	23010
Normalized	96.54%	95.22%	100%
Standard Deviation	0.9%	1.7%	1.1%
NAS Parallel Benchmarks - SP.C (Mop/s)	23813	23738	23992
Normalized	99.26%	98.94%	100%
Standard Deviation	0.6%	0.6%	0.9%
Rodinia - OpenMP Leukocyte (sec)	61.978	61.790	48.918
Normalized	78.93%	79.17%	100%
Standard Deviation	7.1%	4.1%	6.1%
Rodinia - O.S (sec)	8.231	8.101	8.179
Normalized	98.42%	100%	99.05%
Standard Deviation	1.6%	4%	8.3%

NAMD - ATPase Simulation - 327,506 Atoms	0.27279	0.27260	0.28029
(days/ns)			
Normalized	99.93%	100%	97.26%
Standard Deviation	0.2%	0.2%	0.6%
simdjson - Kostya (GB/s)	2.45	2.45	2.44
Normalized	100%	100%	99.59%
Standard Deviation	0%	0%	0.2%
simdjson - LargeRand (GB/s)	0.85	0.85	0.86
Normalized	98.84%	98.84%	100%
Standard Deviation	0%	0%	0.7%
simdjson - PartialTweets (GB/s)	3.63	3.63	3.63
Standard Deviation	0%	0%	0.3%
simdjson - DistinctUserID (GB/s)	4.18	4.16	4.16
Normalized	100%	99.52%	99.52%
Standard Deviation	0.1%	0.4%	0.6%
GNU GMP GMPbench - Total Time	3761	3773	3777
(GMPbench Score)			
Normalized	99.57%	99.91%	100%
DaCapo Benchmark - H2 (msec)	10902	10970	10776
Normalized	98.84%	98.23%	100%
Standard Deviation	2.5%	2.3%	1.7%
DaCapo Benchmark - Jython (msec)	5520	5240	5386
Normalized	94.93%	100%	97.29%
Standard Deviation	10.5%	13.2%	13.4%
DaCapo Benchmark - Tradebeans (msec)	16863	16993	16993
Normalized	100%	99.23%	99.23%
Standard Deviation	0.9%	1.7%	0.6%
Renaissance - Rand Forest (ms)	1563	1573	1537
Normalized	98.35%	97.71%	100%
Standard Deviation	1.6%	1.8%	2.3%
Renaissance - ALS Movie Lens (ms)	18745	17889	18146
Normalized	95.43%	100%	98.58%
Standard Deviation	0.5%	0.7%	0.1%
Renaissance - Apache Spark ALS (ms)	3289	3203	3172
Normalized	96.46%	99.05%	100%
Standard Deviation	1.2%	1.4%	0.6%
Renaissance - Apache Spark Bayes (ms)	1089	1009	1018
Normalized	92.58%	100%	99.1%
Standard Deviation	1.4%	1.7%	2.5%
Renaissance - Savina Reactors.IO (ms)	21747	21507	21211
Normalized	97.53%	98.63%	100%
Standard Deviation	2.8%	2.1%	3.4%
Renaissance - F.H.R (ms)	7856	8045	8138
Normalized	100%	97.65%	96.54%
Standard Deviation	1.1%	2.4%	2.4%
Renaissance - A.U.C.T (ms)	36586	35623	36176
Normalized	97.37%	100%	98.47%
Standard Deviation	0.9%	0.8%	1%
Renaissance - G.A.U.J.F (ms)	6882	6990	6932
Normalized	100%	98.45%	99.28%
Standard Deviation	1.2%	0.2%	0.3%
LZ4 Compression - 3 - Compression Speed	44.09	44.21	43.83
(MB/s)			
Normalized	99.73%	100%	99.14%
Standard Deviation	0.2%	0.4%	0.8%

LZ4 Compression - 3 - D.S (MB/s)	7279	7049	7137
Normalized	100%	96.84%	98.05%
Standard Deviation	0%	0.8%	0.1%
LZ4 Compression - 9 - Compression Speed (MB/s)	43.21	43.27	43.19
Normalized	99.86%	100%	99.82%
Standard Deviation	0.2%	0.1%	0.1%
LZ4 Compression - 9 - D.S (MB/s)	7329	7003	7150
Normalized	100%	95.55%	97.55%
Standard Deviation	1.1%	0.2%	0.2%
Zstd Compression - 8 - Compression Speed (MB/s)	2105	2034	2027
Normalized	100%	96.61%	96.28%
Standard Deviation	3.7%	2.1%	1%
Zstd Compression - 8 - D.S (MB/s)	3134	3102	3105
Normalized	100%	98.98%	99.07%
Standard Deviation	0.5%	0.4%	0.2%
Zstd Compression - 19 - Compression Speed (MB/s)	82.3	81.0	81.2
Normalized	100%	98.42%	98.66%
Standard Deviation	0.6%	0.5%	1.2%
Zstd Compression - 19 - D.S (MB/s)	2684	2642	2658
Normalized	100%	98.44%	99.05%
Standard Deviation	0.3%	0.2%	0.2%
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	45.9	47.2	44.6
Normalized	97.25%	100%	94.49%
Standard Deviation	3.6%	1.2%	0.3%
Zstd Compression - 19, Long Mode - D.S (MB/s)	2757	2702	2729
Normalized	100%	98%	99.01%
Standard Deviation	0.3%	0.9%	0.5%
JPEG XL libjxl - PNG - 7 (MP/s)	7.08	7.21	7.24
Normalized	97.79%	99.59%	100%
Standard Deviation	0.5%	1.5%	1.7%
JPEG XL libjxl - PNG - 8 (MP/s)	0.67	0.66	0.66
Normalized	100%	98.51%	98.51%
Standard Deviation	0.9%	0%	0%
JPEG XL libjxl - JPEG - 7 (MP/s)	40.68	41.02	40.42
Normalized	99.17%	100%	98.54%
Standard Deviation	0.6%	0.4%	0.2%
JPEG XL libjxl - JPEG - 8 (MP/s)	16.17	16.31	15.68
Normalized	99.14%	100%	96.14%
Standard Deviation	0.8%	0.2%	0.3%
Node.js Express HTTP Load Test (Reqs/sec)	5646	5052	5453
Normalized	100%	89.48%	96.58%
Standard Deviation	6.2%	9%	2.4%
OSPray - San Miguel - SciVis (FPS)	90.91	90.91	90.91
Standard Deviation	0%	0%	0%
OSPray - San Miguel - Path Tracer (FPS)	10.38	10.42	10.42
Normalized	99.62%	100%	100%
Standard Deviation	0.6%	0%	0%
OSPray - M.R - SciVis (FPS)	111.11	111.11	111.11
Standard Deviation	0%	0%	0%

Embree - Pathtracer - Crown (FPS)	61.3407	62.0277	62.1289
Normalized	98.73%	99.84%	100%
Standard Deviation	1.1%	0.8%	0.9%
Embree - Pathtracer ISPC - Crown (FPS)	64.4846	64.9345	64.7554
Normalized	99.31%	100%	99.72%
Standard Deviation	0.9%	0.5%	0.6%
Embree - Pathtracer - Asian Dragon (FPS)	82.6008	81.4547	81.9327
Normalized	100%	98.61%	99.19%
Standard Deviation	1.3%	2.7%	0.9%
Embree - Pathtracer ISPC - Asian Dragon (FPS)	106.9985	104.2972	105.4949
Normalized	100%	97.48%	98.59%
Standard Deviation	1.5%	1.9%	2.2%
SVT-AV1 - Preset 4 - Bosphorus 4K (FPS)	2.909	2.953	2.952
Normalized	98.51%	100%	99.97%
Standard Deviation	0.5%	0.4%	0.5%
SVT-AV1 - Preset 8 - Bosphorus 4K (FPS)	28.090	30.650	30.117
Normalized	91.65%	100%	98.26%
Standard Deviation	3.4%	1.1%	0.7%
SVT-HEVC - 1 - Bosphorus 1080p (FPS)	29.90	30.39	30.32
Normalized	98.39%	100%	99.77%
Standard Deviation	1%	1.1%	0.9%
SVT-HEVC - 7 - Bosphorus 1080p (FPS)	166.48	172.71	168.45
Normalized	96.39%	100%	97.53%
Standard Deviation	1.5%	2.2%	1.8%
SVT-VP9 - P.S.O - Bosphorus 1080p (FPS)	196.81	209.48	207.34
Normalized	93.95%	100%	98.98%
Standard Deviation	1.7%	1.8%	1.9%
SVT-VP9 - V.Q.O - Bosphorus 1080p (FPS)	169.54	171.40	172.78
Normalized	98.12%	99.2%	100%
Standard Deviation	2.5%	1.5%	0.9%
x265 - Bosphorus 4K (FPS)	12.08	12.02	11.91
Normalized	100%	99.5%	98.59%
Standard Deviation	3.8%	2.4%	1%
x265 - Bosphorus 1080p (FPS)	27.34	27.03	26.99
Normalized	100%	98.87%	98.72%
Standard Deviation	1.7%	1.1%	1.4%
Intel Open Image Denoise - RT.hdr_alb_nrm.3840x2160 (Images / Sec)	2.68	2.88	2.87
Normalized	93.06%	100%	99.65%
Standard Deviation	0.7%	0.2%	0.3%
OpenVKL - vkiBenchmark ISPC (Items / Sec)	270	268	271
Normalized	99.63%	98.89%	100%
Standard Deviation	1.9%	2.5%	0%
Coremark - CoreMark Size 666 - I.P.S (Iterations/Sec)	2388805	2384547	2387053
Normalized	100%	99.82%	99.93%
Standard Deviation	0.1%	0.3%	0.1%
7-Zip Compression - C.S.T (MIPS)	290706	297747	290145
Normalized	97.64%	100%	97.45%
Standard Deviation	0.4%	0.5%	0.6%
Stockfish - Total Time (Nodes/s)	179990009	184421499	18007920
Normalized	97.6%	100%	97.65%
Standard Deviation	2.5%	3.7%	2.1%

Timed Godot Game Engine Compilation - Time To Compile (sec)	76.580	78.121	61.622
Normalized	80.47%	78.88%	100%
Standard Deviation	1.6%	2.4%	1.6%
Timed Linux Kernel Compilation - Time To Compile (sec)	26.310	26.456	25.863
Normalized	98.3%	97.76%	100%
Standard Deviation	5.7%	4.8%	4.5%
Timed LLVM Compilation - Ninja (sec)	134.425	134.529	131.309
Normalized	97.68%	97.61%	100%
Standard Deviation	0.5%	1.2%	0.2%
Timed LLVM Compilation - Unix Makefiles	203.109	202.474	199.621
Normalized	98.28%	98.59%	100%
Standard Deviation	1%	1.2%	0.6%
Timed Node.js Compilation - Time To Compile (sec)	101.183	99.510	
Normalized	98.35%	100%	
Standard Deviation	0.8%	0.4%	
Timed Wasmer Compilation - Time To Compile (sec)	44.566	44.862	44.812
Normalized	100%	99.34%	99.45%
Standard Deviation	0.8%	2.3%	1.1%
Google SynthMark - VoiceMark_100 (Voices)	544.013	549.103	543.430
Normalized	99.07%	100%	98.97%
Standard Deviation	0.1%	1.3%	1.9%
SecureMark - SecureMark-TLS (marks)	226326	224530	228244
Normalized	99.16%	98.37%	100%
Standard Deviation	0.1%	0.2%	0.1%
OpenSSL - SHA256 (byte/s)	58492173530	59028157487	59198740233
Normalized	98.81%	99.71%	100%
Standard Deviation	0.3%	0.2%	0.2%
OpenSSL - RSA4096 (sign/s)	17814	17728	17707
Normalized	100%	99.52%	99.4%
Standard Deviation	1.3%	1.3%	1.2%
OpenSSL - RSA4096 (verify/s)	1191777	1188908	1187547
Normalized	100%	99.76%	99.65%
Standard Deviation	0%	0.1%	0.2%
GROMACS - MPI CPU - water_GMX50_bare (Ns/Day)	8.727	8.757	9.049
Normalized	96.44%	96.77%	100%
Standard Deviation	0.2%	0.4%	0.4%
TensorFlow Lite - Mobilenet Quant (us)	40351	39903	37666
Normalized	93.35%	94.39%	100%
Standard Deviation	3.9%	4.9%	0.3%
PostgreSQL pgbench - 100 - 250 - Read Only (TPS)	919636	959754	991583
Normalized	92.74%	96.79%	100%
Standard Deviation	2.3%	5.6%	2.3%
PostgreSQL pgbench - 100 - 250 - Read Only - Average Latency (ms)	0.272	0.261	0.252
Normalized	92.65%	96.55%	100%
Standard Deviation	2.3%	5.9%	2.4%

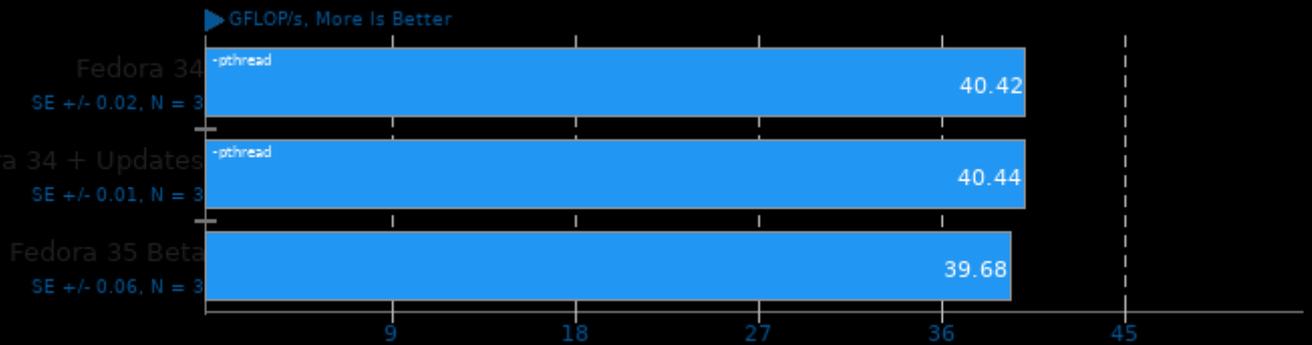
PostgreSQL pgbench - 100 - 250 - Read	30707	31804	32630
Write (TPS)			
Normalized	94.11%	97.47%	100%
Standard Deviation	0.1%	0.1%	0.1%
PostgreSQL pgbench - 100 - 250 - Read	8.143	7.862	7.663
Write - Average Latency (ms)			
Normalized	94.11%	97.47%	100%
Standard Deviation	0.1%	0.1%	0.1%
SQLite Speedtest - Timed Time - Size 1,000	58.363	59.428	59.770
(sec)			
Normalized	100%	98.21%	97.65%
Standard Deviation	0.5%	0.5%	0.7%
Stress-NG - MMAP (Bogo Ops/s)	4517	4576	4720
Normalized	95.72%	96.97%	100%
Standard Deviation	1.8%	1.7%	1.2%
Stress-NG - MEMFD (Bogo Ops/s)	3596	3478	3895
Normalized	92.3%	89.28%	100%
Standard Deviation	1.8%	1.8%	1.3%
Stress-NG - Crypto (Bogo Ops/s)	13495	13865	14075
Normalized	95.88%	98.51%	100%
Standard Deviation	1.7%	1.3%	1.5%
Stress-NG - Malloc (Bogo Ops/s)	1389299348	1400602750	1399403296
Normalized	99.19%	100%	99.91%
Standard Deviation	0.9%	0.3%	0.2%
Stress-NG - RdRand (Bogo Ops/s)	666508	666736	666960
Normalized	99.93%	99.97%	100%
Standard Deviation	0.6%	0.6%	0.6%
Stress-NG - Forking (Bogo Ops/s)	60734	63239	69886
Normalized	86.9%	90.49%	100%
Standard Deviation	1.6%	0.8%	0.7%
Stress-NG - SENDFILE (Bogo Ops/s)	1282418	1202535	1225385
Normalized	100%	93.77%	95.55%
Standard Deviation	0.4%	0.5%	0.4%
Stress-NG - CPU Cache (Bogo Ops/s)	16.14	16.20	15.93
Normalized	99.63%	100%	98.33%
Standard Deviation	2.4%	2.8%	0%
Stress-NG - CPU Stress (Bogo Ops/s)	127362	127123	126640
Normalized	100%	99.81%	99.43%
Standard Deviation	0.6%	0.7%	0.5%
Stress-NG - Semaphores (Bogo Ops/s)	9301084	9312964	9177477
Normalized	99.87%	100%	98.55%
Standard Deviation	0.1%	1.1%	2.5%
Stress-NG - Vector Math (Bogo Ops/s)	284412	283861	277479
Normalized	100%	99.81%	97.56%
Standard Deviation	0.6%	0.5%	0.5%
Stress-NG - Memory Copying (Bogo Ops/s)	8673	8821	13309
Normalized	65.17%	66.28%	100%
Standard Deviation	0.4%	0.5%	0.2%
Stress-NG - G.C.S.F (Bogo Ops/s)	7826791	7756441	7933317
Normalized	98.66%	97.77%	100%
Standard Deviation	1.1%	1.7%	0.8%
Stress-NG - G.Q.D.S (Bogo Ops/s)	980.22	975.08	978.29
Normalized	100%	99.48%	99.8%
Standard Deviation	0.5%	0.5%	0.6%

Stress-NG - S.V.M.P (Bogo Ops/s)	3746931	2893815	4098551
Normalized	91.42%	70.61%	100%
Standard Deviation	4.8%	0.2%	9.2%
Mobile Neural Network - mobilenetV3 (ms)	1.971	2.019	1.994
Normalized	100%	97.62%	98.85%
Standard Deviation	1.9%	4.9%	8.4%
Mobile Neural Network - squeezenetv1.1	3.724	3.762	3.840
Normalized	100%	98.99%	96.98%
Standard Deviation	2.6%	5%	5.1%
Mobile Neural Network - resnet-v2-50 (ms)	19.090	19.271	19.122
Normalized	100%	99.06%	99.83%
Standard Deviation	1.6%	1.8%	1.2%
Mobile Neural Network - SqueezeNetV1.0	3.971	4.819	4.672
Normalized	100%	82.4%	85%
Standard Deviation	1.1%	4.9%	12%
Mobile Neural Network - MobileNetV2_224	2.838	2.881	2.795
Normalized	98.48%	97.01%	100%
Standard Deviation	3.6%	4.1%	5.7%
Mobile Neural Network - mobilenet-v1-1.0	1.925	2.046	1.946
Normalized	100%	94.09%	98.92%
Standard Deviation	2.3%	3.1%	5.5%
Mobile Neural Network - inception-v3 (ms)	22.621	22.667	22.304
Normalized	98.6%	98.4%	100%
Standard Deviation	0.7%	1.4%	2.2%
TNN - CPU - DenseNet (ms)	4207	4152	4131
Normalized	98.18%	99.48%	100%
Standard Deviation	1.4%	2%	1.7%
TNN - CPU - MobileNet v2 (ms)	398.942	389.690	396.219
Normalized	97.68%	100%	98.35%
Standard Deviation	4.6%	1.2%	1.2%
TNN - CPU - SqueezeNet v2 (ms)	75.860	76.918	74.022
Normalized	97.58%	96.23%	100%
Standard Deviation	1.2%	1%	1.6%
TNN - CPU - SqueezeNet v1.1 (ms)	366.383	366.270	366.322
Normalized	99.97%	100%	99.99%
Standard Deviation	0.1%	0.1%	0.1%
Apache Cassandra - Writes (Op/s)	156353	162269	155829
Normalized	96.35%	100%	96.03%
Standard Deviation	1.7%	2.4%	2.8%
Facebook RocksDB - Rand Fill (Op/s)	100049	102520	101033
Normalized	97.59%	100%	98.55%
Standard Deviation	0.1%	0%	0.4%
Facebook RocksDB - Rand Read (Op/s)	351215402	354422391	369206119
Normalized	95.13%	96%	100%
Standard Deviation	1.1%	1.9%	4%
Facebook RocksDB - Update Rand (Op/s)	94416	97326	96320
Normalized	97.01%	100%	98.97%
Standard Deviation	0.2%	0.2%	0.2%
Facebook RocksDB - Rand Fill Sync (Op/s)	99834	102033	100599
Normalized	97.84%	100%	98.59%
Standard Deviation	0.2%	0.1%	0.2%
Facebook RocksDB - R.R.W.R (Op/s)	877912	892067	884458
Normalized	98.41%	100%	99.15%
Standard Deviation	0.2%	0%	0.2%
Blender - BMW27 - CPU-Only (sec)	29.53	29.61	29.86

	Normalized	100%	99.73%	98.89%
	Standard Deviation	0.8%	0.4%	0.3%
Blender - Classroom - CPU-Only (sec)		72.83	72.84	73.64
	Normalized	100%	99.99%	98.9%
	Standard Deviation	0.1%	0.2%	0%
Blender - Barbershop - CPU-Only (sec)		108.64	108.53	109.60
	Normalized	99.9%	100%	99.02%
	Standard Deviation	0.6%	0.4%	0.7%
ONNX Runtime - yolov4 - OpenMP CPU (Inferences/min)		584	560	548
	Normalized	100%	95.89%	93.84%
	Standard Deviation	0.6%	1.3%	1.2%
ONNX Runtime - bert squad-10 - OpenMP CPU (Inferences/min)		664	705	687
	Normalized	94.18%	100%	97.45%
	Standard Deviation	2.2%	9.2%	5.7%
ONNX Runtime - fcn-resnet101-11 - OpenMP CPU (Inferences/min)		468	466	474
	Normalized	98.73%	98.31%	100%
	Standard Deviation	0.7%		1.2%
ONNX Runtime - shufflenet-v2-10 - OpenMP CPU (Inferences/min)		13123	12746	12630
	Normalized	100%	97.13%	96.24%
	Standard Deviation	0.6%	0.4%	1%
PyBench - T.F.A.T.T (Milliseconds)		1171	1174	1157
	Normalized	98.8%	98.55%	100%
	Standard Deviation	0.2%	0.5%	0.2%
PyPerformance - 2to3 (Milliseconds)		529	525	524
	Normalized	99.05%	99.81%	100%
	Standard Deviation			0.2%
PyPerformance - chaos (Milliseconds)		146	136	132
	Normalized	90.41%	97.06%	100%
	Standard Deviation	2.3%	2.6%	1.6%
PyPerformance - float (Milliseconds)		151	143	128
	Normalized	84.77%	89.51%	100%
	Standard Deviation	3.9%	2.2%	0%
PyPerformance - pathlib (Milliseconds)		27.2	23.8	28.7
	Normalized	87.5%	100%	82.93%
	Standard Deviation	0.2%	16%	0%
PyPerformance - raytrace (Milliseconds)		574	569	525
	Normalized	91.46%	92.27%	100%
	Standard Deviation	0.8%	0.5%	0.4%
PyPerformance - json_loads (Milliseconds)		27.6	25.5	26.2
	Normalized	92.39%	100%	97.33%
	Standard Deviation	2.4%	1.4%	1%
PyPerformance - crypto_pyaes		138	132	137
	Normalized	95.65%	100%	96.35%
	Standard Deviation	1.8%	3%	1.5%
PyPerformance - regex_compile		211	203	206
	Normalized	96.21%	100%	98.54%
	Standard Deviation	2.6%	1.8%	0.6%
PyPerformance - python_startup		16.1	15.7	16.1
	Normalized	97.52%	100%	97.52%
	Standard Deviation	1%	0%	0.4%

PyPerformance - django_template (Milliseconds)	61.0	60.5	55.8
Normalized	91.48%	92.23%	100%
Standard Deviation	2%	1.3%	2.4%
PyPerformance - pickle_pure_python (Milliseconds)	539	513	516
Normalized	95.18%	100%	99.42%
Standard Deviation	2.3%	1.5%	1%
nginx - 100 (Reqs/sec)	70447	82049	88738
Normalized	79.39%	92.46%	100%
Standard Deviation	1%	0.3%	1.9%
nginx - 200 (Reqs/sec)	183954	189549	204765
Normalized	89.84%	92.57%	100%
Standard Deviation	3.4%	0.5%	1%
nginx - 500 (Reqs/sec)	193186	199644	213761
Normalized	90.37%	93.4%	100%
Standard Deviation	1.4%	0.6%	1.1%
nginx - 1000 (Reqs/sec)	196962	204942	216774
Normalized	90.86%	94.54%	100%
Standard Deviation	0.7%	0.5%	1%
Apache HTTP Server - 100 (Reqs/sec)	27135	36247	40138
Normalized	67.6%	90.31%	100%
Standard Deviation	1%	2.4%	1.1%
Apache HTTP Server - 200 (Reqs/sec)	43095	41361	39792
Normalized	100%	95.98%	92.34%
Standard Deviation	1%	0.4%	0.4%
Appleseed - Emily (sec)	181.274025	179.849652	178.073796
Normalized	98.23%	99.01%	100%
Appleseed - Disney Material (sec)	83.34648	82.259563	83.066417
Normalized	98.7%	100%	99.03%
Appleseed - Material Tester (sec)	184.402413	195.659274	194.072632
Normalized	100%	94.25%	95.02%
PHPBench - P.B.S (Score)	710168	714962	761666
Normalized	93.24%	93.87%	100%
Standard Deviation	1%	1.3%	0.2%
Git - T.T.C.C.G.C (sec)	62.363	63.059	62.329
Normalized	99.95%	98.84%	100%
Standard Deviation	0.8%	0.2%	0.5%
Chaos Group V-RAY - CPU (vsamples)	63638	64192	63528
Normalized	99.14%	100%	98.97%
Standard Deviation	0.9%	0.7%	0.9%

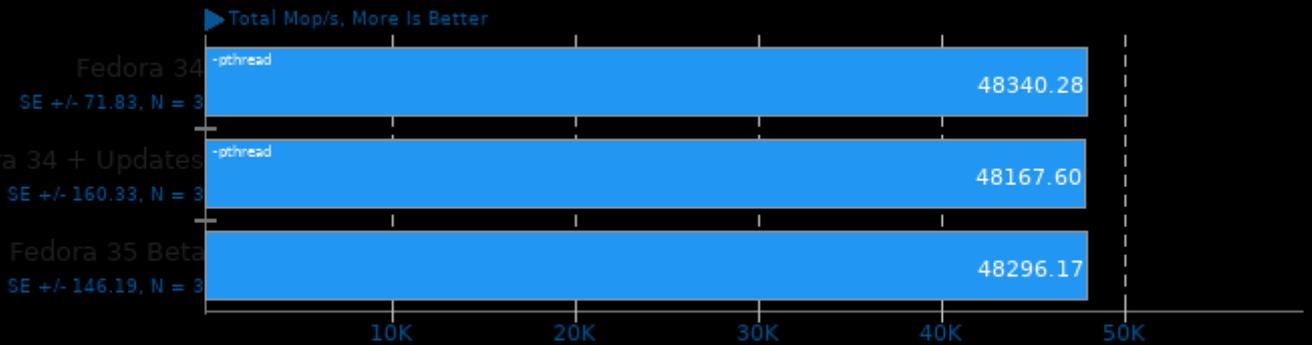
High Performance Conjugate Gradient 3.1



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

NAS Parallel Benchmarks 3.4

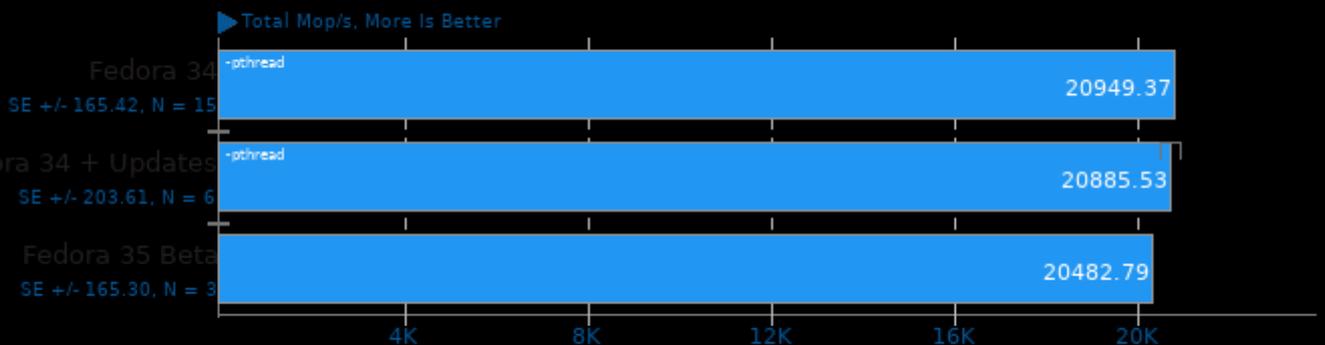
Test / Class: BT.C



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

NAS Parallel Benchmarks 3.4

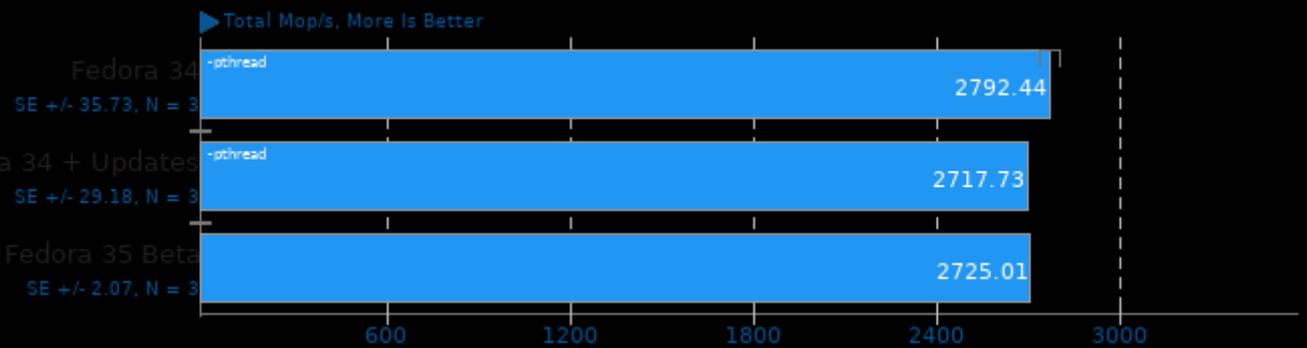
Test / Class: CG.C



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

NAS Parallel Benchmarks 3.4

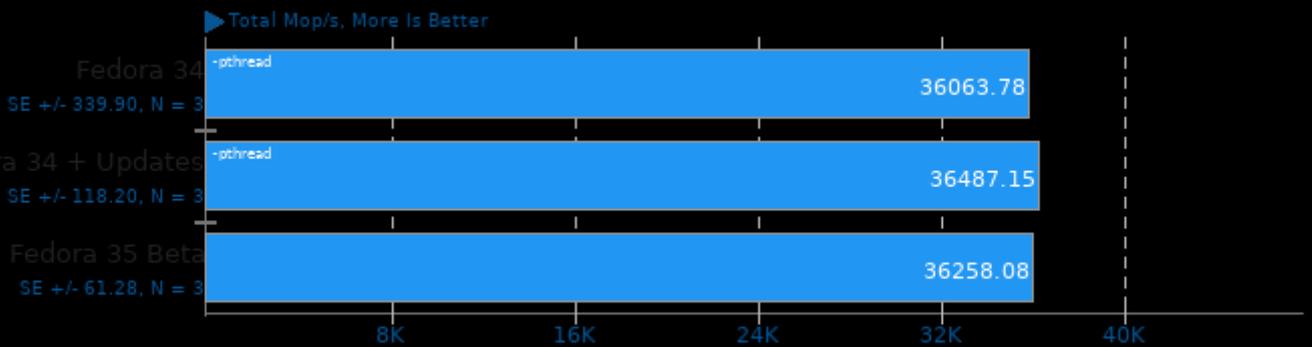
Test / Class: EP.D



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

NAS Parallel Benchmarks 3.4

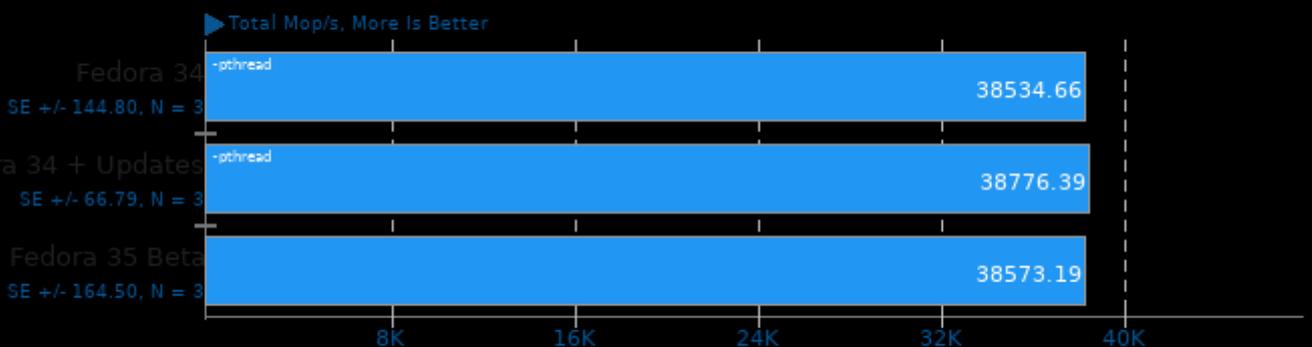
Test / Class: FT.C



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

NAS Parallel Benchmarks 3.4

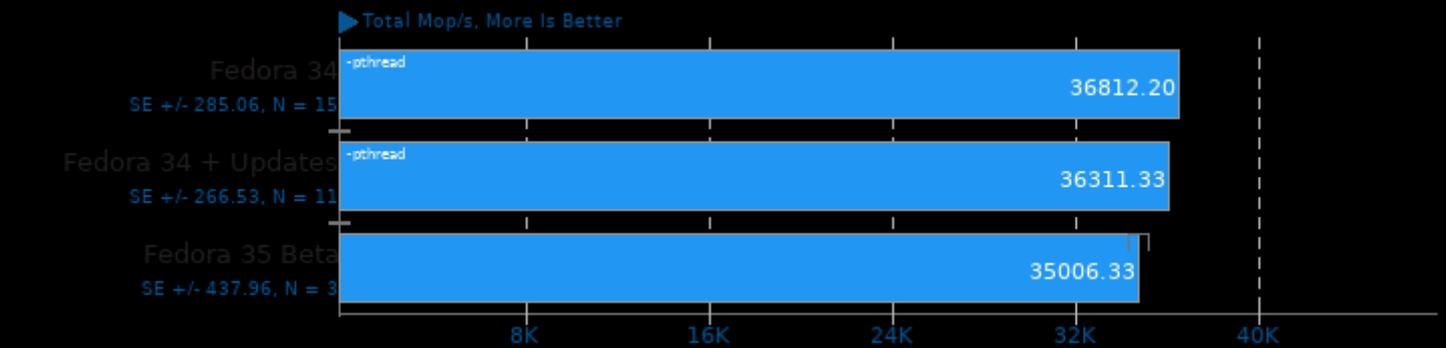
Test / Class: LU.C



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

NAS Parallel Benchmarks 3.4

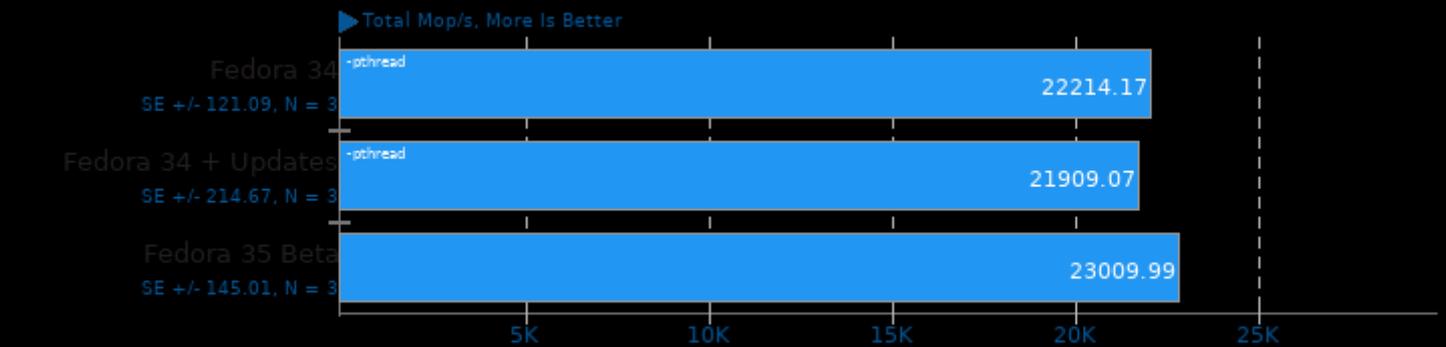
Test / Class: MG.C



1. (F9X) gfortran options: -O3 -march=native -fimplicit-externals -fimplicit-externals -fimplicit-externals

NAS Parallel Benchmarks 3.4

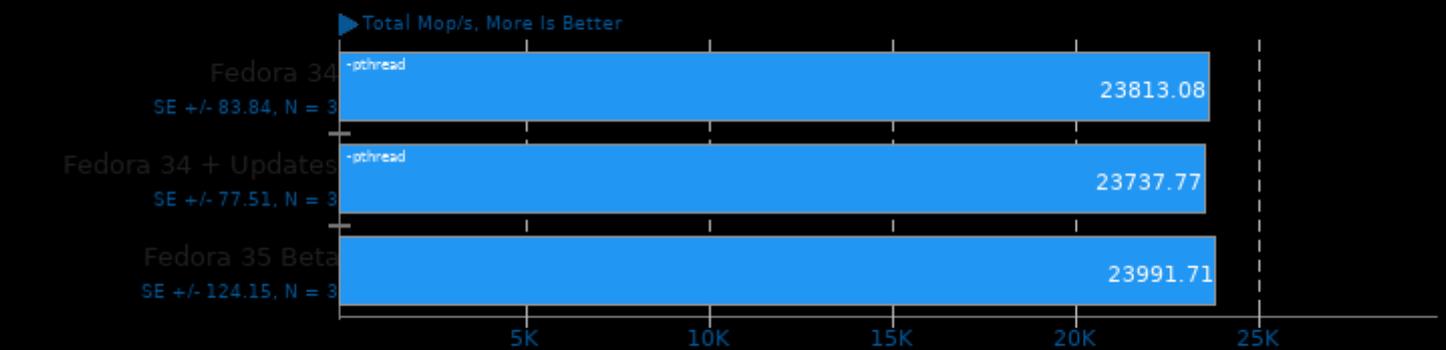
Test / Class: SP.B



1. (F9X) gfortran options: -O3 -march=native -fimplicit-externals -fimplicit-externals -fimplicit-externals

NAS Parallel Benchmarks 3.4

Test / Class: SP.C

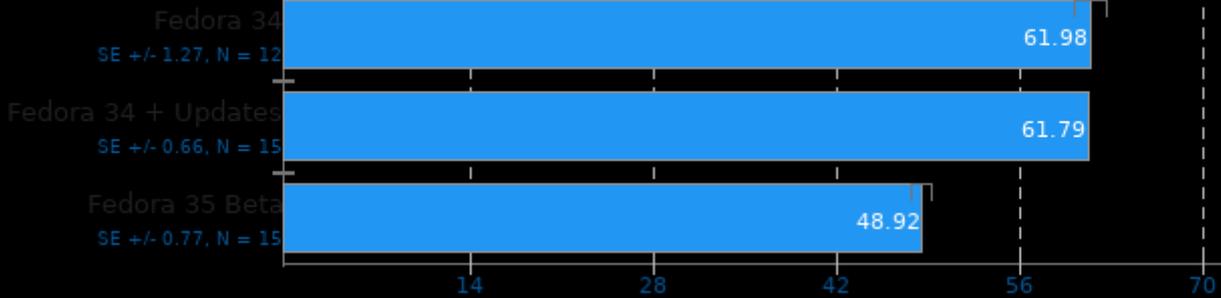


1. (F9X) gfortran options: -O3 -march=native -fimplicit-externals -fimplicit-externals -fimplicit-externals

Rodinia 3.1

Test: OpenMP Leukocyte

← Seconds, Fewer Is Better

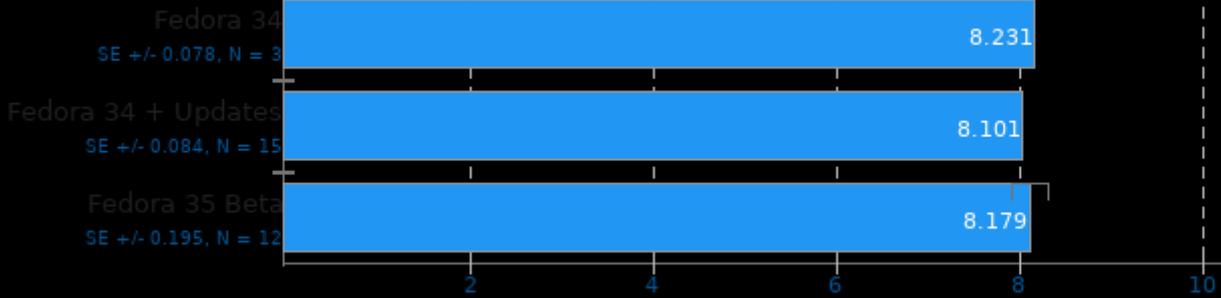


1. (CXX) g++ options: -O2 -fOpenCL

Rodinia 3.1

Test: OpenMP Streamcluster

← Seconds, Fewer Is Better

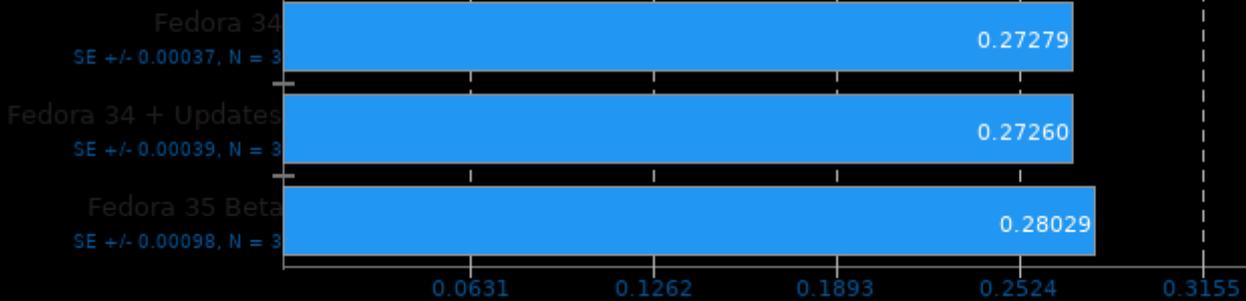


1. (CXX) g++ options: -O2 -fOpenCL

NAMD 2.14

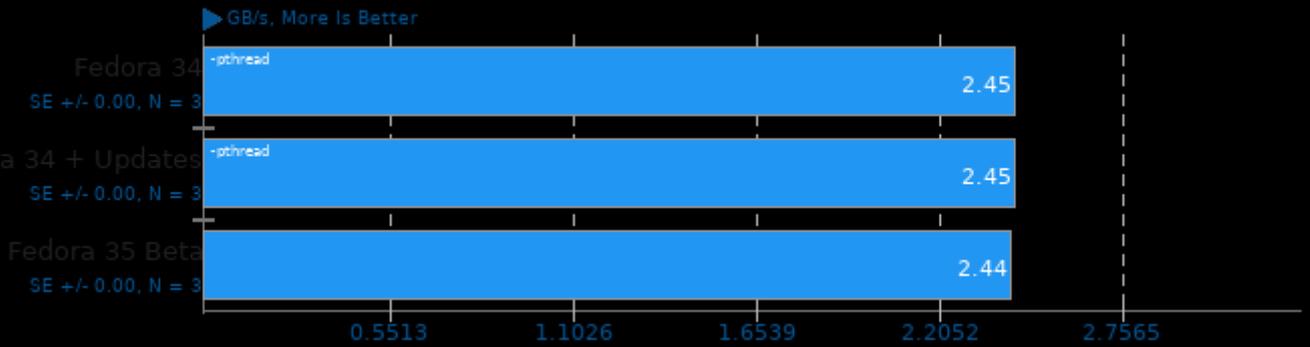
ATPase Simulation - 327,506 Atoms

← days/ns, Fewer Is Better



simdjson 1.0

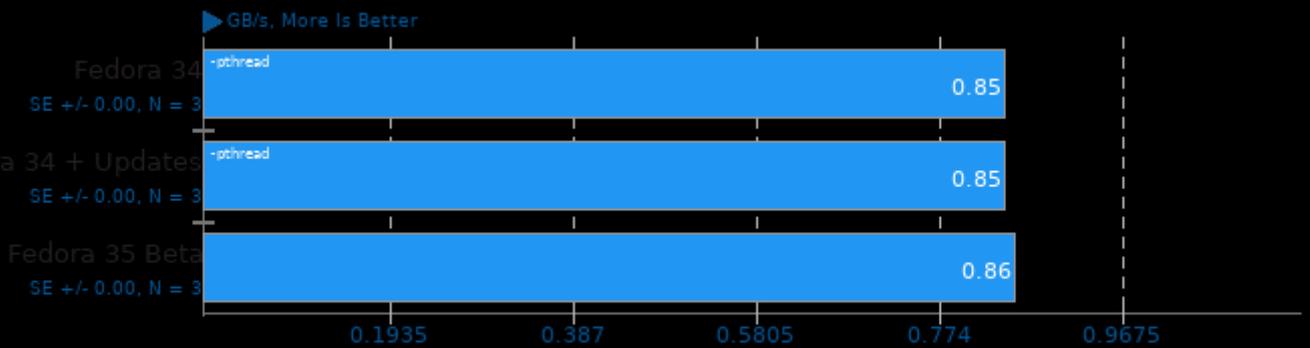
Throughput Test: Kostya



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

simdjson 1.0

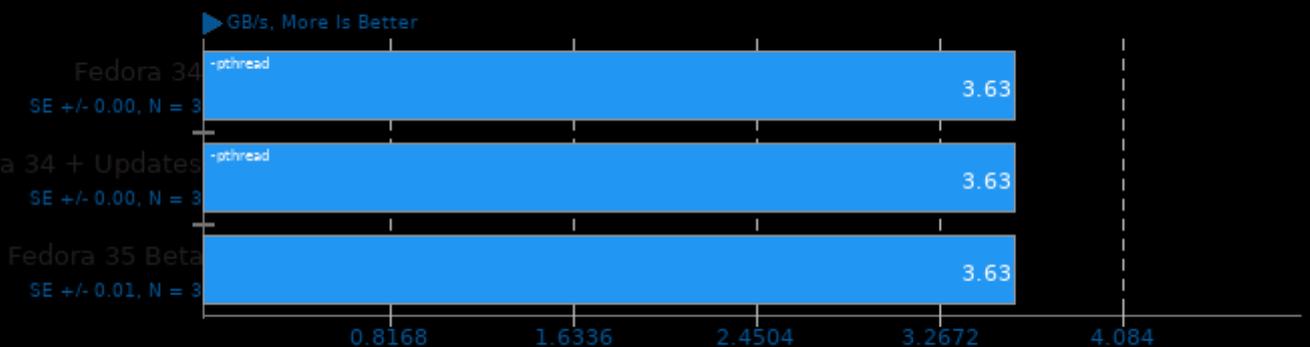
Throughput Test: LargeRandom



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

simdjson 1.0

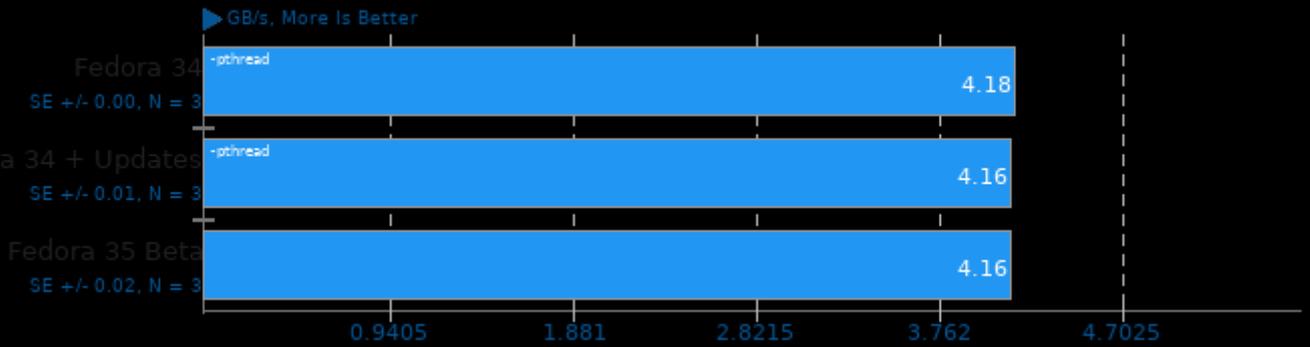
Throughput Test: PartialTweets



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

simdjson 1.0

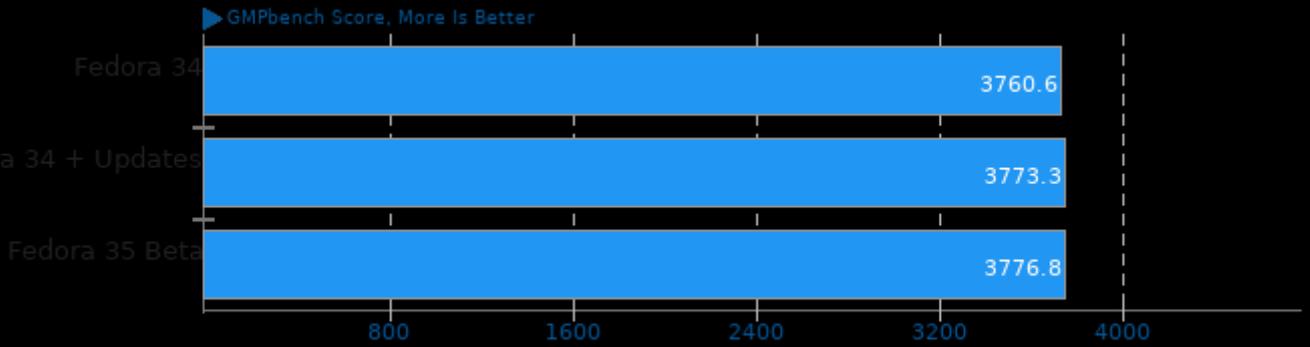
Throughput Test: DistinctUserID



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

GNU GMP GMPbench 6.2.1

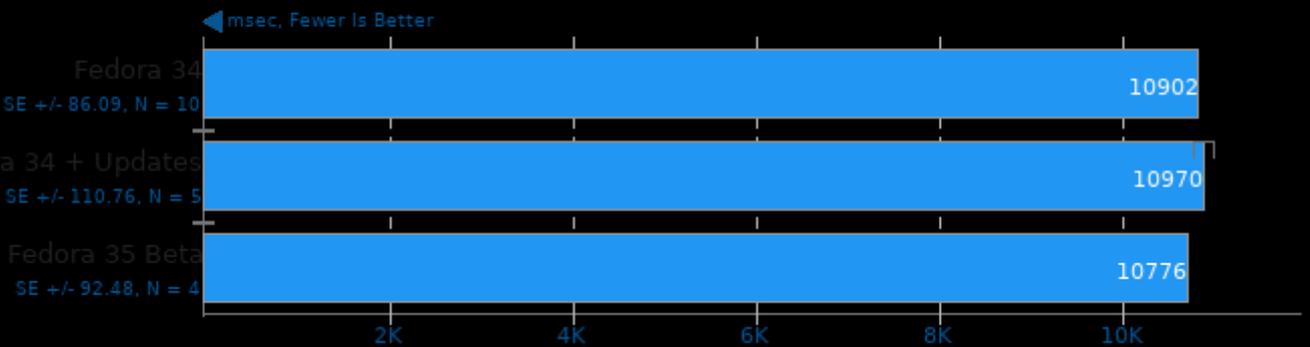
Total Time



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

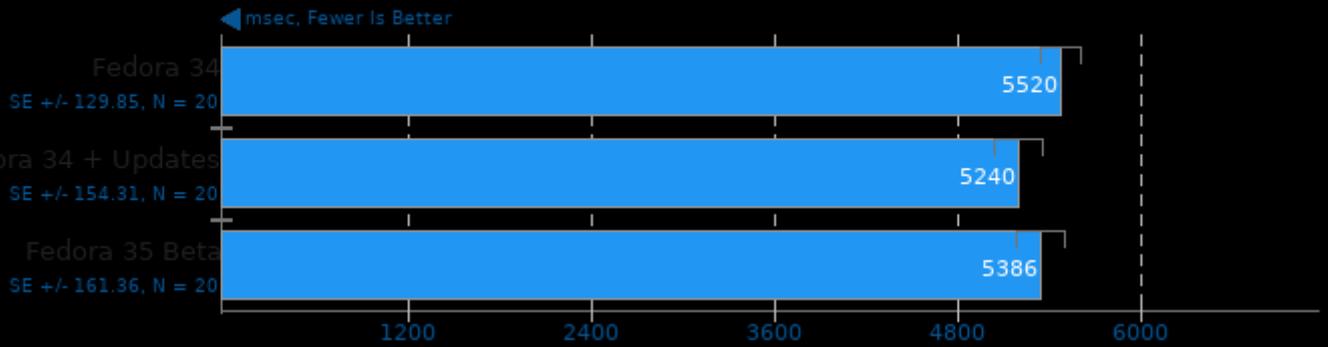
DaCapo Benchmark 9.12-MR1

Java Test: H2



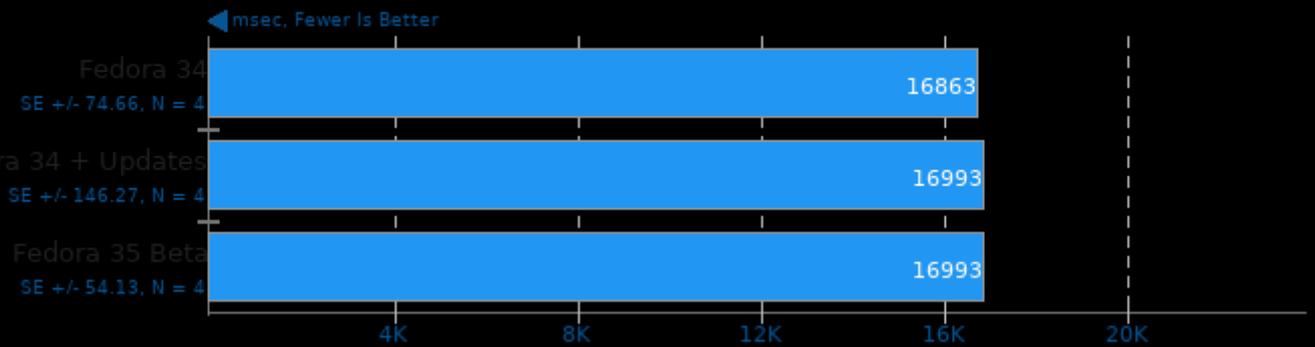
DaCapo Benchmark 9.12-MR1

Java Test: jython



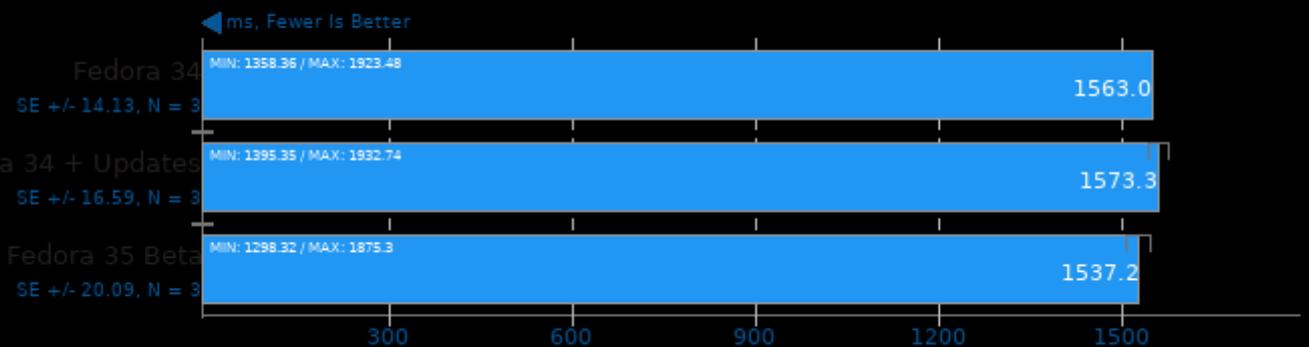
DaCapo Benchmark 9.12-MR1

Java Test: Tradebeans



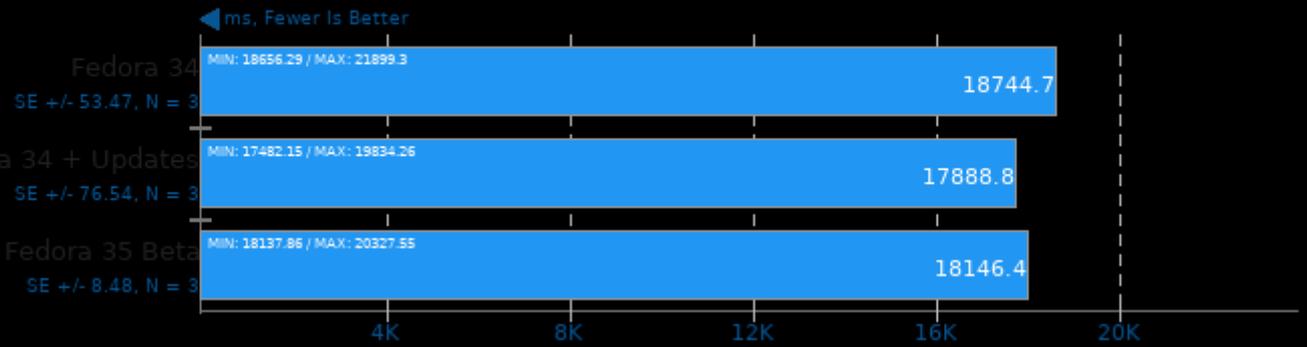
Renaissance 0.12

Test: Random Forest



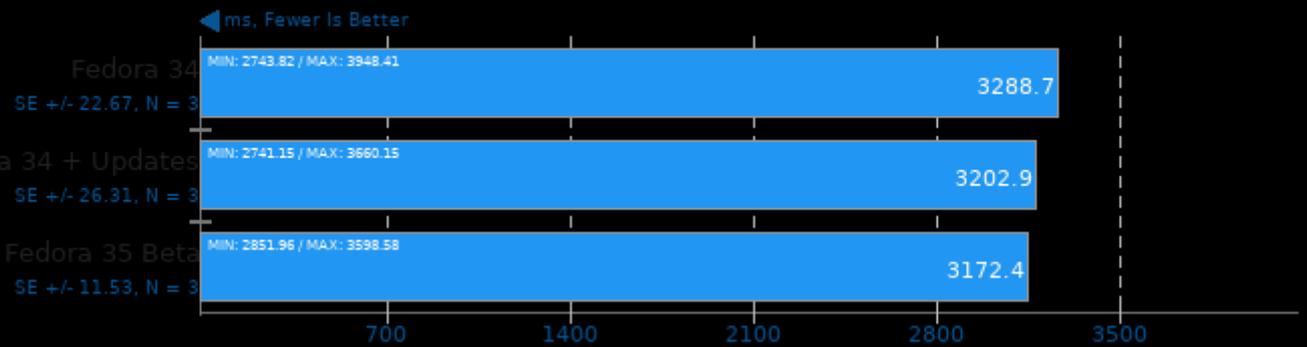
Renaissance 0.12

Test: ALS Movie Lens



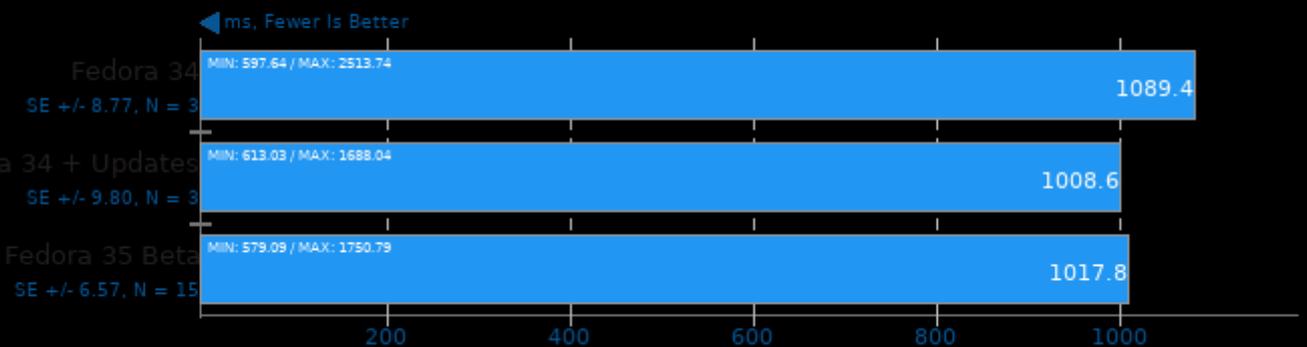
Renaissance 0.12

Test: Apache Spark ALS



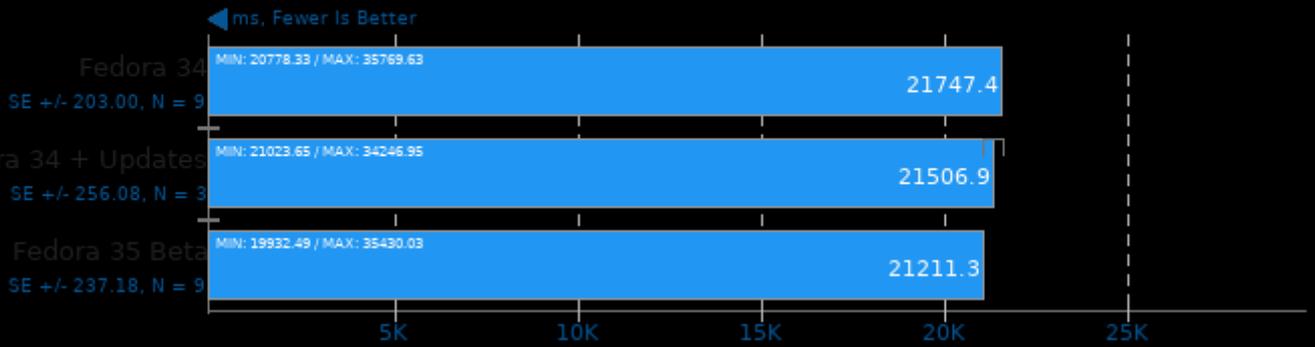
Renaissance 0.12

Test: Apache Spark Bayes



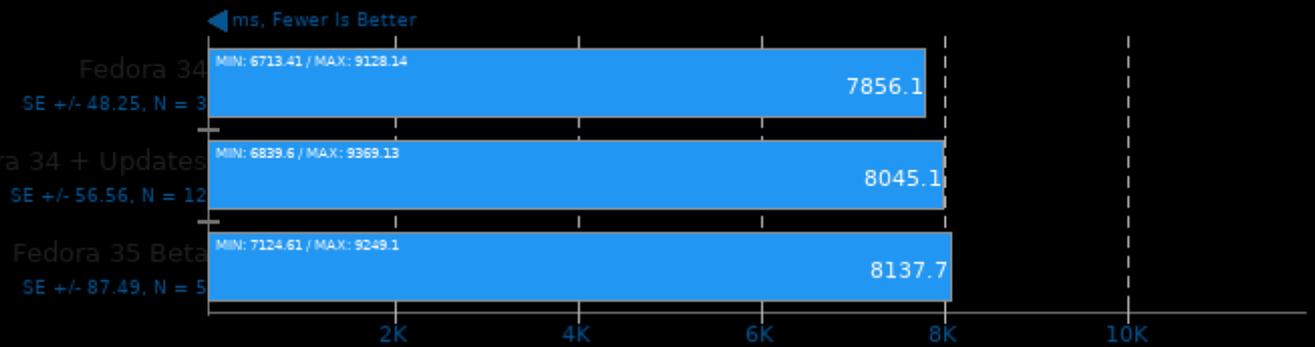
Renaissance 0.12

Test: Savina Reactors.IO



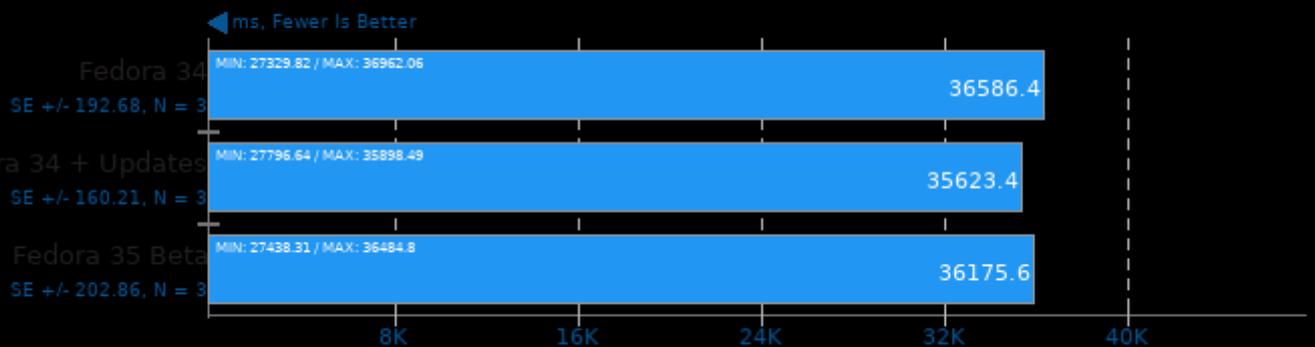
Renaissance 0.12

Test: Finagle HTTP Requests



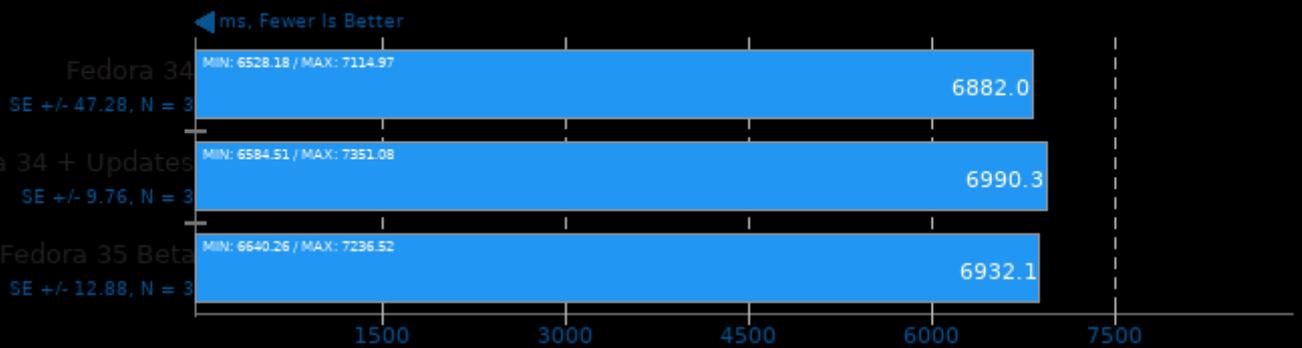
Renaissance 0.12

Test: Akka Unbalanced Cobwebbed Tree



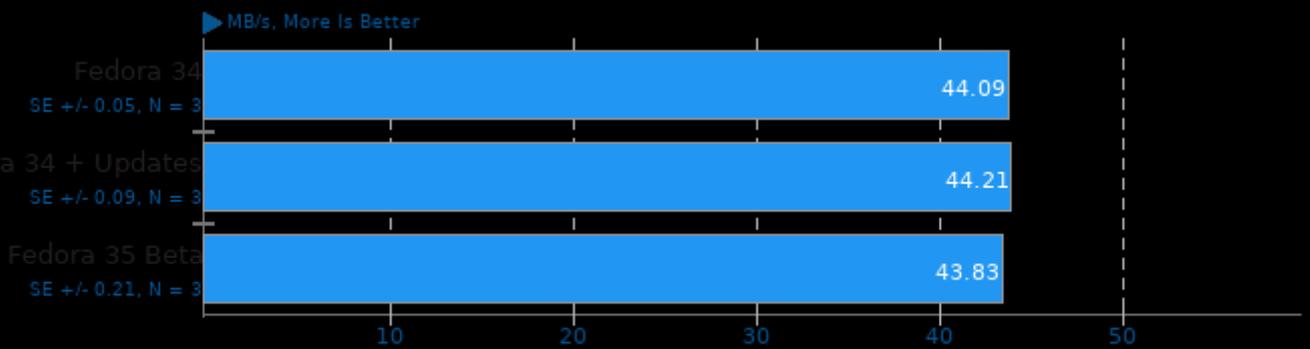
Renaissance 0.12

Test: Genetic Algorithm Using Jenetics + Futures



LZ4 Compression 1.9.3

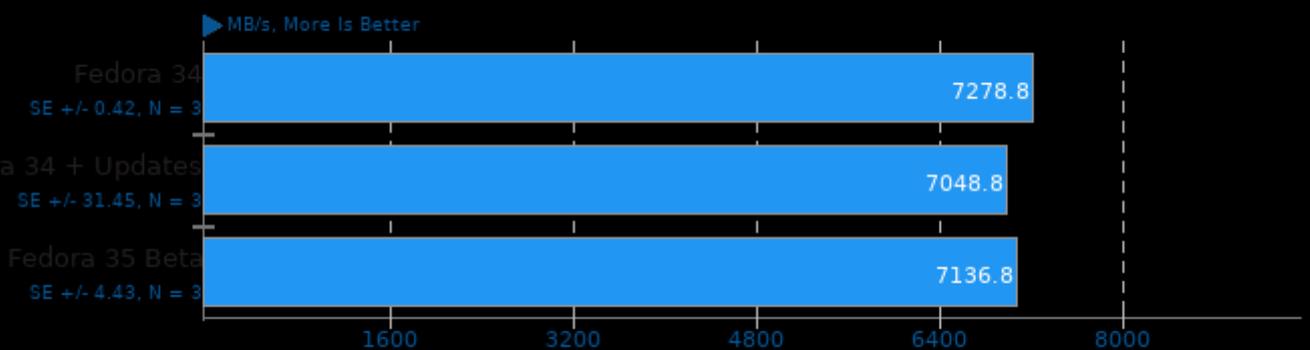
Compression Level: 3 - Compression Speed



1, (CC) gcc options: -O3

LZ4 Compression 1.9.3

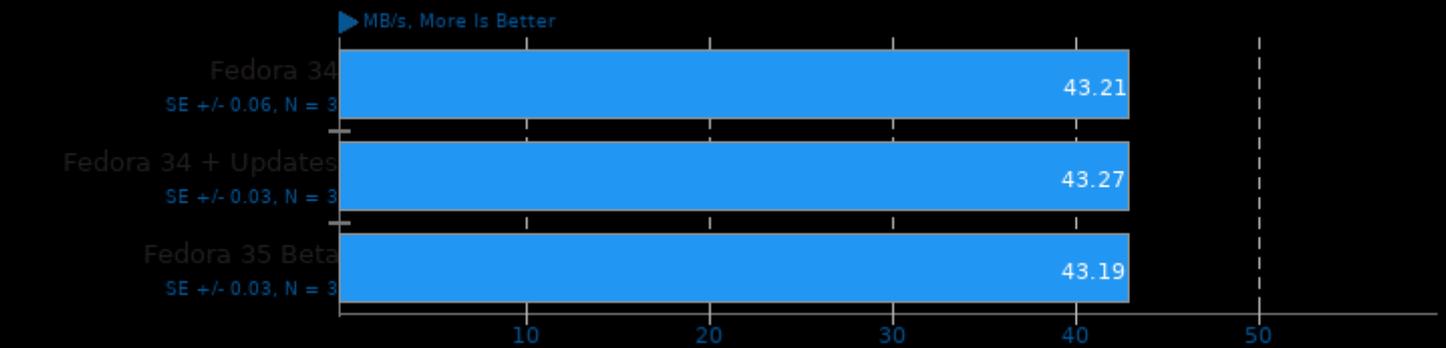
Compression Level: 3 - Decompression Speed



1, (CC) gcc options: -O3

LZ4 Compression 1.9.3

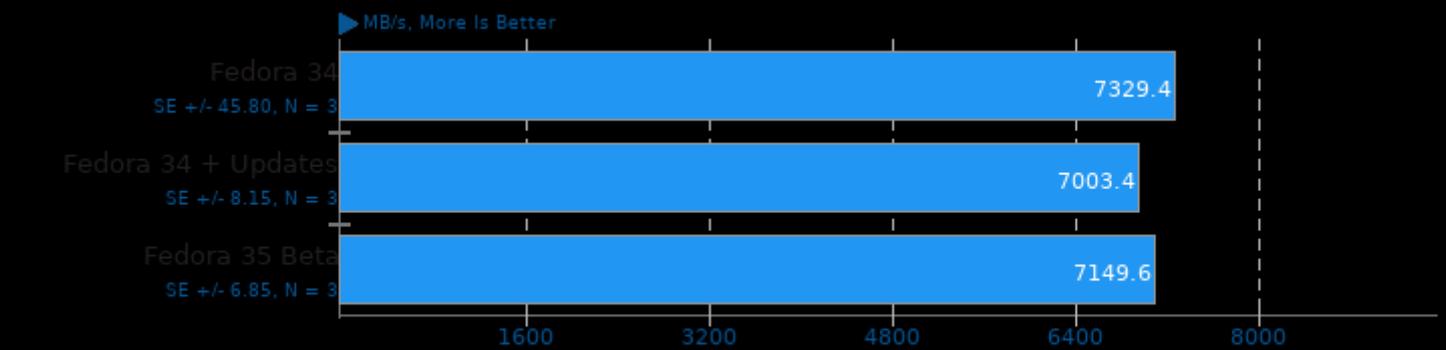
Compression Level: 9 - Compression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

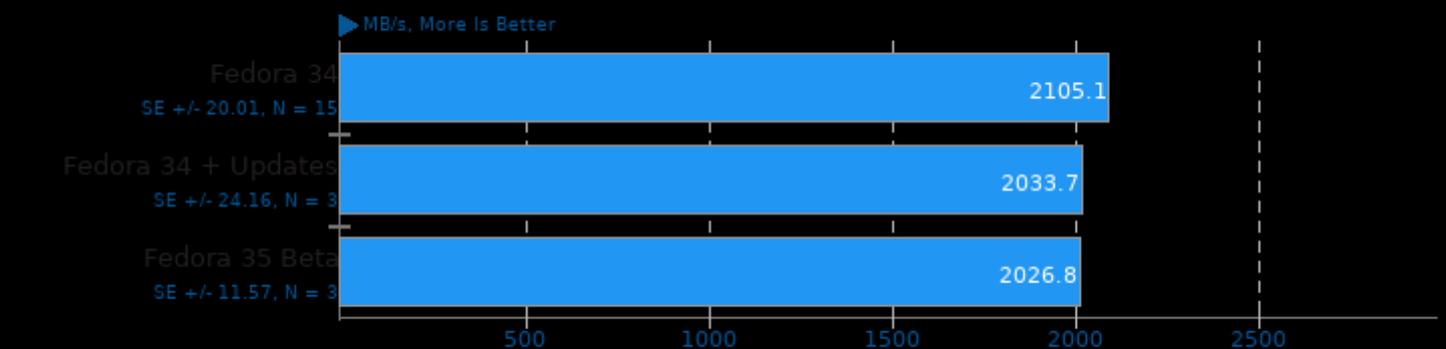
Compression Level: 9 - Decompression Speed



1. (CC) gcc options: -O3

Zstd Compression 1.5.0

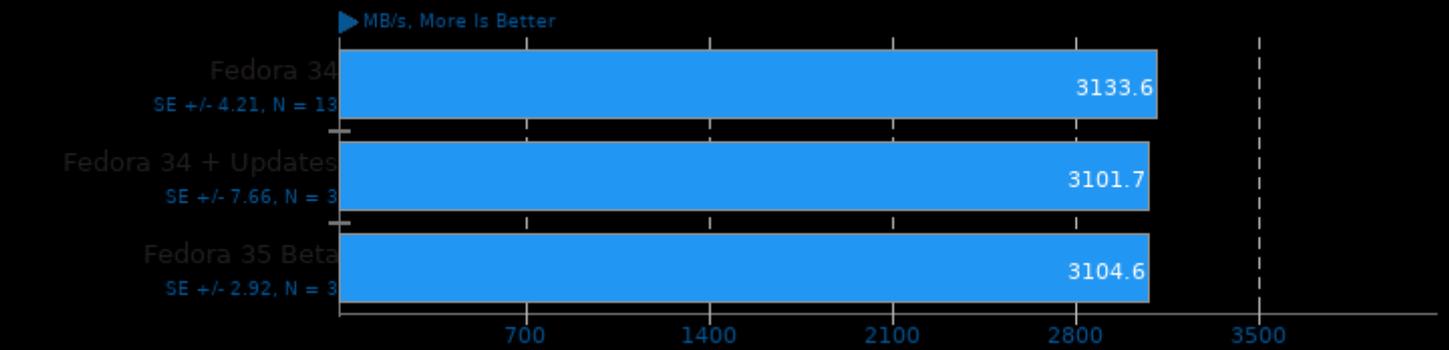
Compression Level: 8 - Compression Speed



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

Zstd Compression 1.5.0

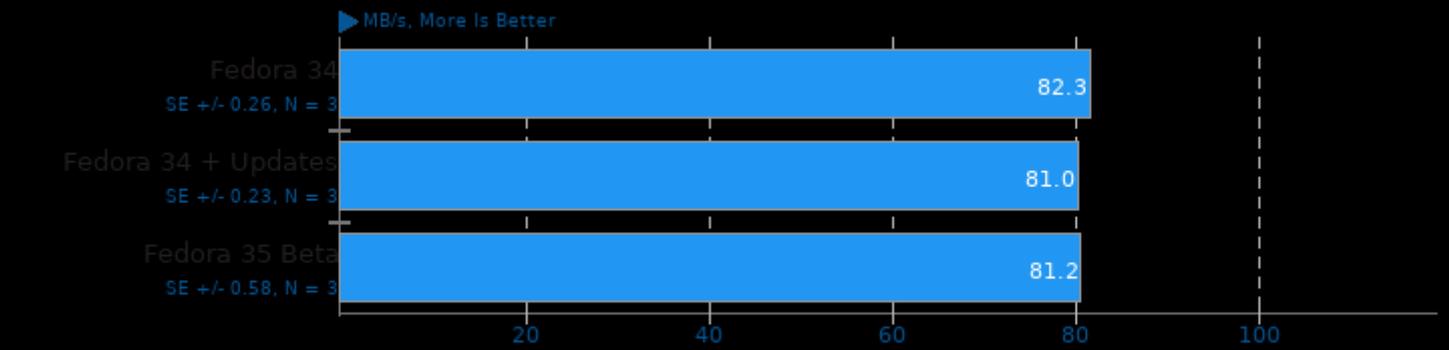
Compression Level: 8 - Decompression Speed



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

Zstd Compression 1.5.0

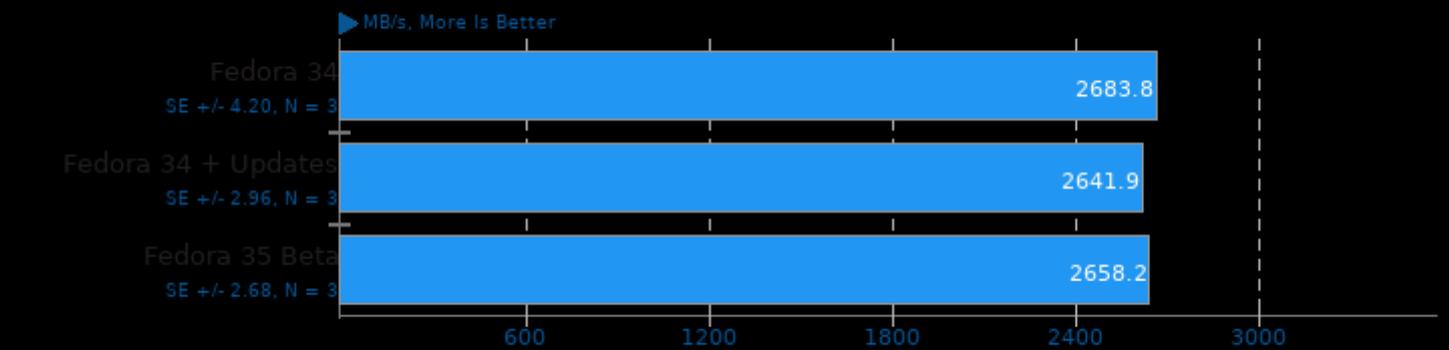
Compression Level: 19 - Compression Speed



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

Zstd Compression 1.5.0

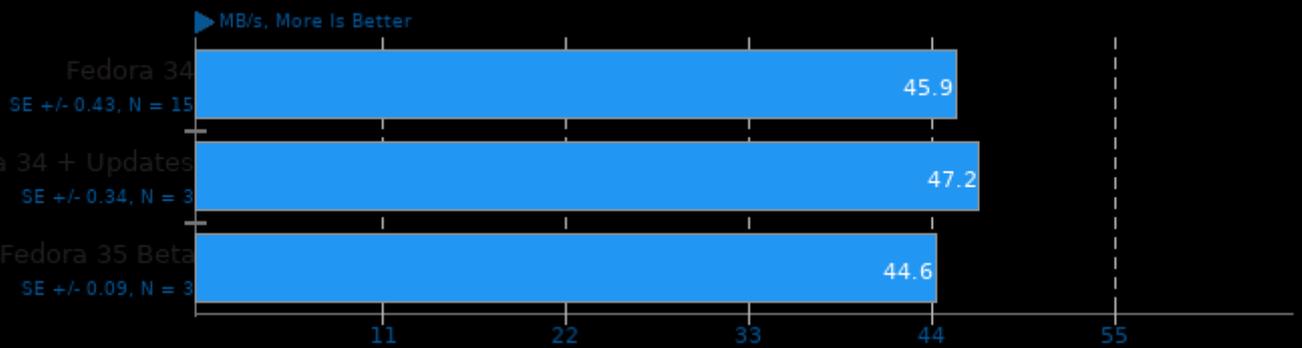
Compression Level: 19 - Decompression Speed



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

Zstd Compression 1.5.0

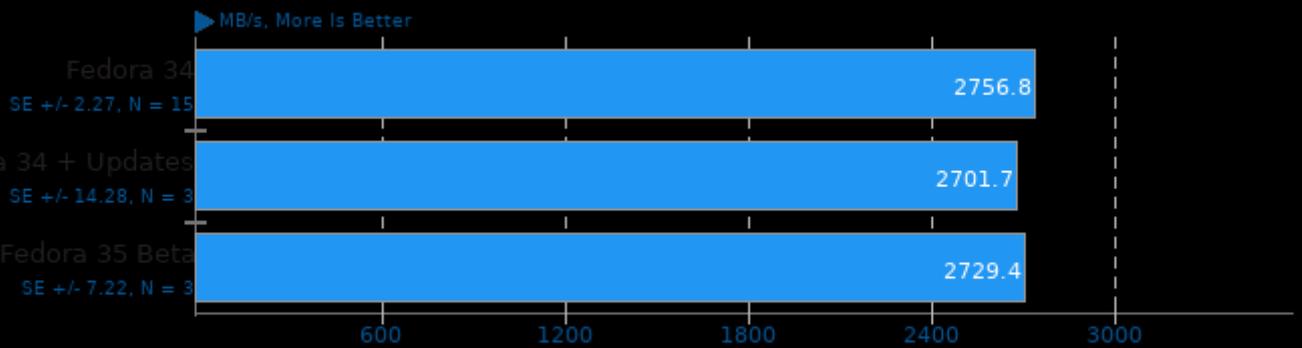
Compression Level: 19, Long Mode - Compression Speed



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

Zstd Compression 1.5.0

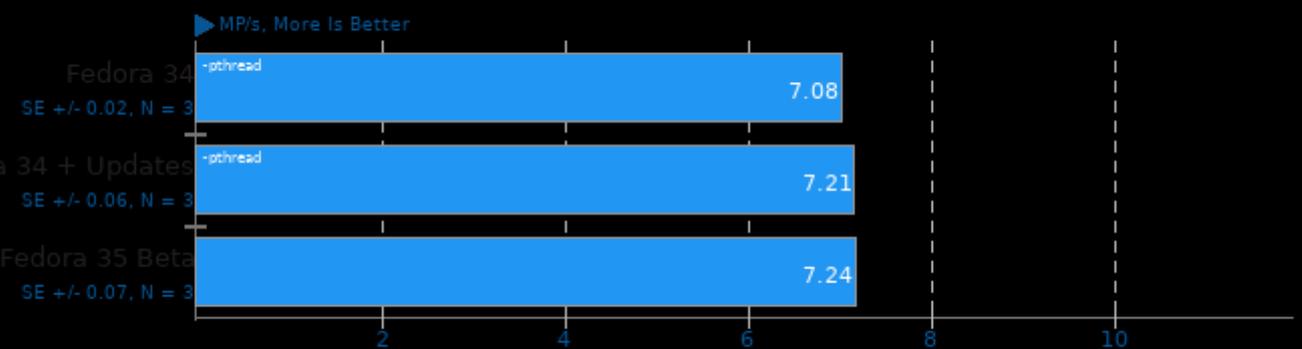
Compression Level: 19, Long Mode - Decompression Speed



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

JPEG XL libjxl 0.5

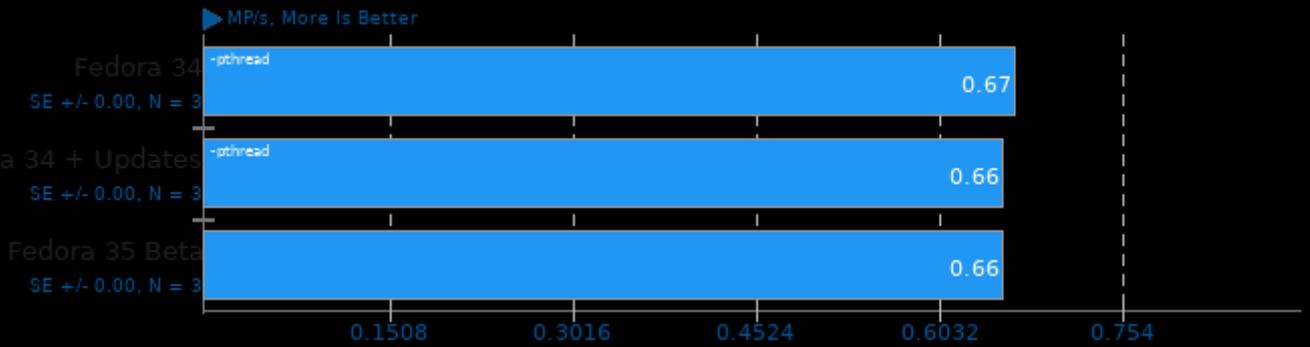
Input: PNG - Encode Speed: 7



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

JPEG XL libjxl 0.5

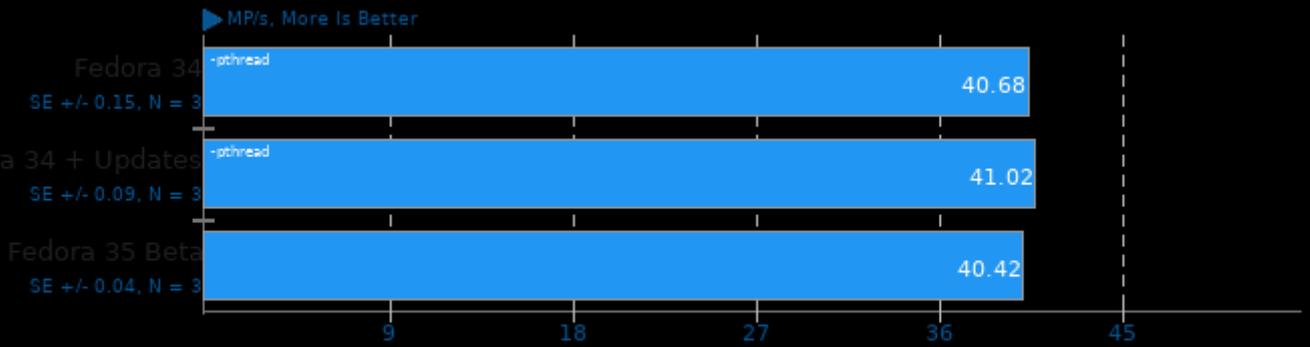
Input: PNG - Encode Speed: 8



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

JPEG XL libjxl 0.5

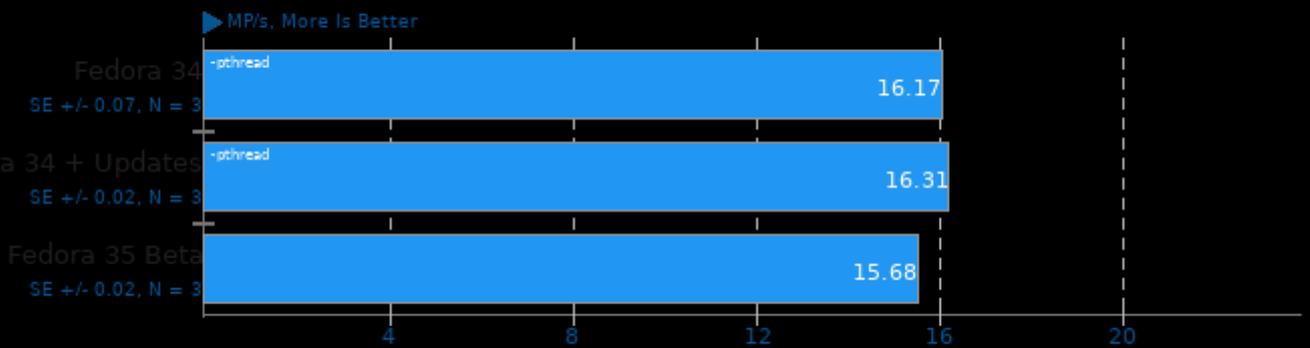
Input: JPEG - Encode Speed: 7



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

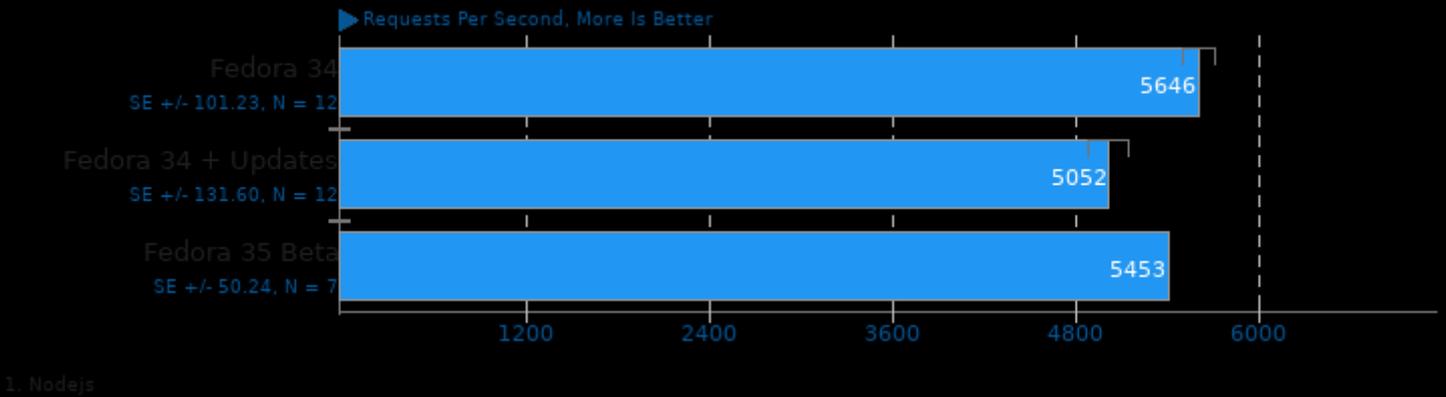
JPEG XL libjxl 0.5

Input: JPEG - Encode Speed: 8



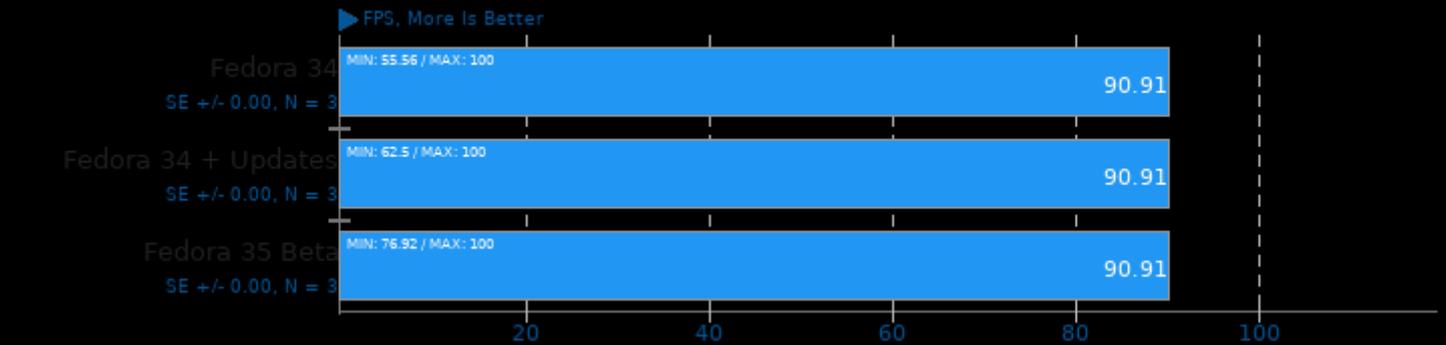
1. (CXX) g++ options: -funwind-tables -O3 -O2 -fPIE -pie

Node.js Express HTTP Load Test



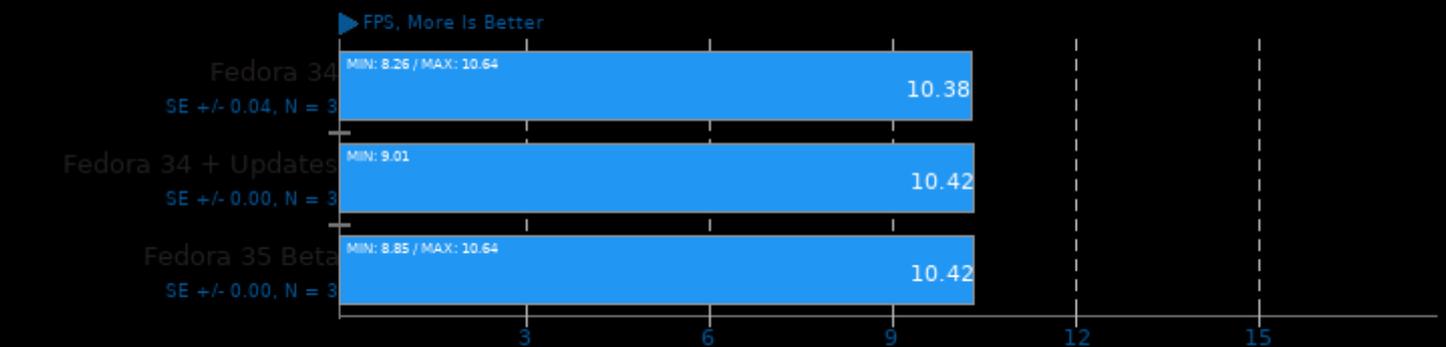
OSPray 1.8.5

Demo: San Miguel - Renderer: SciVis



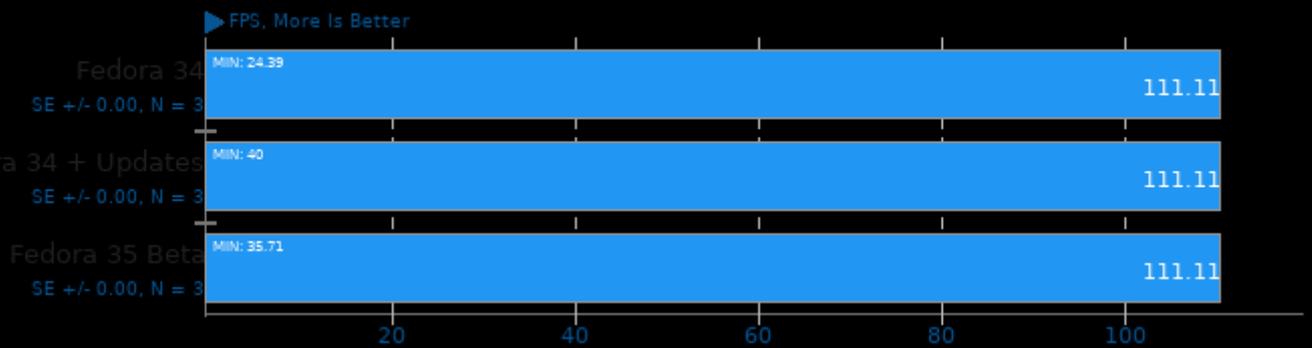
OSPray 1.8.5

Demo: San Miguel - Renderer: Path Tracer



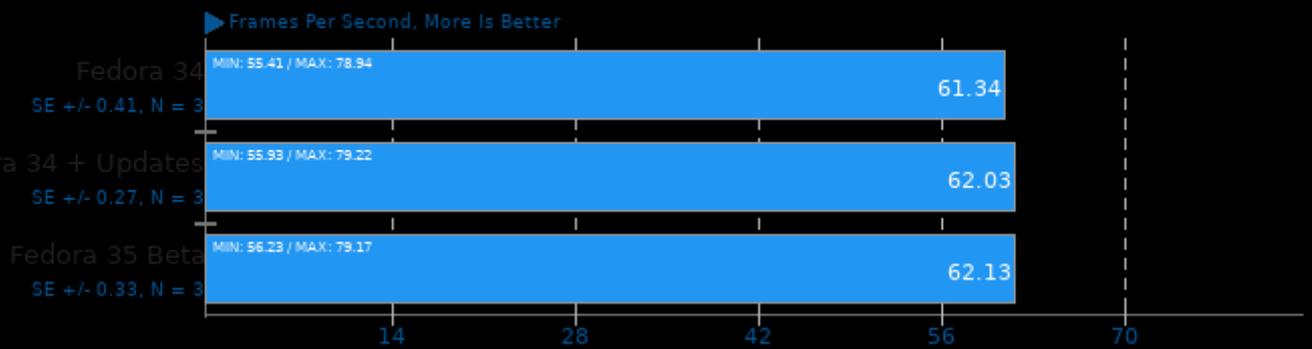
OSPray 1.8.5

Demo: Magnetic Reconnection - Renderer: SciVis



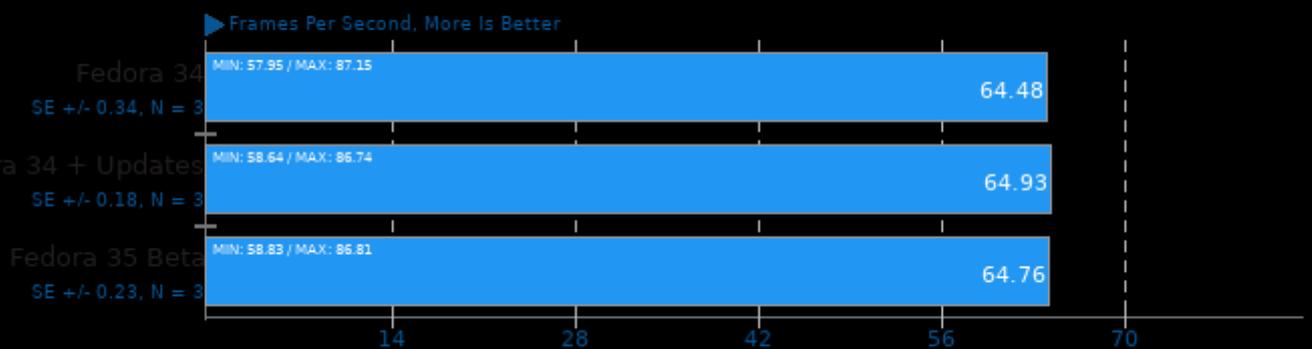
Embree 3.13

Binary: Pathtracer - Model: Crown



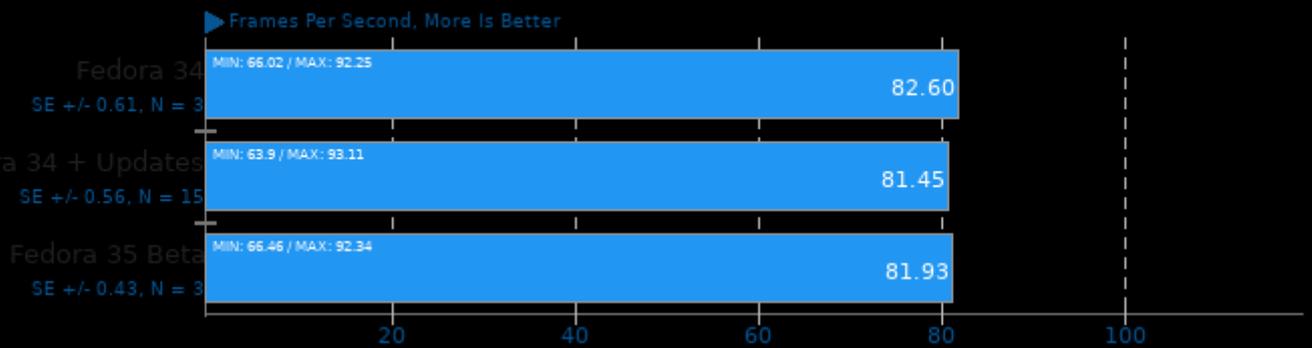
Embree 3.13

Binary: Pathtracer ISPC - Model: Crown



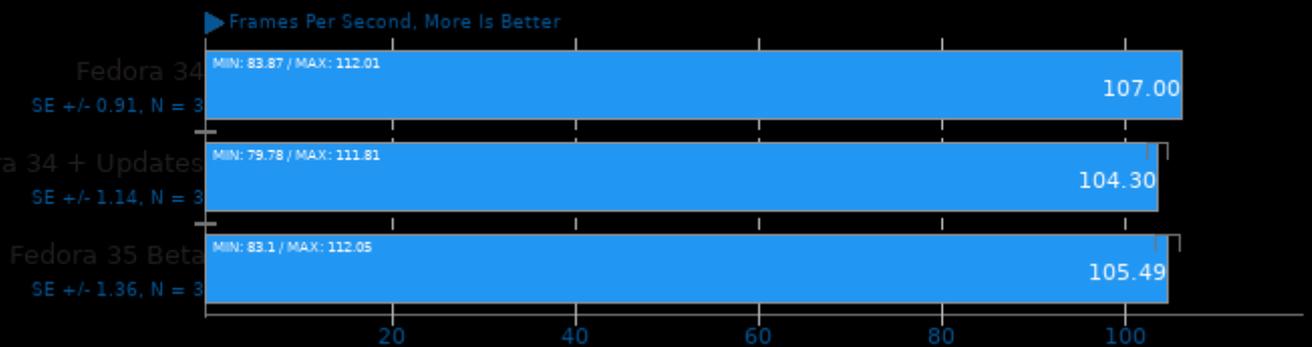
Embree 3.13

Binary: Pathtracer - Model: Asian Dragon



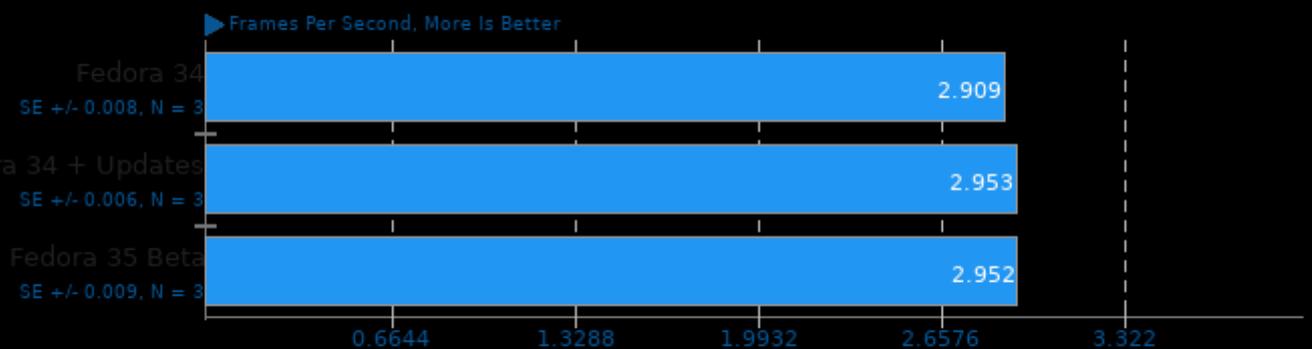
Embree 3.13

Binary: Pathtracer ISPC - Model: Asian Dragon



SVT-AV1 0.8.7

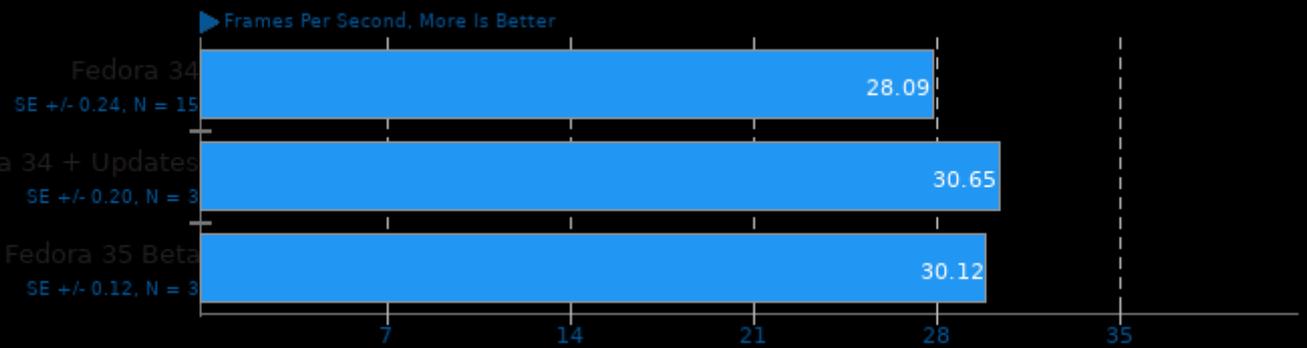
Encoder Mode: Preset 4 - Input: Bosphorus 4K



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

SVT-AV1 0.8.7

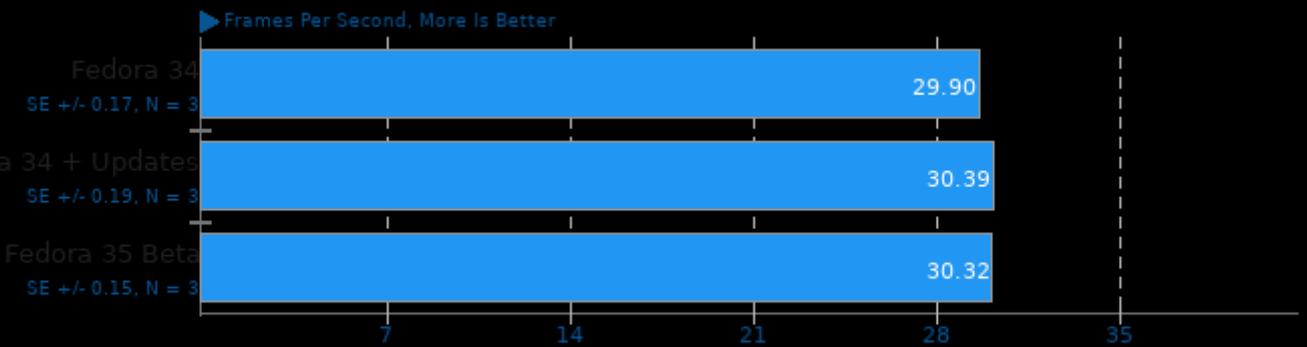
Encoder Mode: Preset 8 - Input: Bosphorus 4K



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

SVT-HEVC 1.5.0

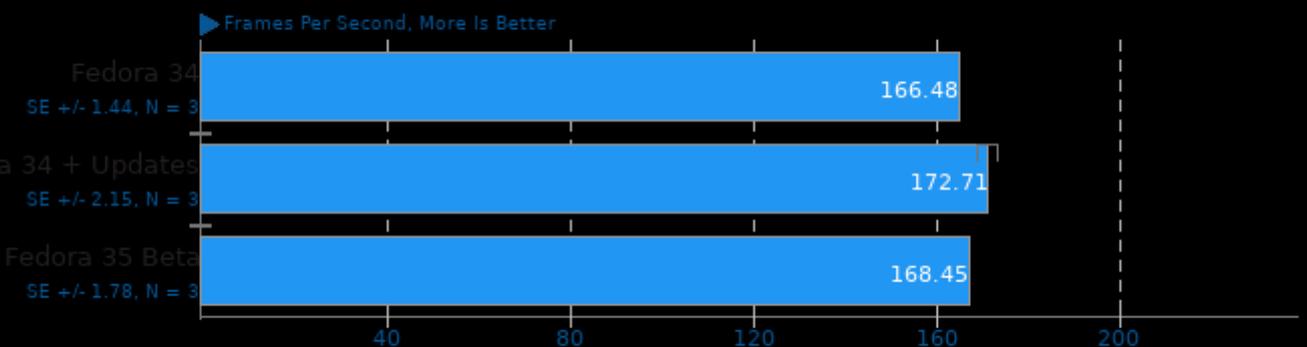
Tuning: 1 - Input: Bosphorus 1080p



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

SVT-HEVC 1.5.0

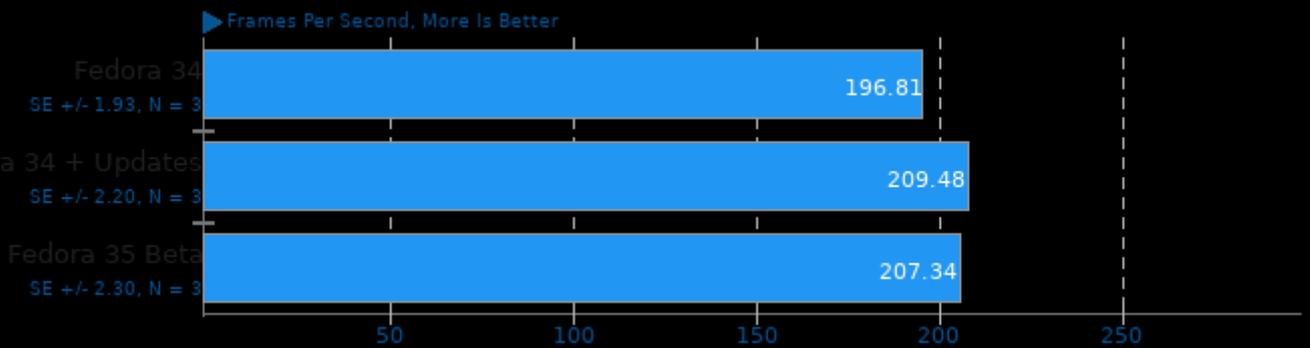
Tuning: 7 - Input: Bosphorus 1080p



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

SVT-VP9 0.3

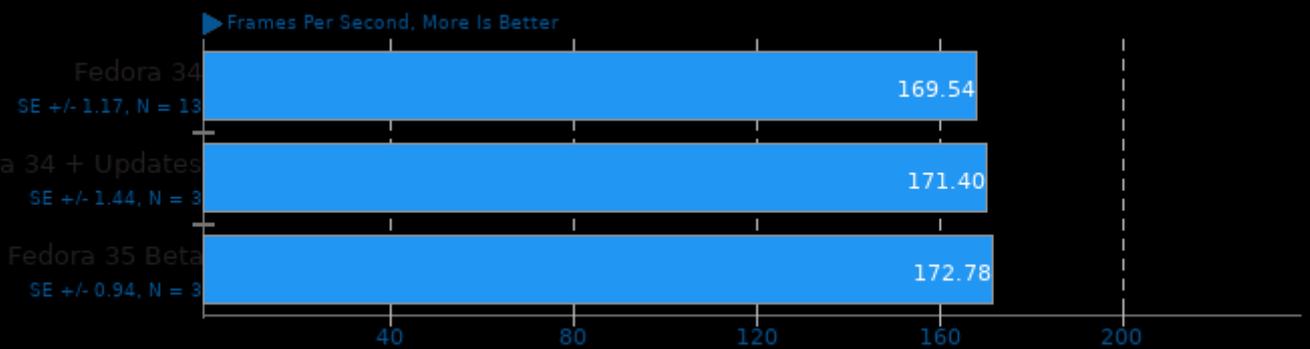
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p



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

SVT-VP9 0.3

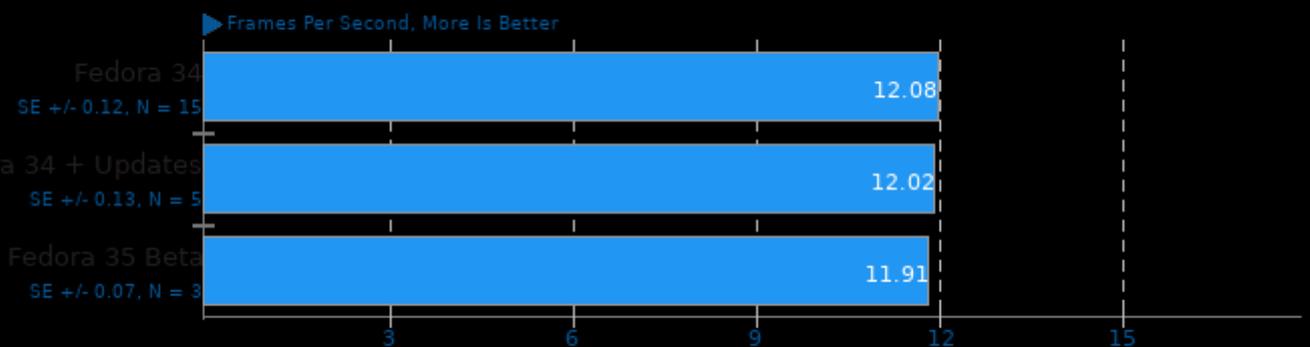
Tuning: Visual Quality Optimized - Input: Bosphorus 1080p



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

x265 3.4

Video Input: Bosphorus 4K

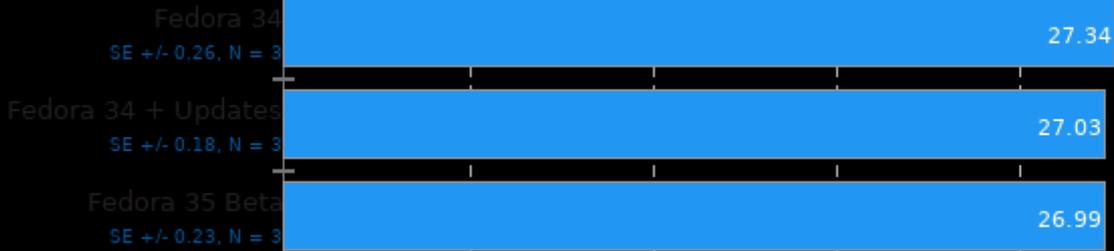


1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl

x265 3.4

Video Input: Bosphorus 1080p

► Frames Per Second, More Is Better

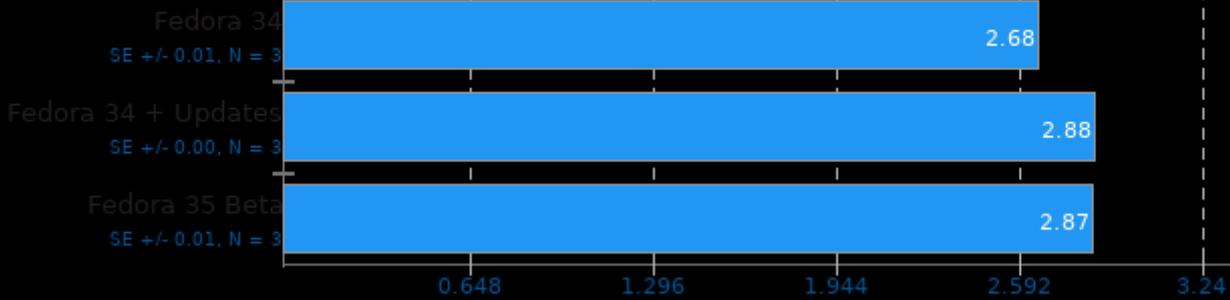


1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl

Intel Open Image Denoise 1.4.0

Run: RT.hdr_alb_nrm.3840x2160

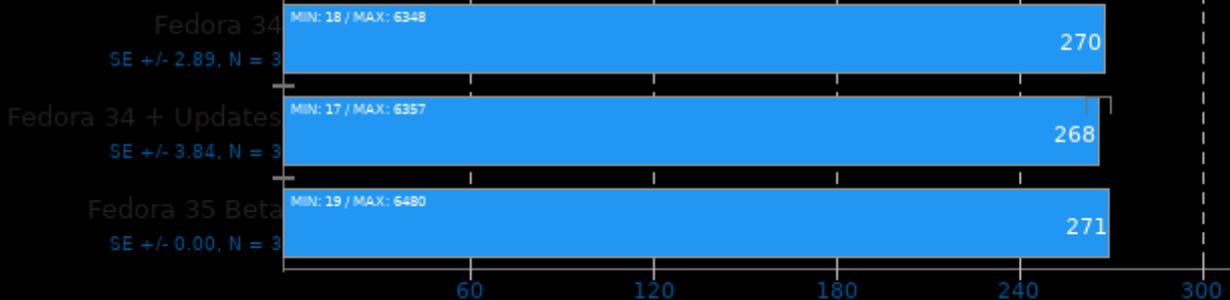
► Images / Sec, More Is Better



OpenVKL 1.0

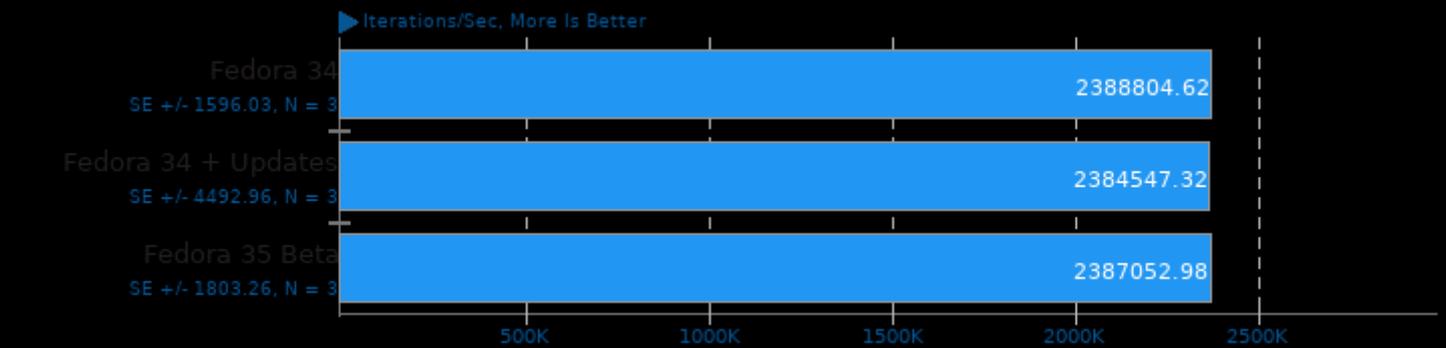
Benchmark: vkiBenchmark ISPC

► Items / Sec, More Is Better



Coremark 1.0

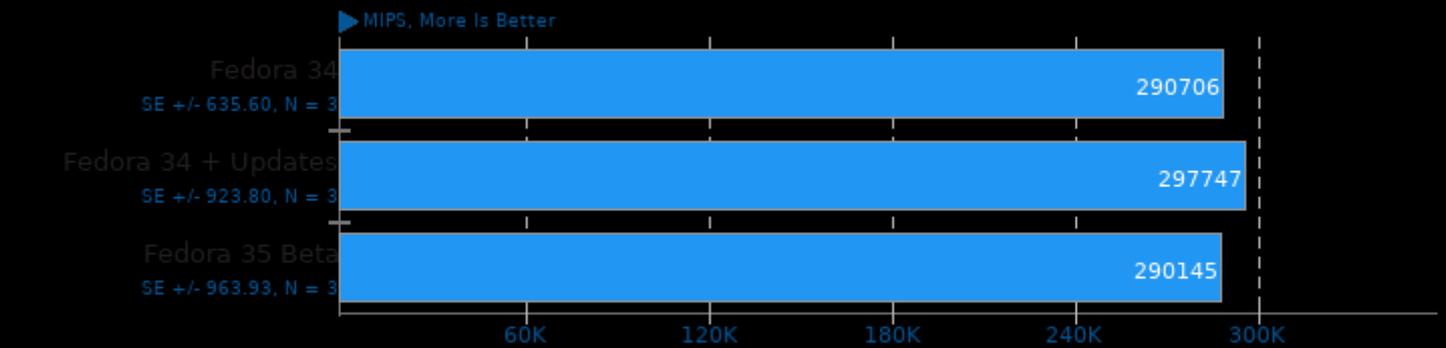
CoreMark Size 666 - Iterations Per Second



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

7-Zip Compression 16.02

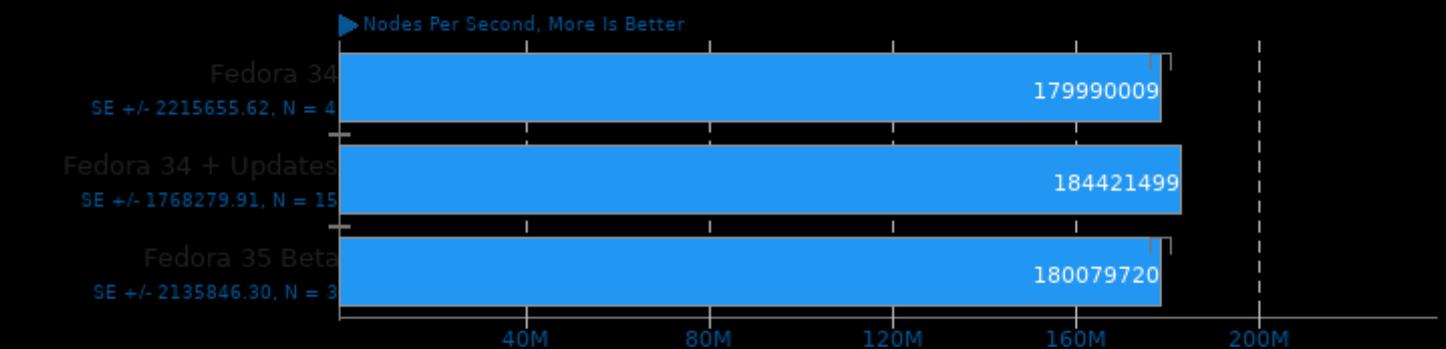
Compress Speed Test



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

Stockfish 13

Total Time

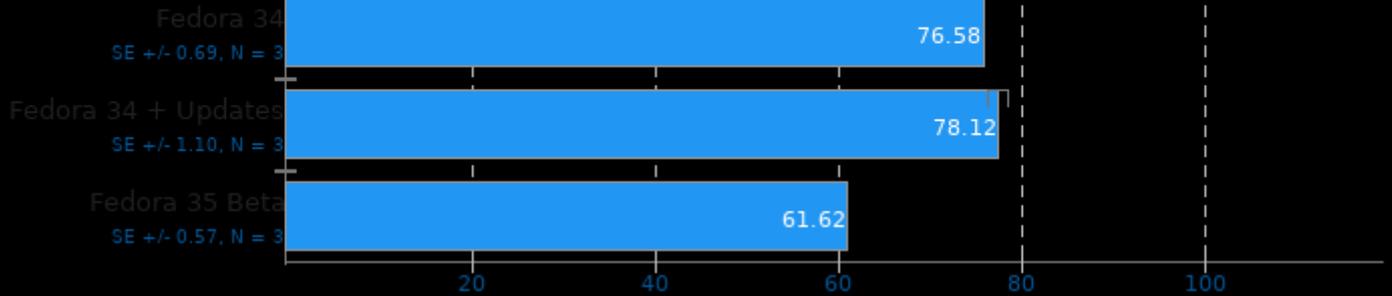


1. (CXX) g++ options: -lgcov -m64 -pthread -fno-exceptions -std=c++17 -fprofile-use -fno-peel-loops -fno-tracer -pedantic -O3 -msse -msse3 -mpopcnt

Timed Godot Game Engine Compilation 3.2.3

Time To Compile

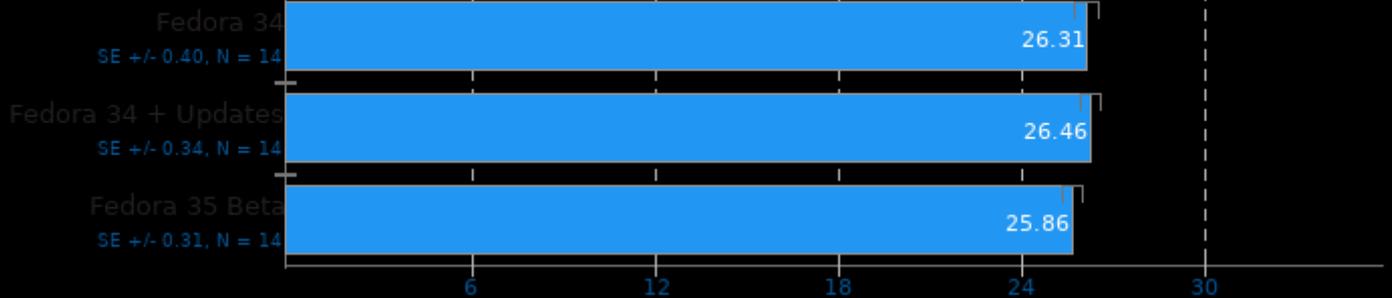
Seconds, Fewer Is Better



Timed Linux Kernel Compilation 5.14

Time To Compile

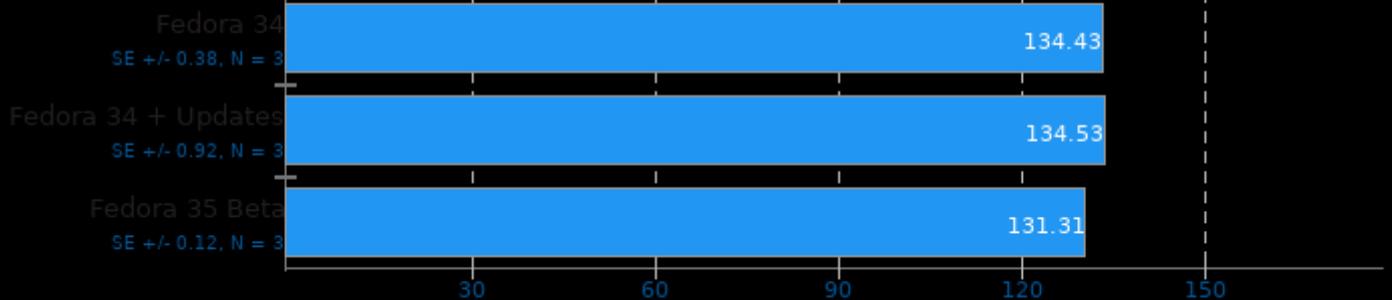
Seconds, Fewer Is Better



Timed LLVM Compilation 12.0

Build System: Ninja

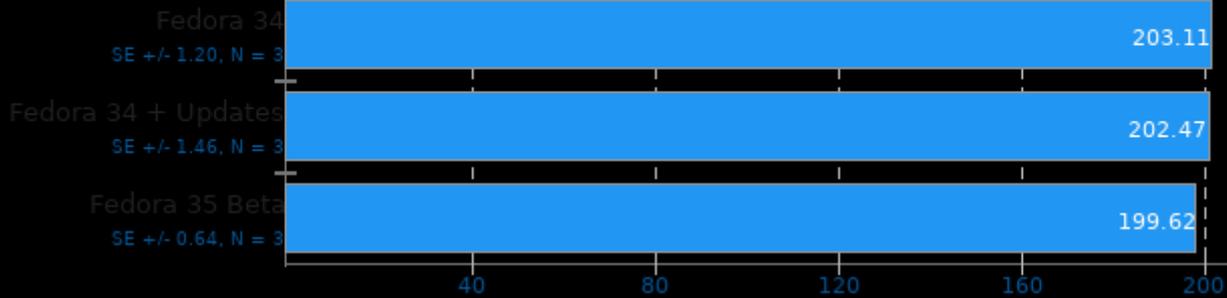
Seconds, Fewer Is Better



Timed LLVM Compilation 12.0

Build System: Unix Makefiles

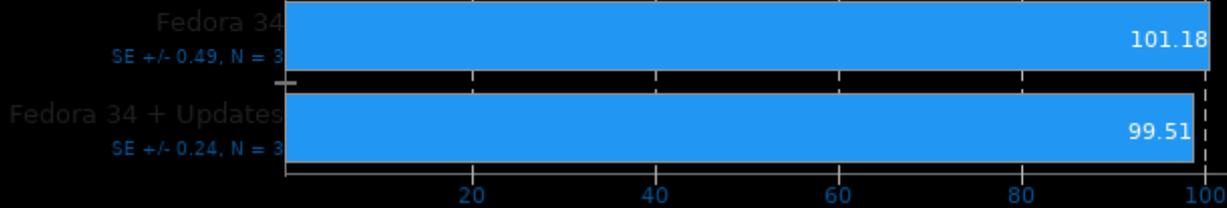
← Seconds, Fewer Is Better



Timed Node.js Compilation 15.11

Time To Compile

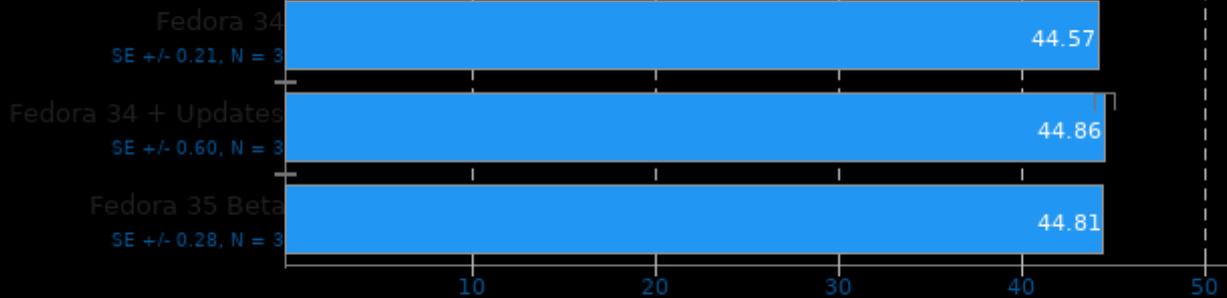
← Seconds, Fewer Is Better



Timed Wasmer Compilation 1.0.2

Time To Compile

← Seconds, Fewer Is Better

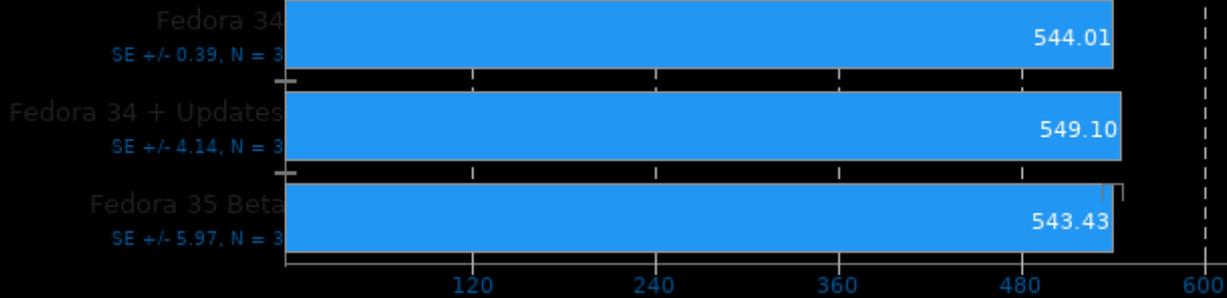


1. (CO) gcc options: -m64 -ldl -lgcc_s -lutil -lrt -lpthread -lm -lc -pie -nodefaultlibs

Google SynthMark 20201109

Test: VoiceMark_100

▶ Voices, More Is Better

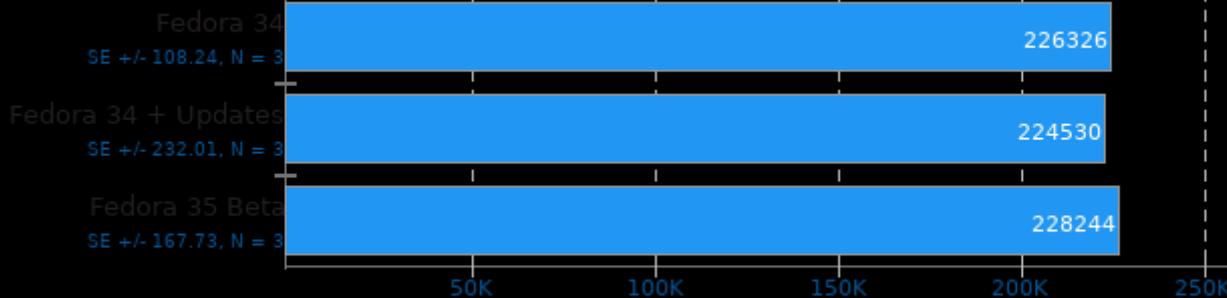


1. (CXX) g++ options: -lm -lthread -std=c++11 -Ofast

SecureMark 1.0.4

Benchmark: SecureMark-TLS

▶ marks, More Is Better

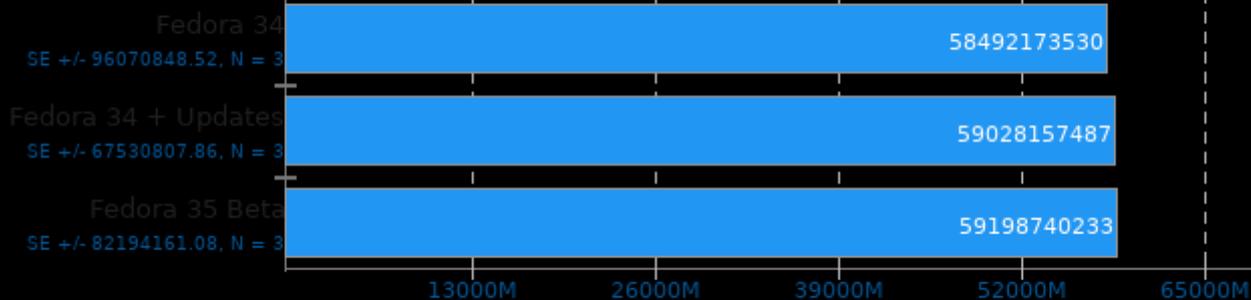


1. (CC) gcc options: -pedantic -O3

OpenSSL 3.0

Algorithm: SHA256

▶ byte/s, More Is Better

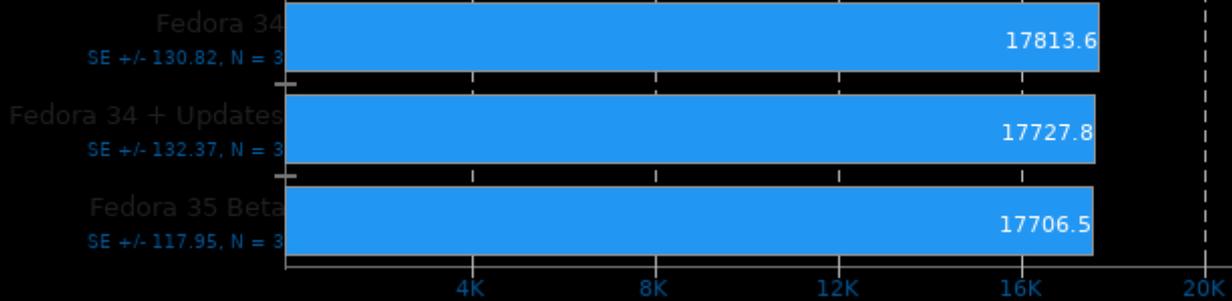


1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ld

OpenSSL 3.0

Algorithm: RSA4096

sign/s, More Is Better

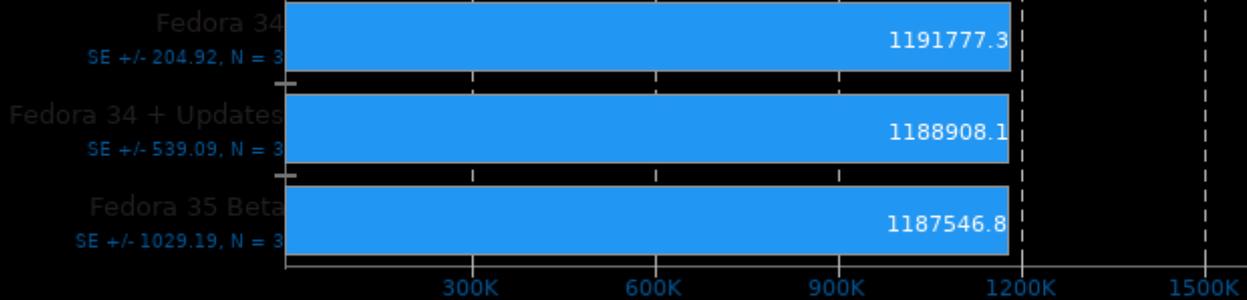


1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

OpenSSL 3.0

Algorithm: RSA4096

verify/s, More Is Better



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

GROMACS 2021.2

Implementation: MPI CPU - Input: water_GMX50_bare

ns Per Day, More Is Better

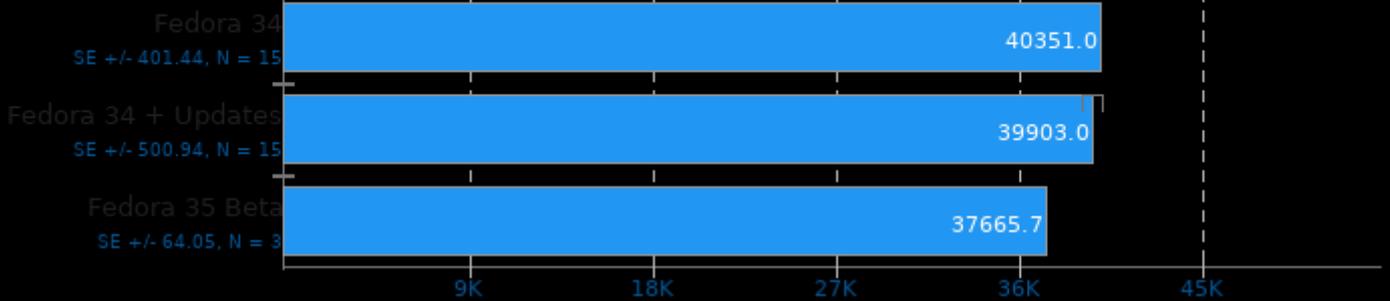


1. (CXX) g++ options: -O3

TensorFlow Lite 2020-08-23

Model: Mobilenet Quant

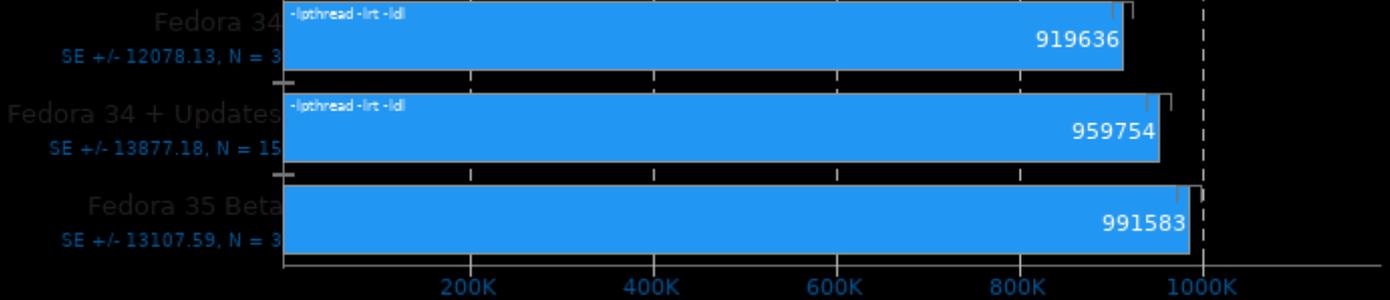
Microseconds, Fewer Is Better



PostgreSQL pgbench 13.0

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

TPS, More Is Better

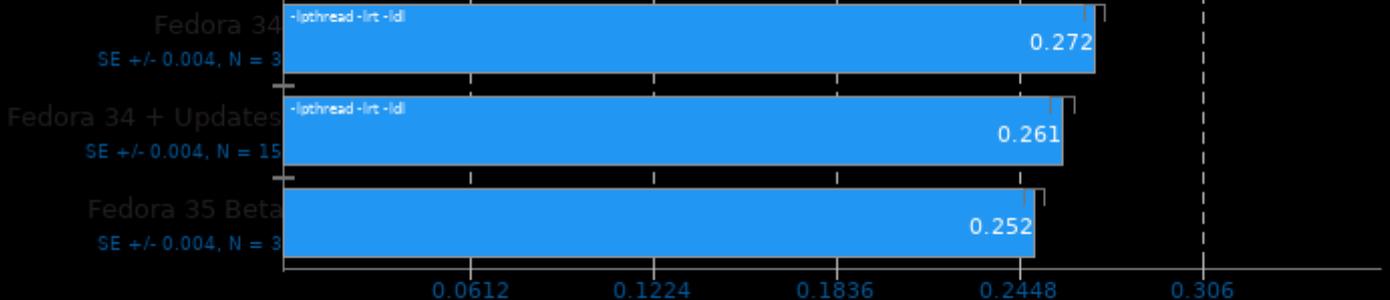


1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lm

PostgreSQL pgbench 13.0

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

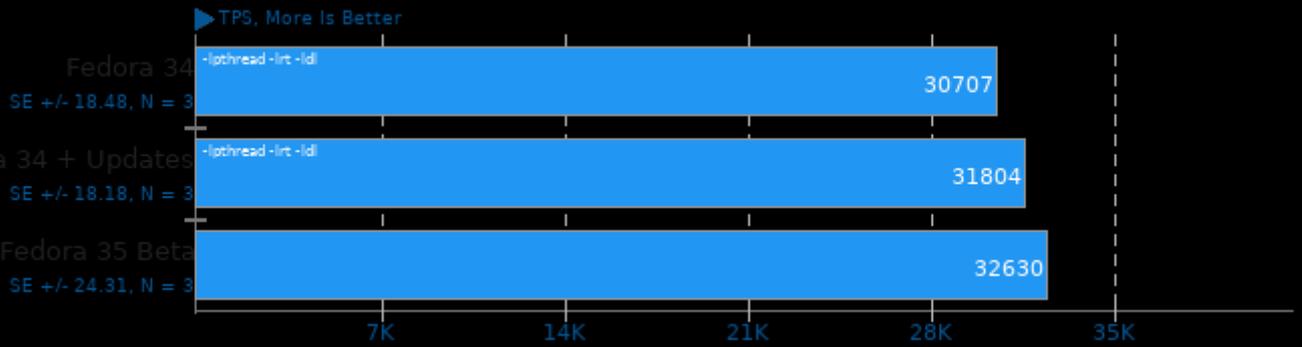
ms, Fewer Is Better



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

PostgreSQL pgbench 13.0

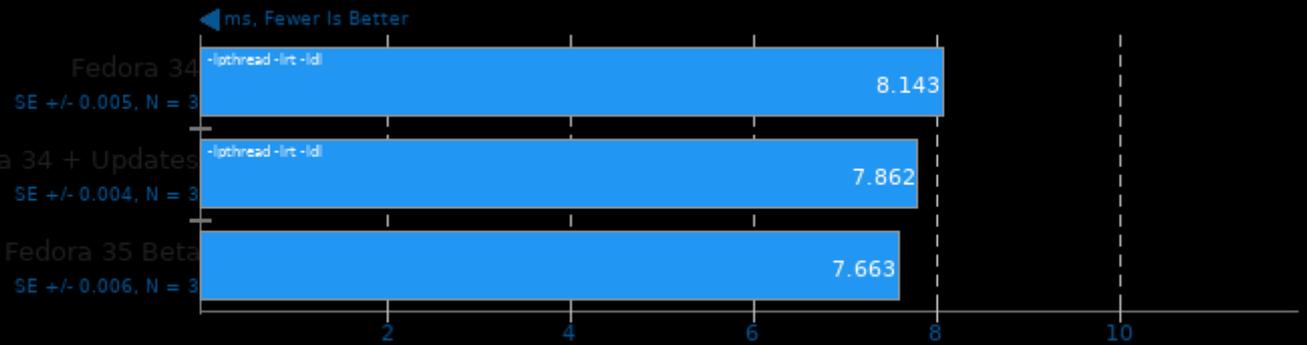
Scaling Factor: 100 - Clients: 250 - Mode: Read Write



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

PostgreSQL pgbench 13.0

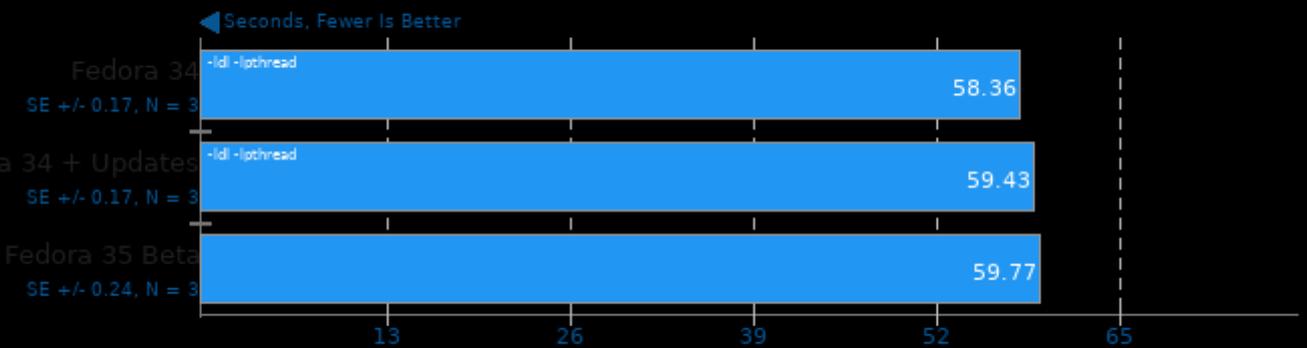
Scaling Factor: 100 - Clients: 250 - Mode: Read Write - Average Latency



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

SQLite Speedtest 3.30

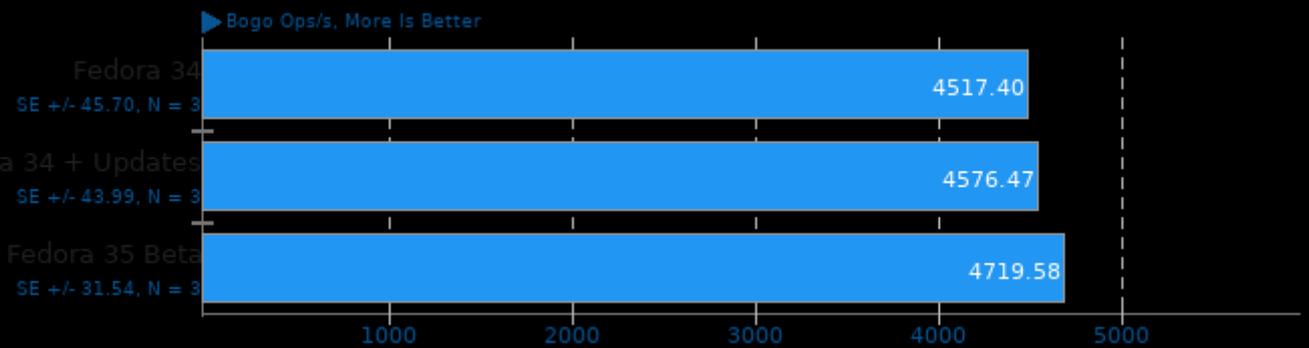
Timed Time - Size 1,000



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

Stress-NG 0.13.02

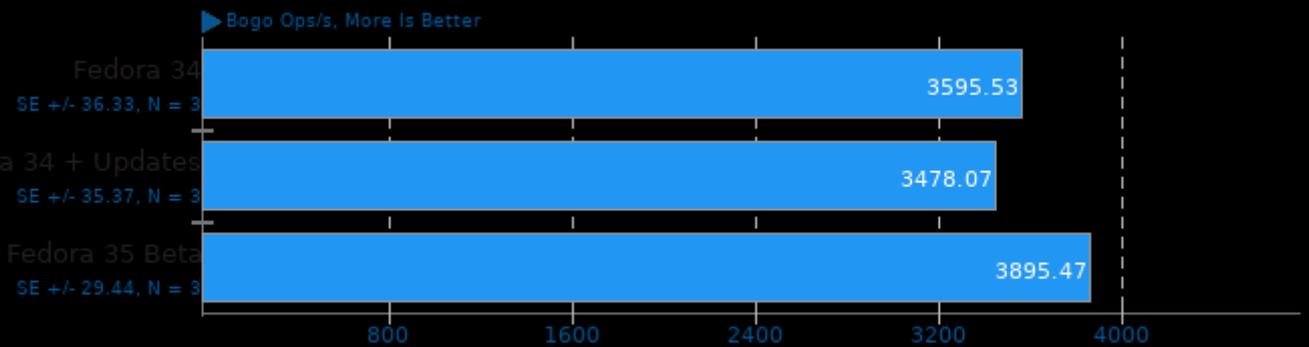
Test: MMAP



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

Stress-NG 0.13.02

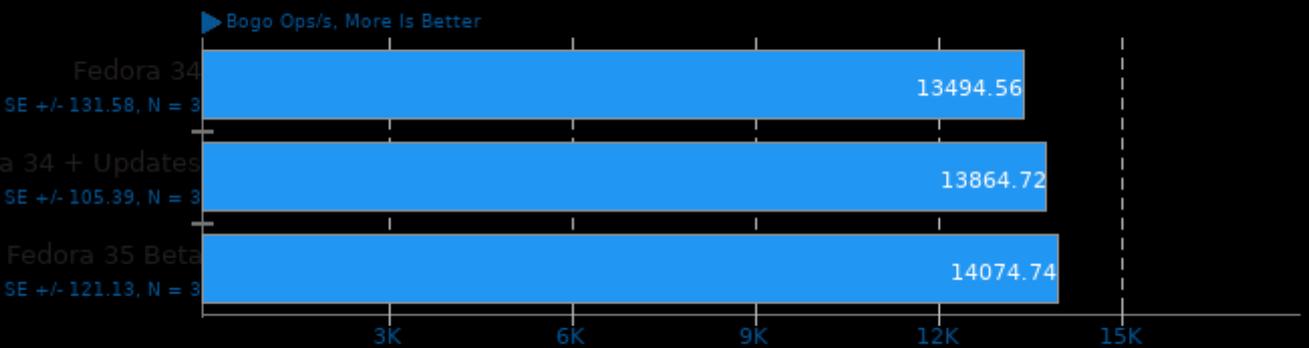
Test: MEMFD



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

Stress-NG 0.13.02

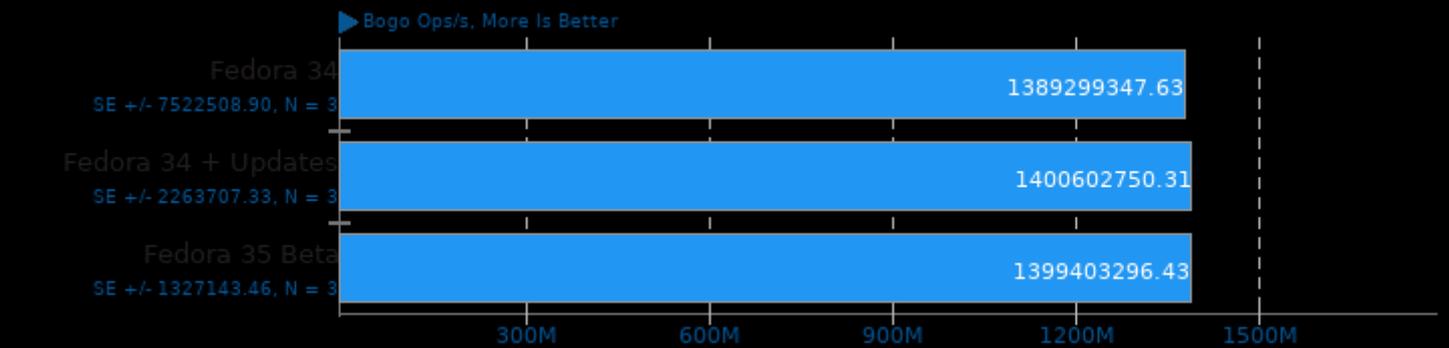
Test: Crypto



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

Stress-NG 0.13.02

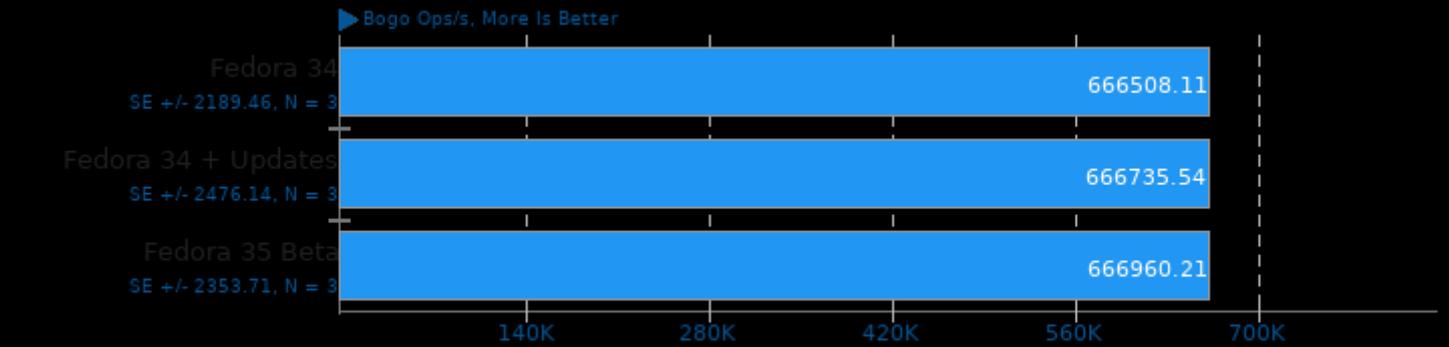
Test: Malloc



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

Stress-NG 0.13.02

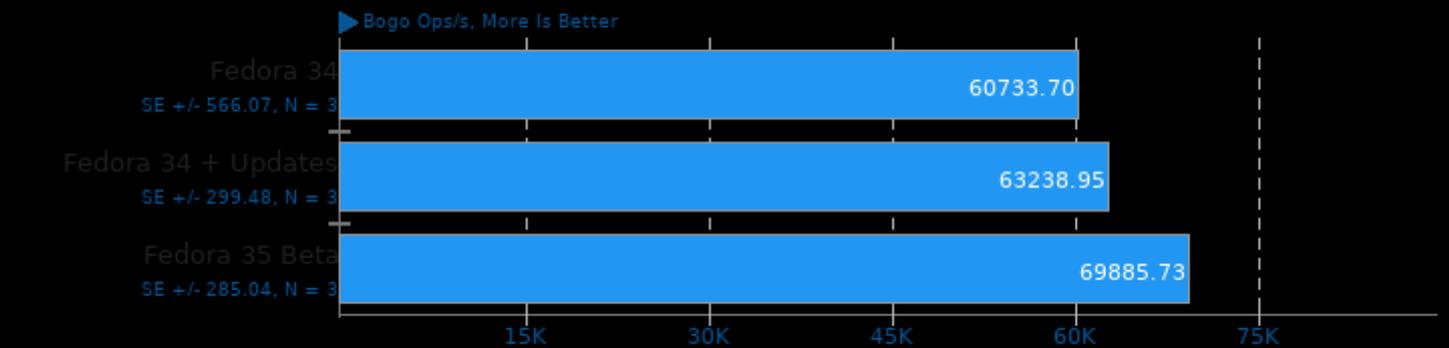
Test: RdRand



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

Stress-NG 0.13.02

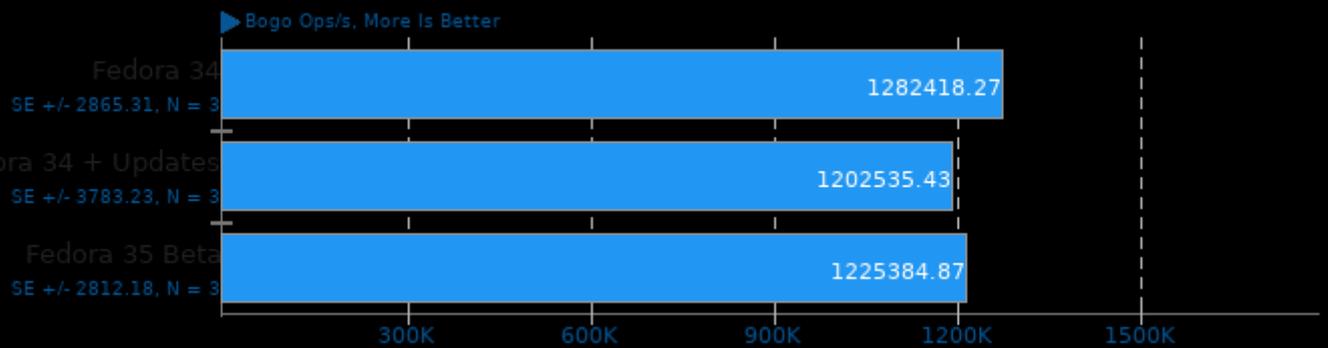
Test: Forking



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

Stress-NG 0.13.02

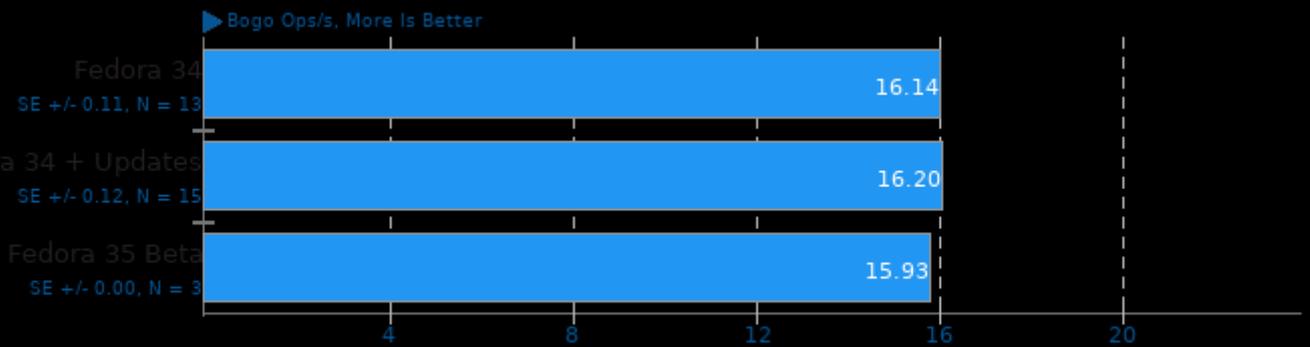
Test: SENDFILE



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

Stress-NG 0.13.02

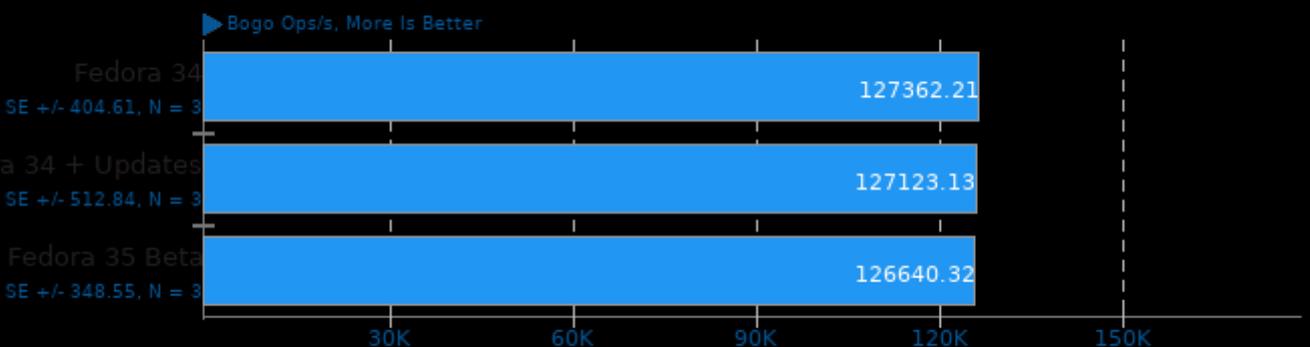
Test: CPU Cache



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

Stress-NG 0.13.02

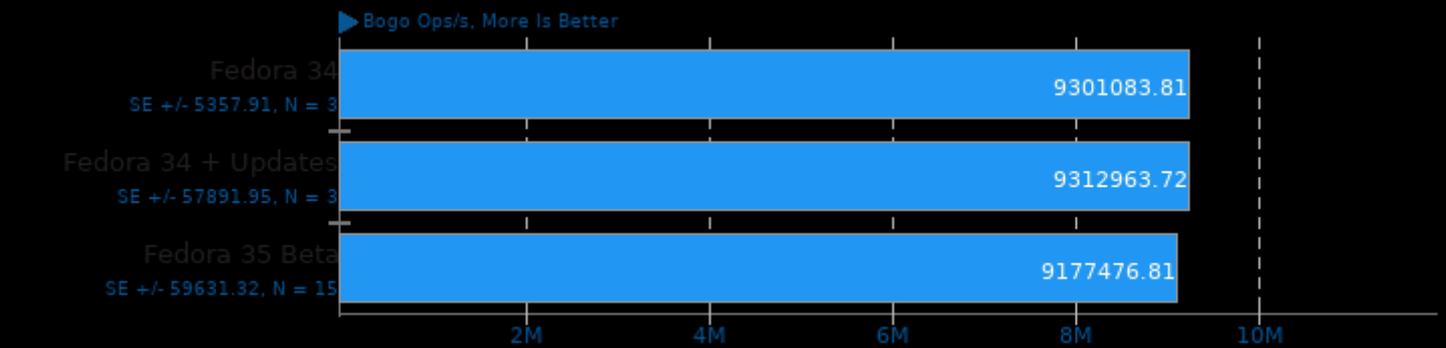
Test: CPU Stress



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

Stress-NG 0.13.02

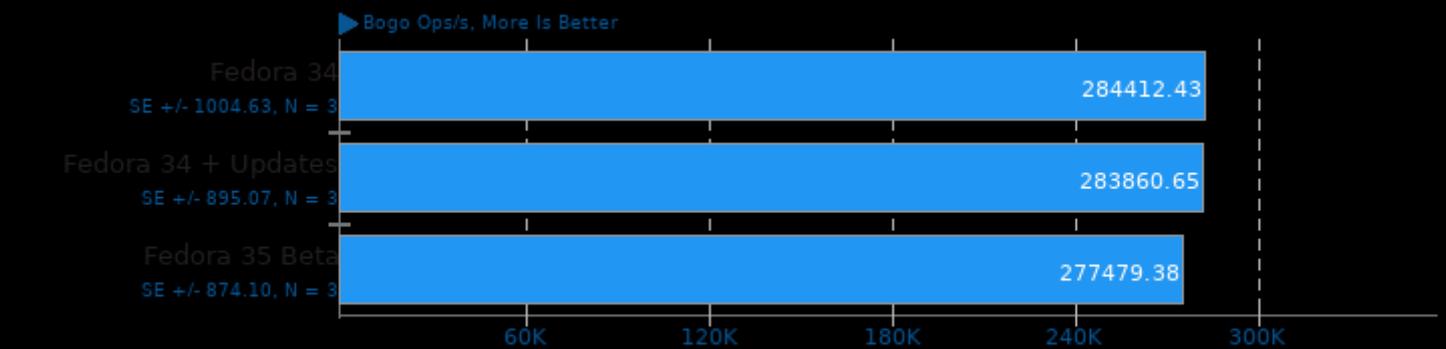
Test: Semaphores



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

Stress-NG 0.13.02

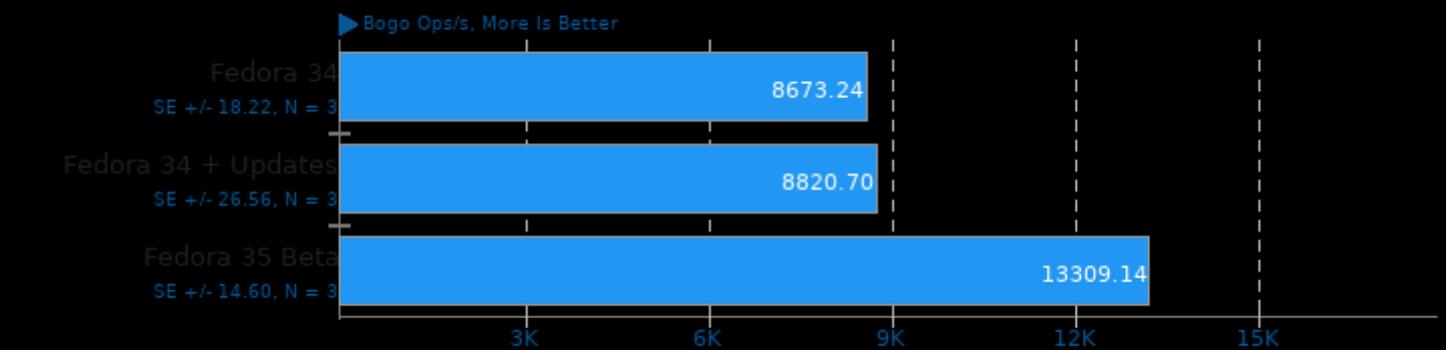
Test: Vector Math



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

Stress-NG 0.13.02

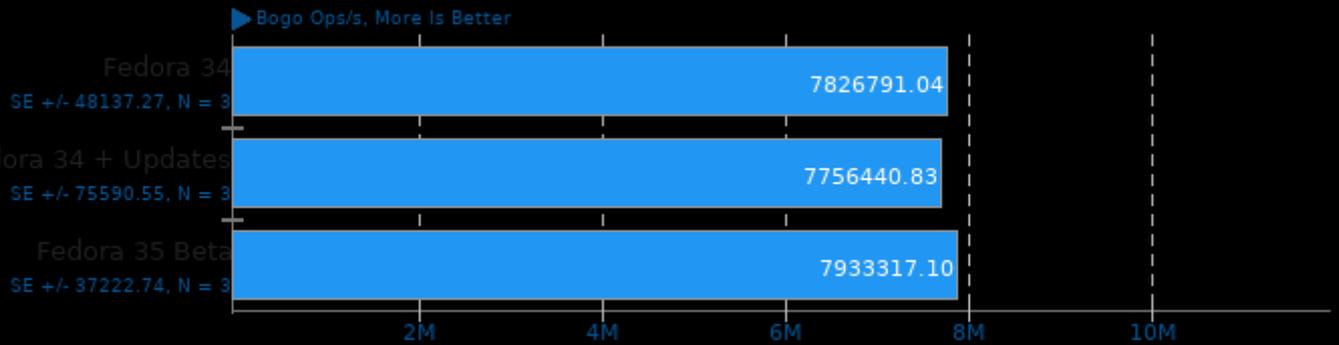
Test: Memory Copying



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

Stress-NG 0.13.02

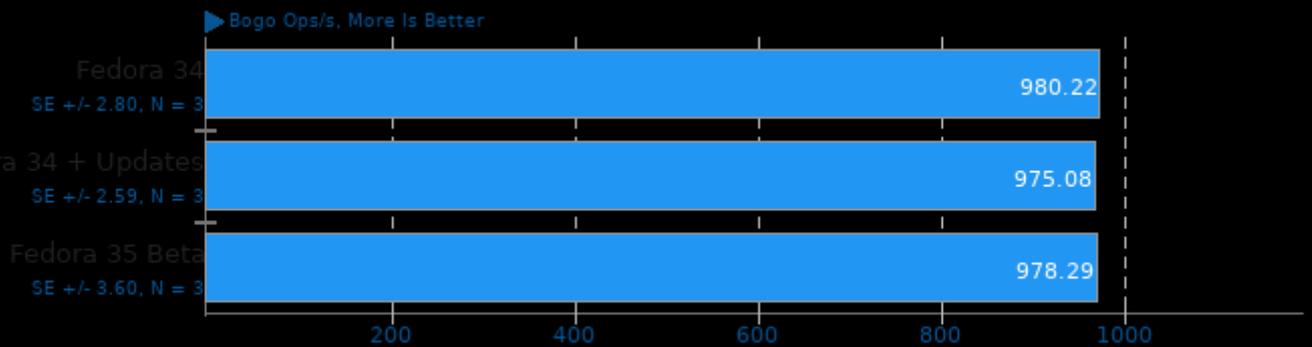
Test: Glibc C String Functions



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

Stress-NG 0.13.02

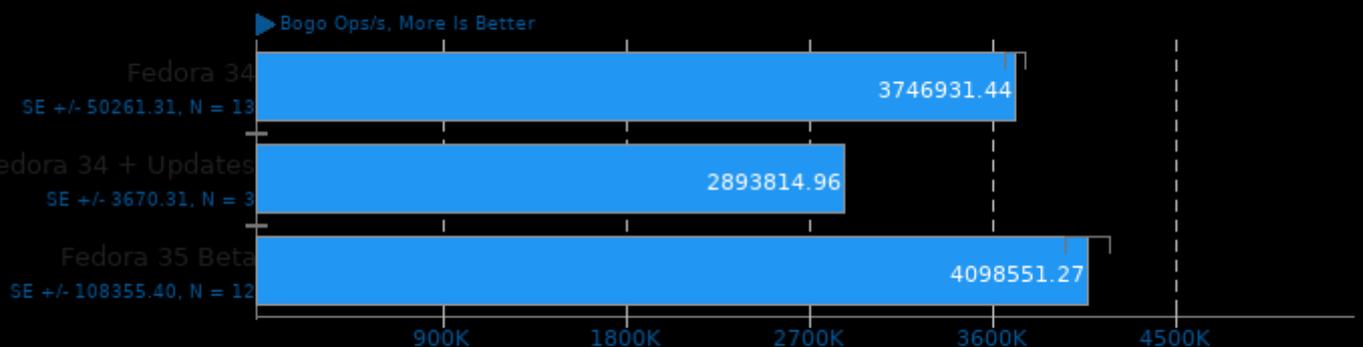
Test: Glibc Qsort Data Sorting



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

Stress-NG 0.13.02

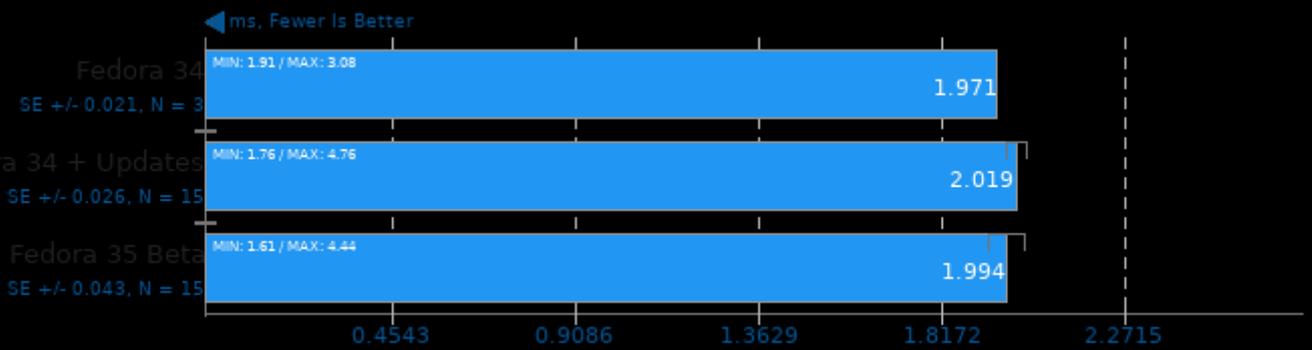
Test: System V Message Passing



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

Mobile Neural Network 1.2

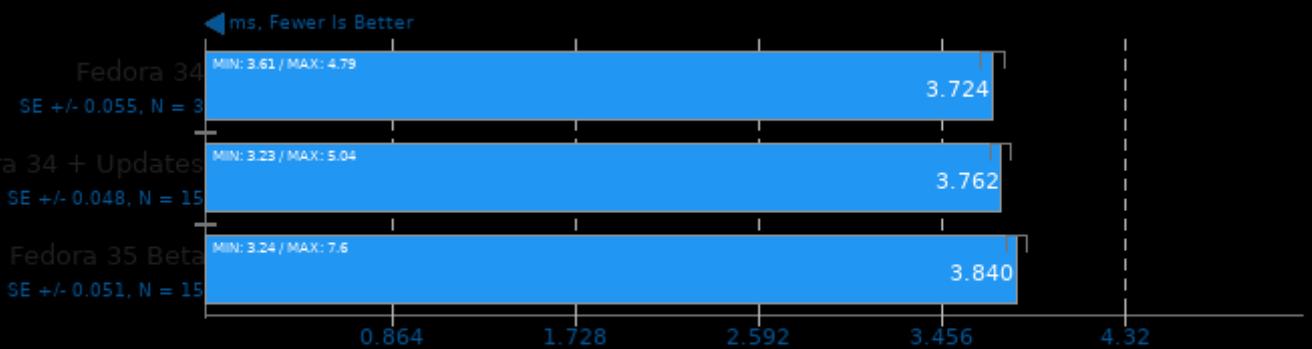
Model: mobilenetV3



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

Mobile Neural Network 1.2

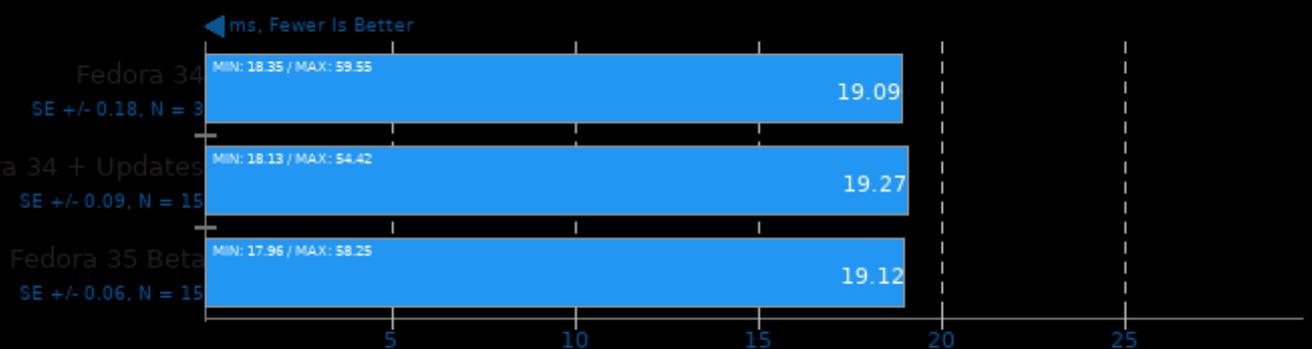
Model: squeezenetv1.1



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

Mobile Neural Network 1.2

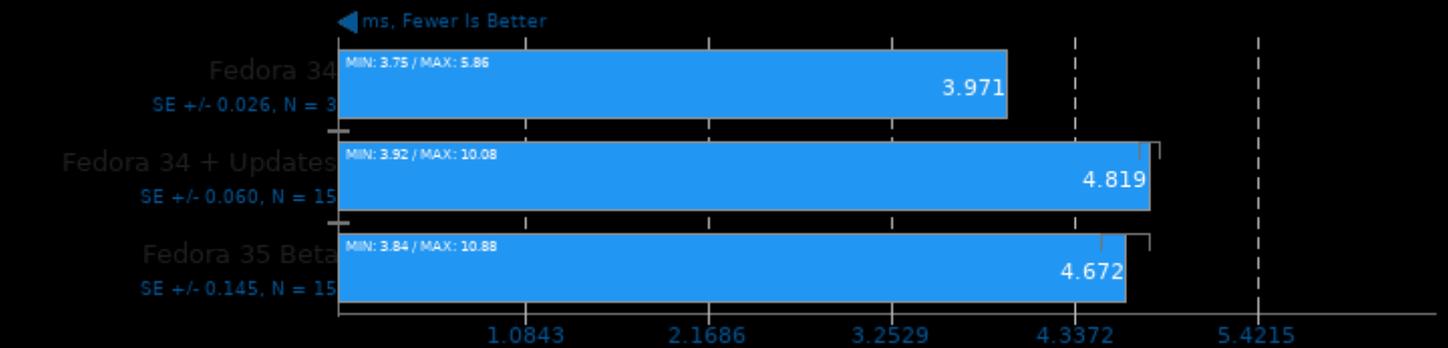
Model: resnet-v2-50



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

Mobile Neural Network 1.2

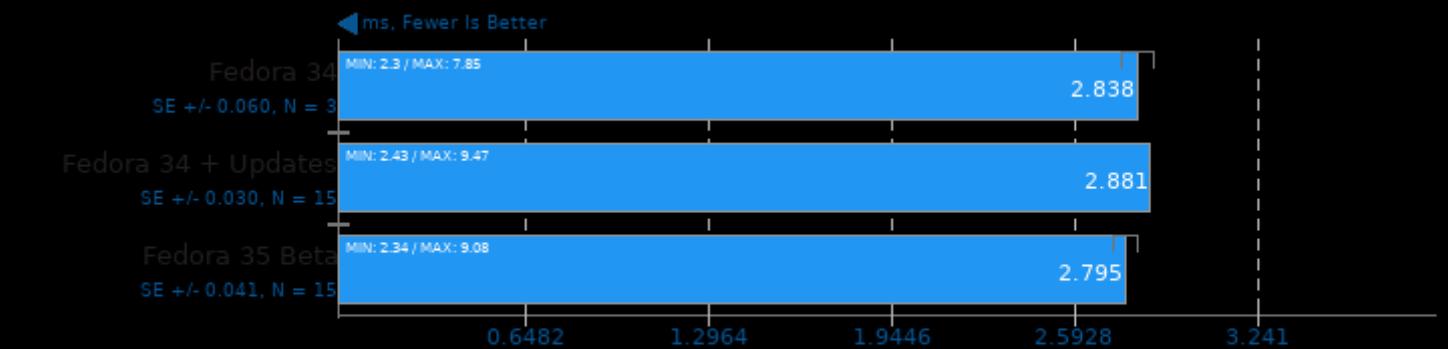
Model: SqueezeNetV1.0



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

Mobile Neural Network 1.2

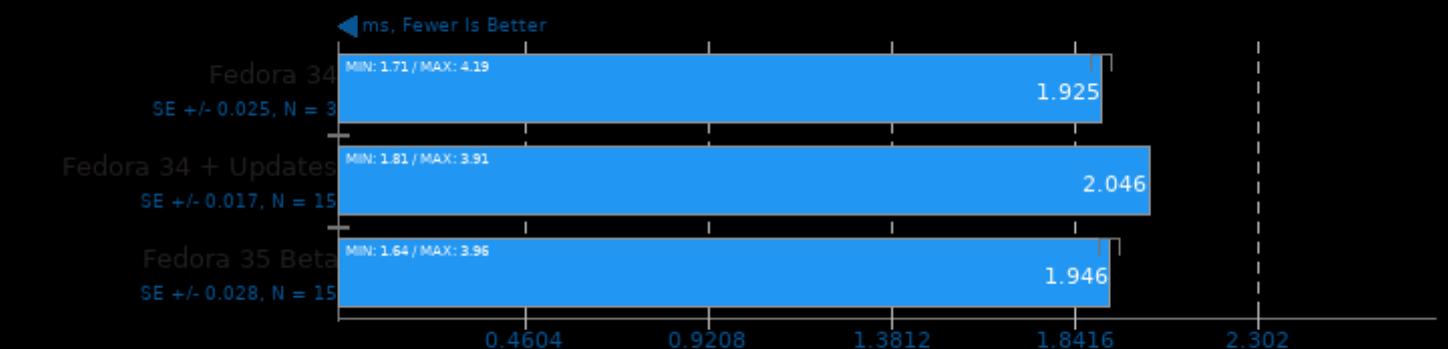
Model: MobileNetV2_224



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

Mobile Neural Network 1.2

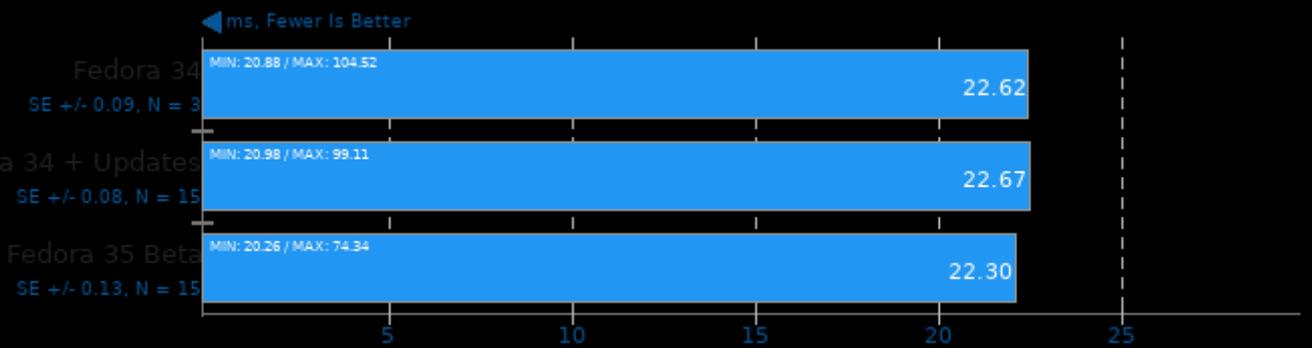
Model: mobilenet-v1-1.0



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

Mobile Neural Network 1.2

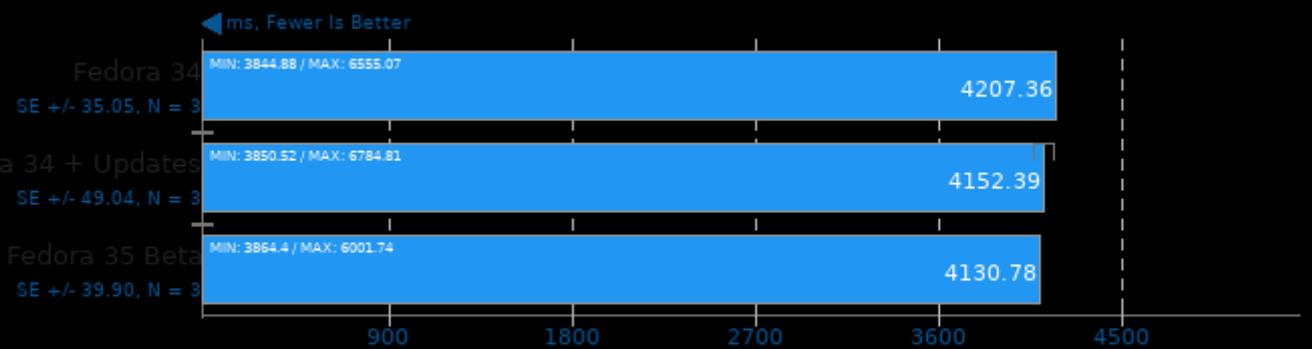
Model: inception-v3



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

TNN 0.3

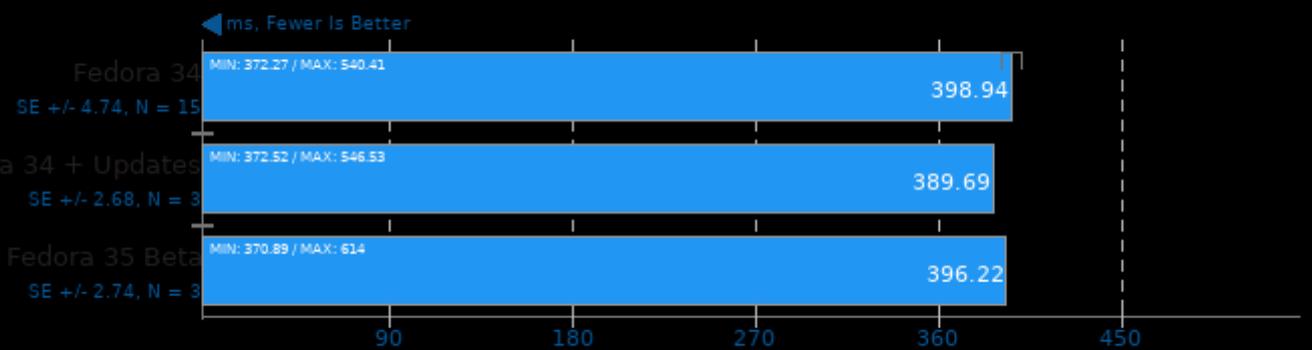
Target: CPU - Model: DenseNet



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

TNN 0.3

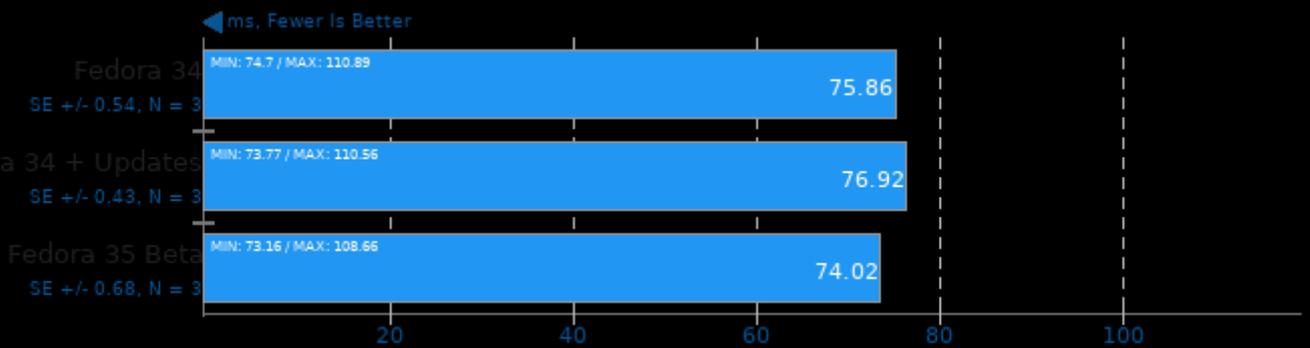
Target: CPU - Model: MobileNet v2



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

TNN 0.3

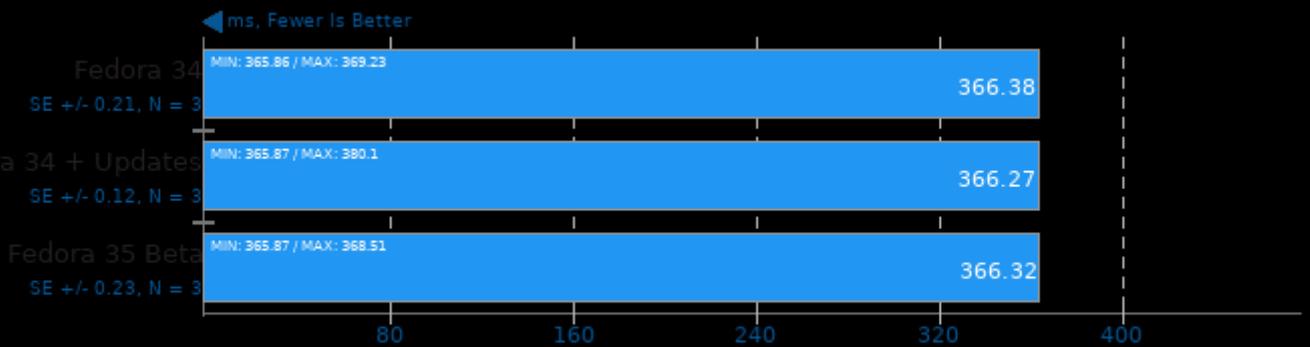
Target: CPU - Model: SqueezeNet v2



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

TNN 0.3

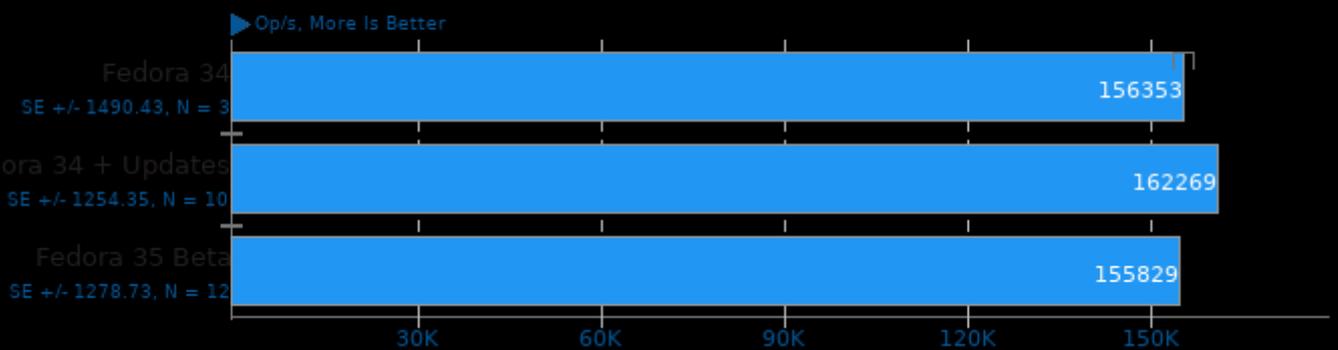
Target: CPU - Model: SqueezeNet v1.1



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

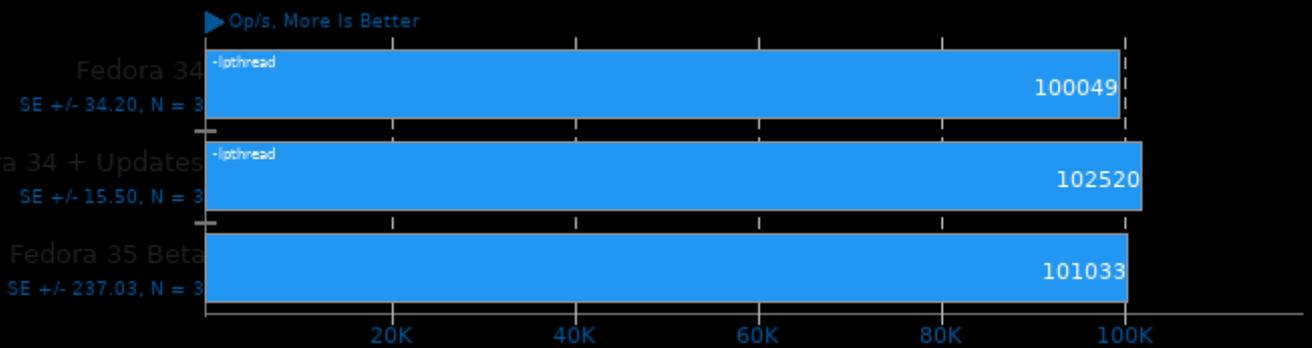
Apache Cassandra 4.0

Test: Writes



Facebook RocksDB 6.22.1

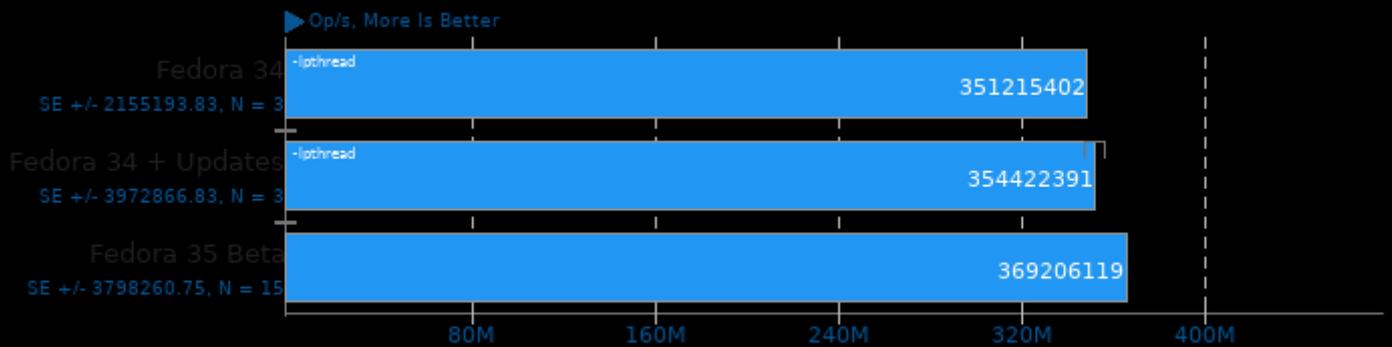
Test: Random Fill



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

Facebook RocksDB 6.22.1

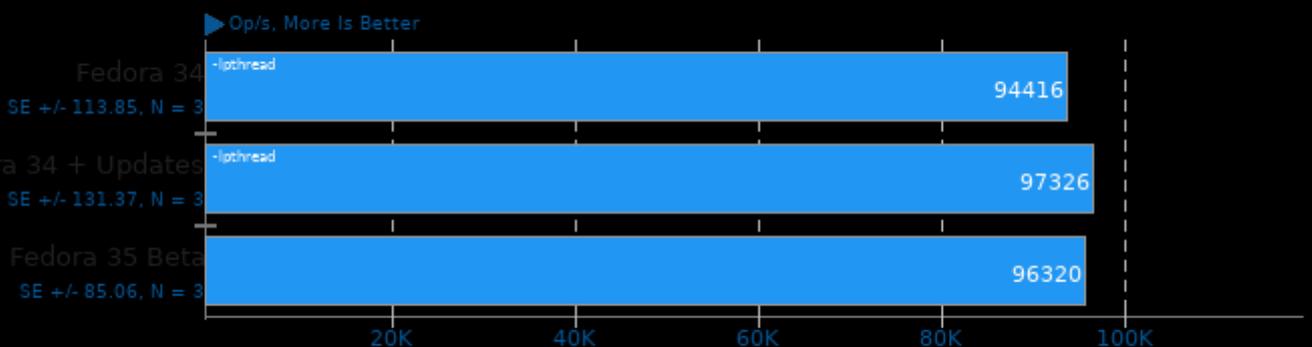
Test: Random Read



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

Facebook RocksDB 6.22.1

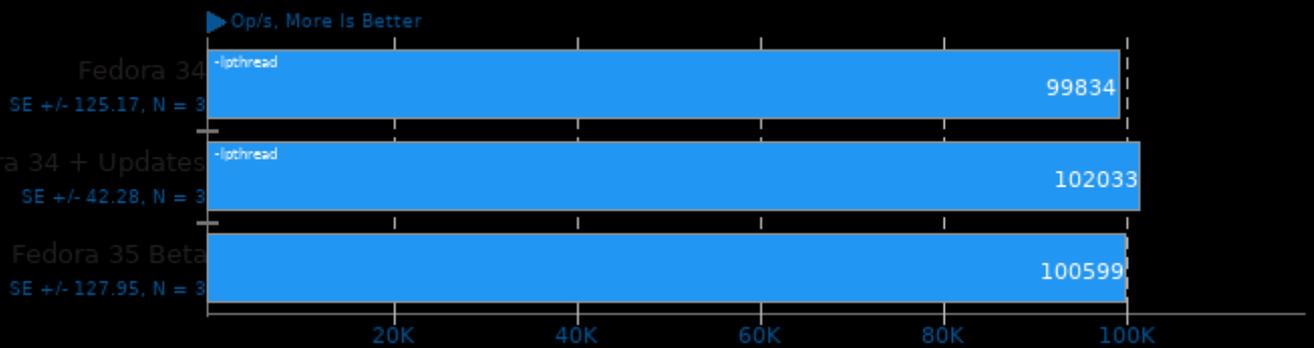
Test: Update Random



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

Facebook RocksDB 6.22.1

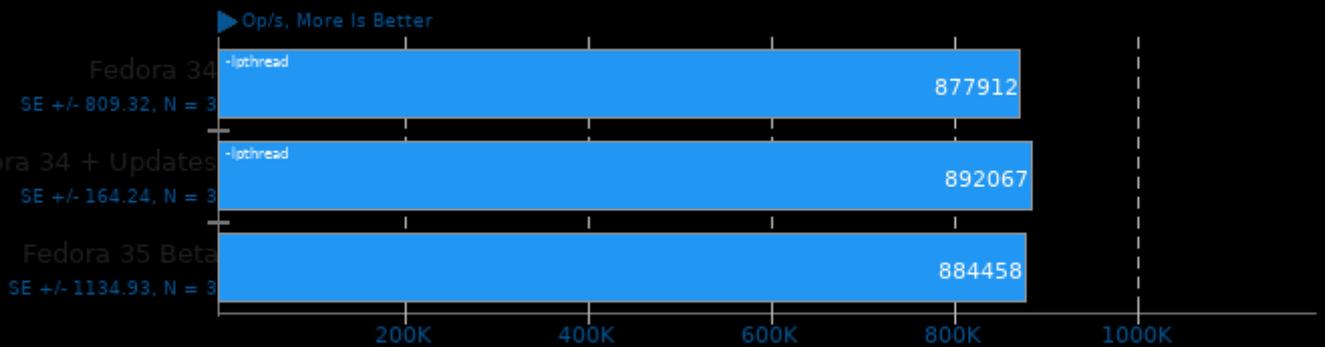
Test: Random Fill Sync



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

Facebook RocksDB 6.22.1

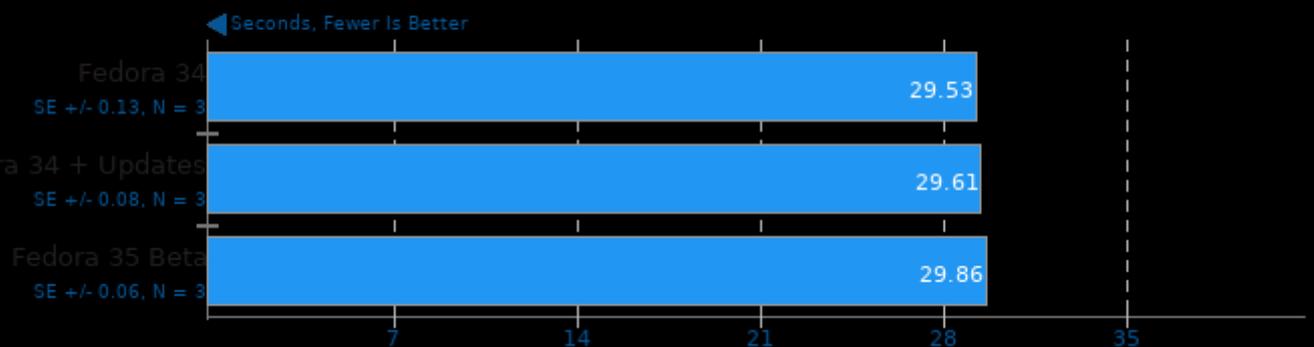
Test: Read Random Write Random



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

Blender 2.92

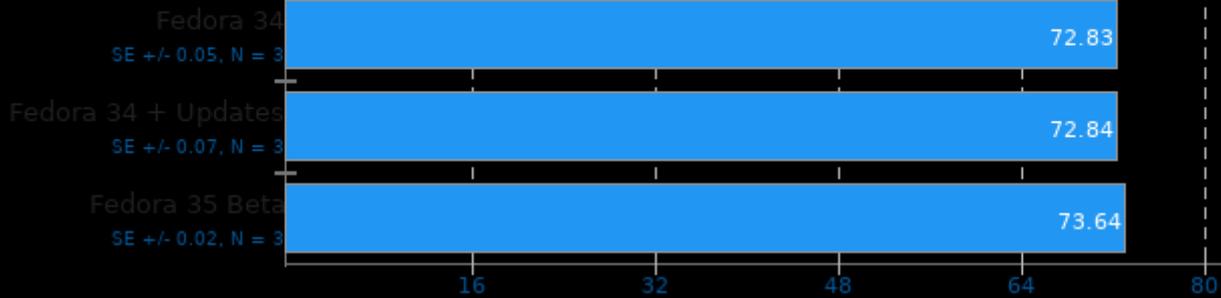
Blend File: BMW27 - Compute: CPU-Only



Blender 2.92

Blend File: Classroom - Compute: CPU-Only

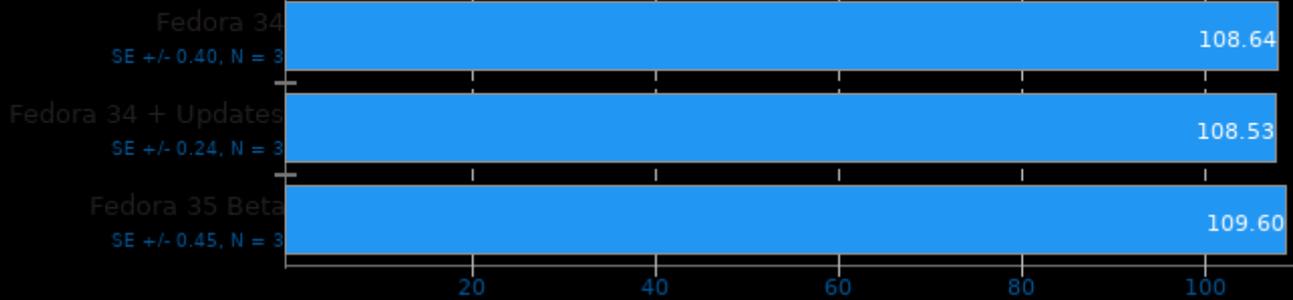
◀ Seconds, Fewer Is Better



Blender 2.92

Blend File: Barbershop - Compute: CPU-Only

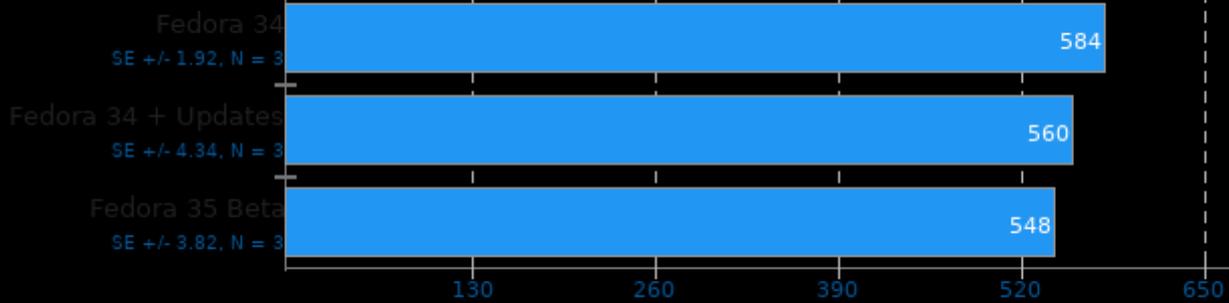
◀ Seconds, Fewer Is Better



ONNX Runtime 1.8.2

Model: yolov4 - Device: OpenMP CPU

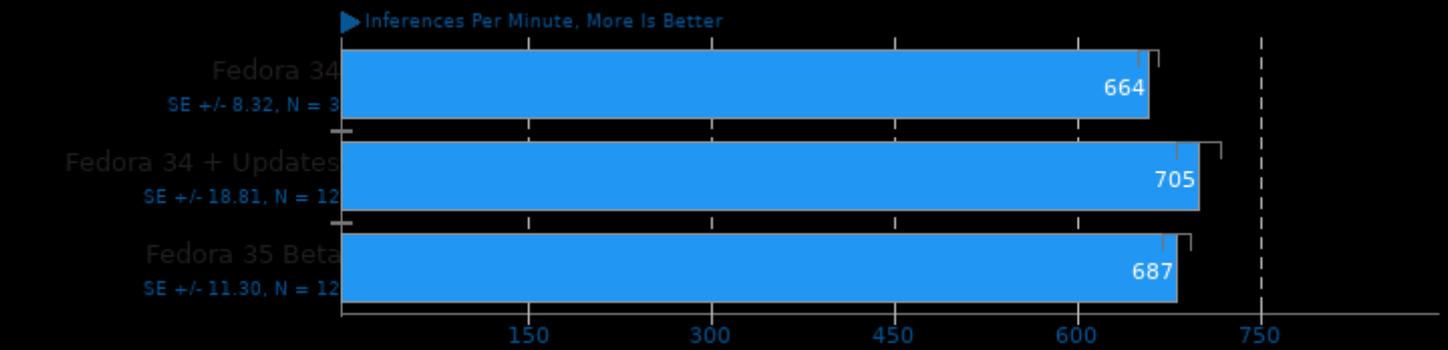
▶ Inferences Per Minute, More Is Better



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

ONNX Runtime 1.8.2

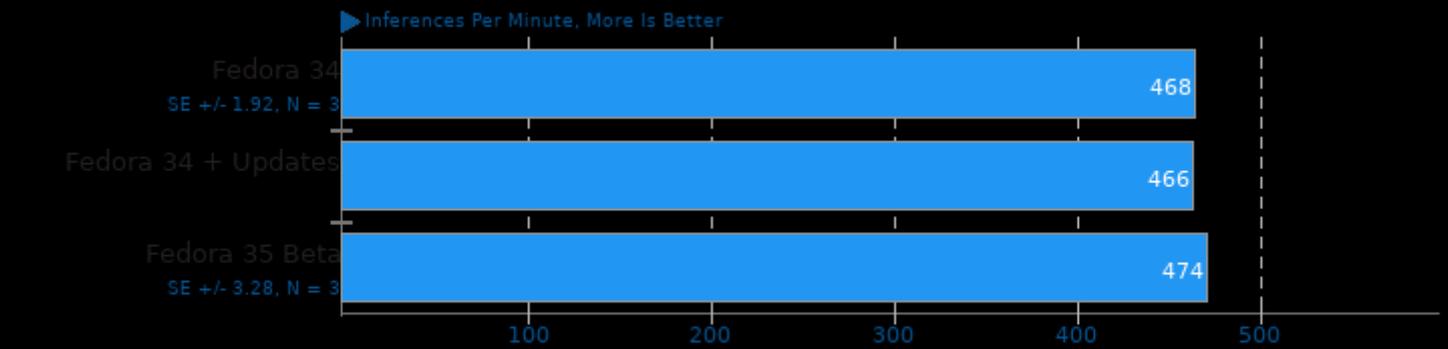
Model: bertsqad-10 - Device: OpenMP CPU



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

ONNX Runtime 1.8.2

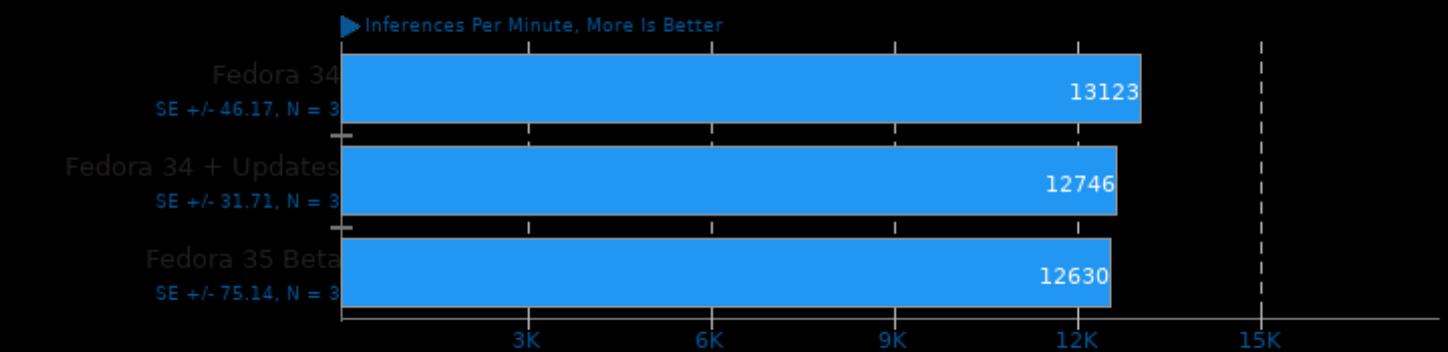
Model: fcnn-resnet101-11 - Device: OpenMP CPU



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

ONNX Runtime 1.8.2

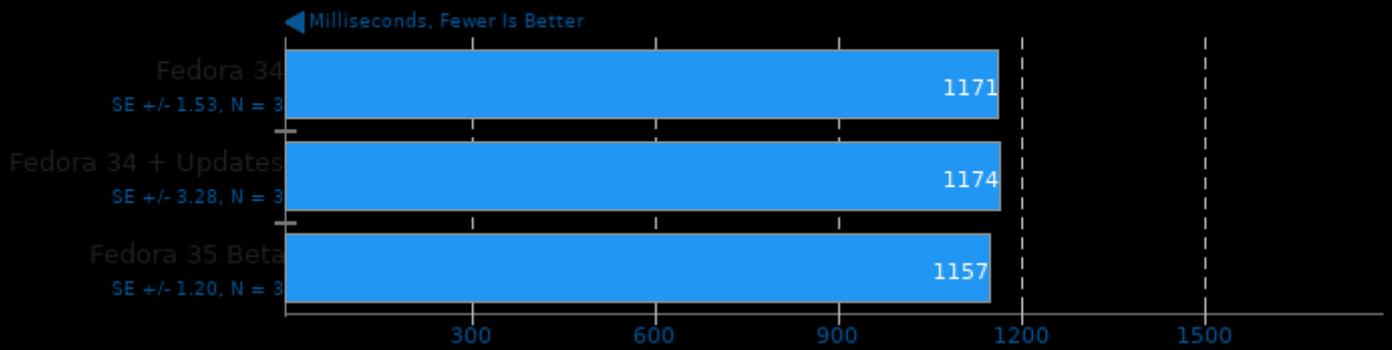
Model: shufflenet-v2-10 - Device: OpenMP CPU



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

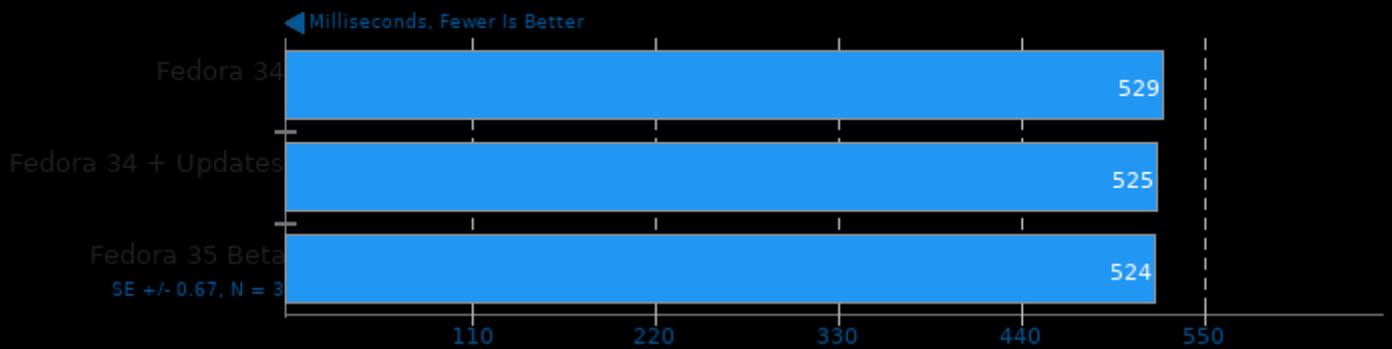
PyBench 2018-02-16

Total For Average Test Times



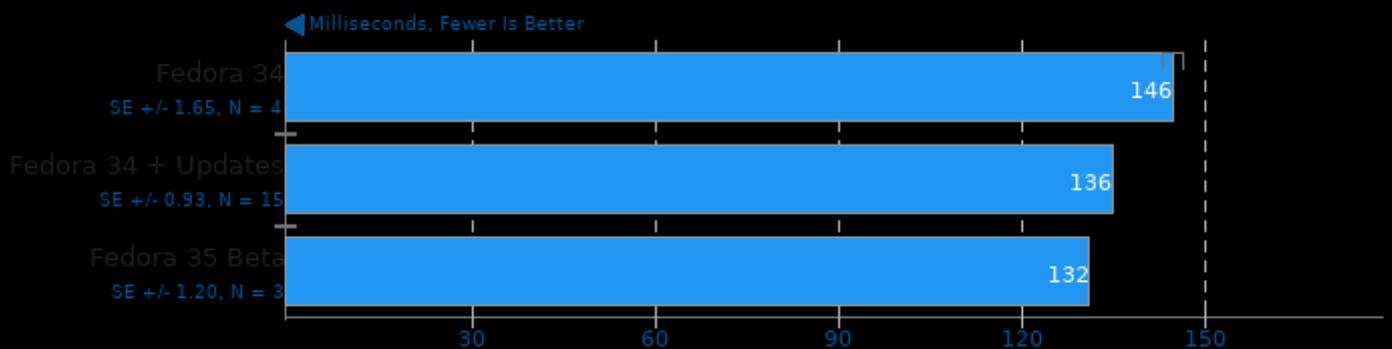
PyPerformance 1.0.0

Benchmark: 2to3



PyPerformance 1.0.0

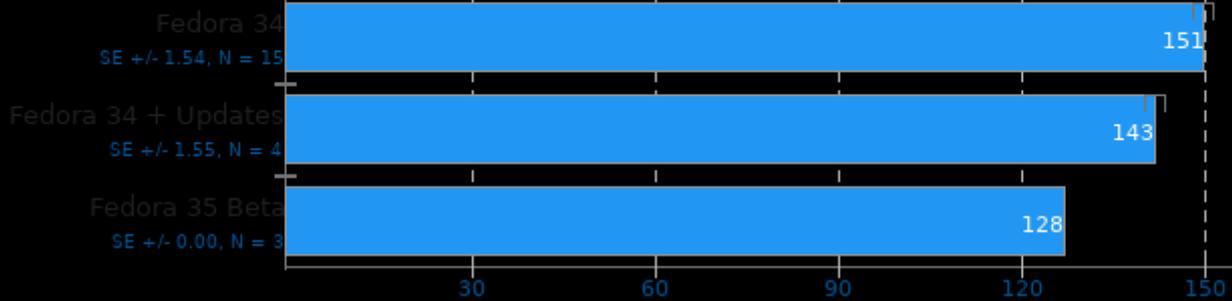
Benchmark: chaos



PyPerformance 1.0.0

Benchmark: float

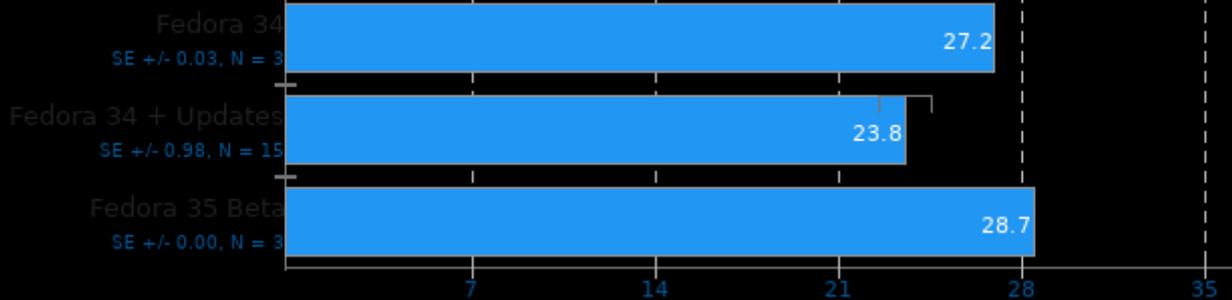
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: pathlib

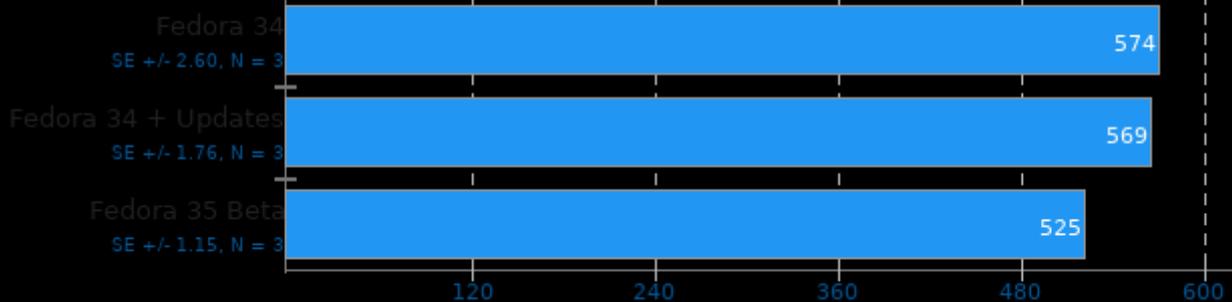
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: raytrace

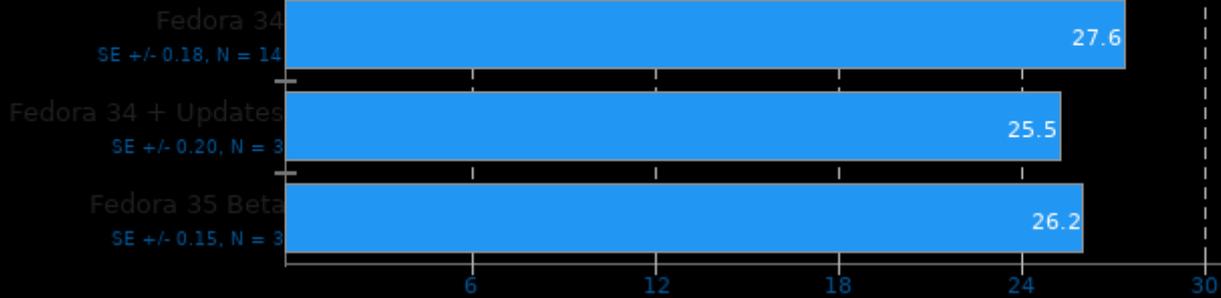
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: json_loads

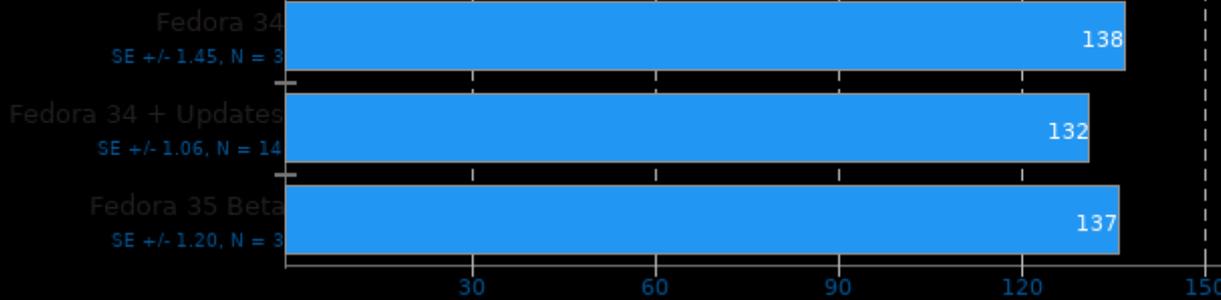
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: crypto_pyaes

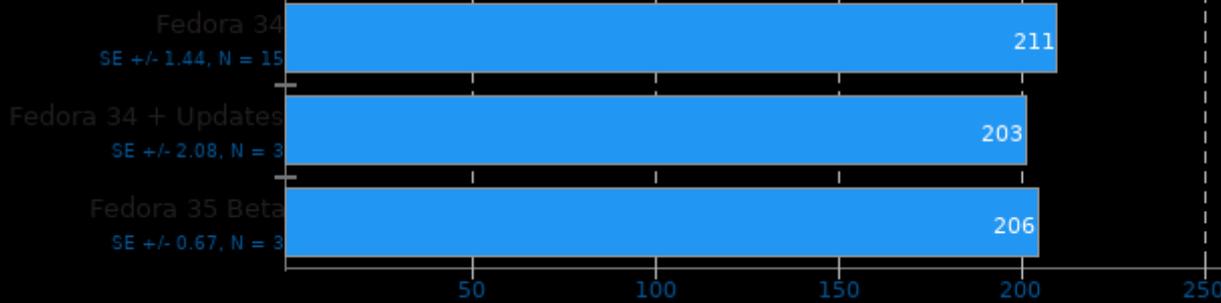
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: regex_compile

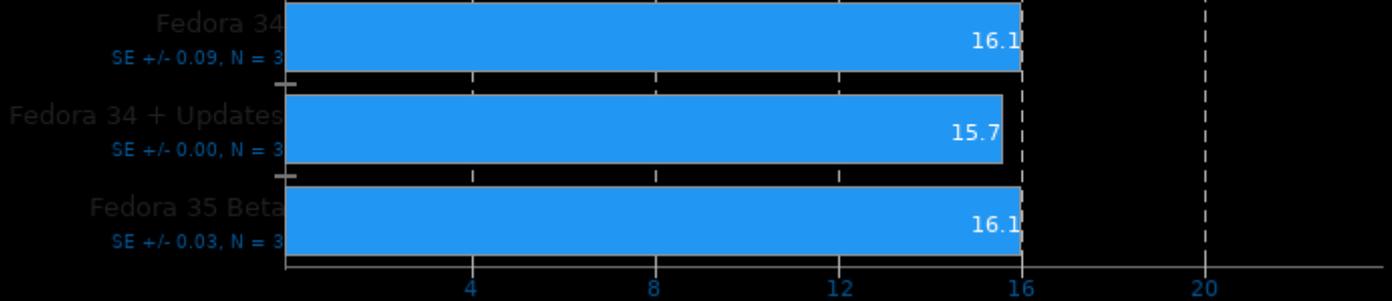
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: python_startup

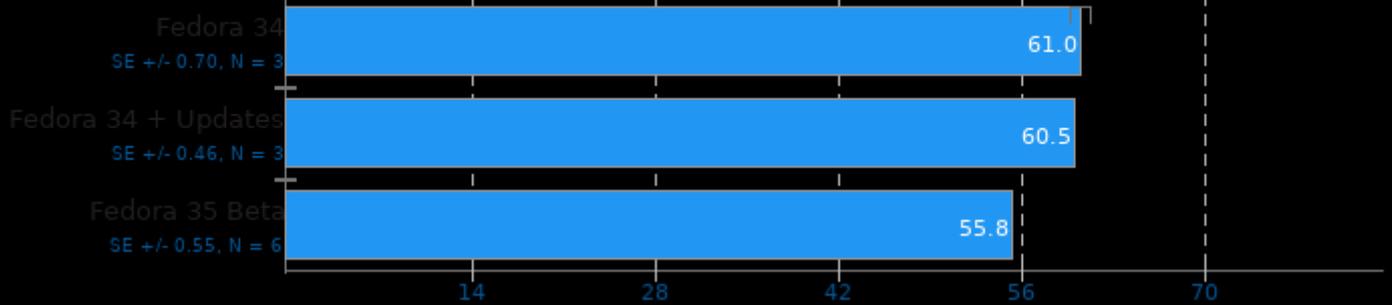
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: django_template

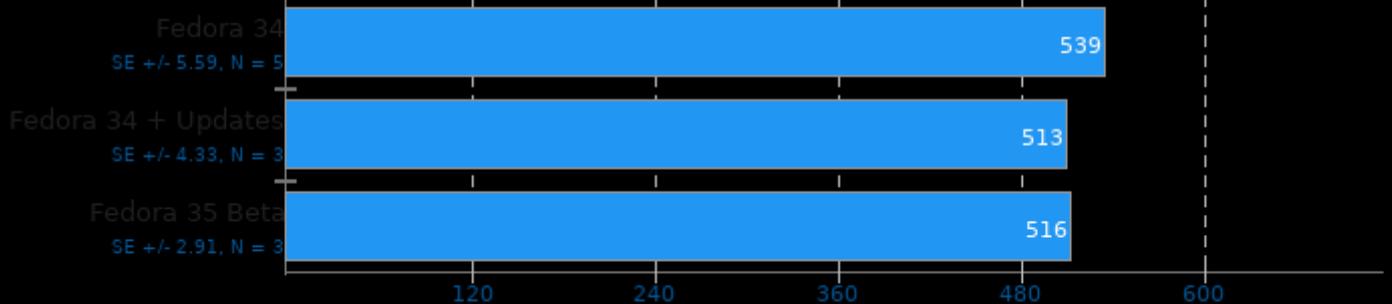
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

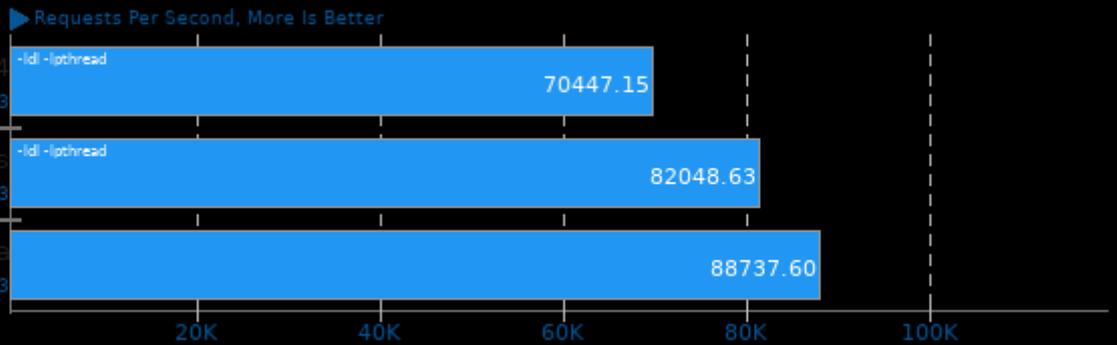
Benchmark: pickle_pure_python

◀ Milliseconds, Fewer Is Better



nginx 1.21.1

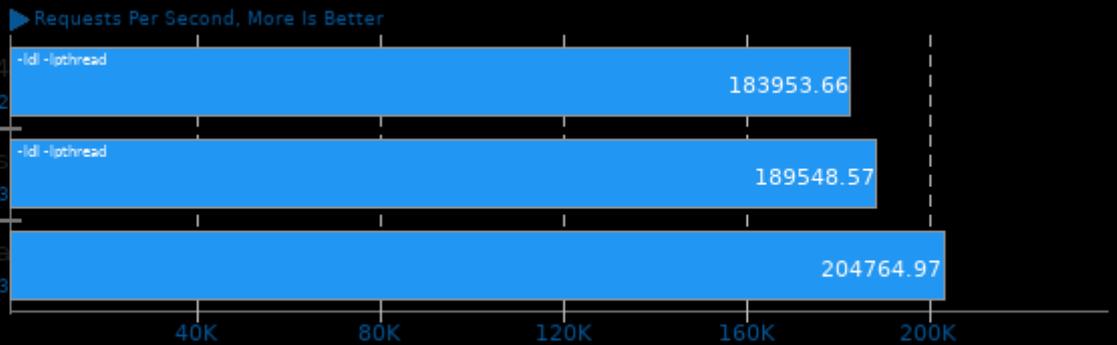
Concurrent Requests: 100



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

nginx 1.21.1

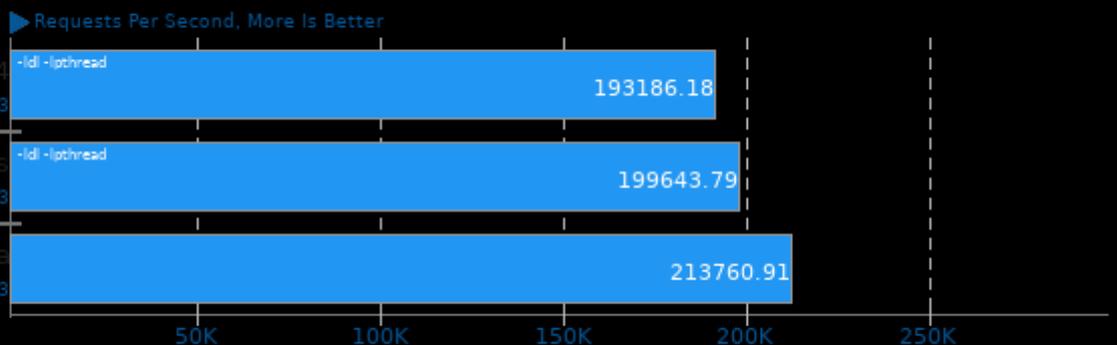
Concurrent Requests: 200



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

nginx 1.21.1

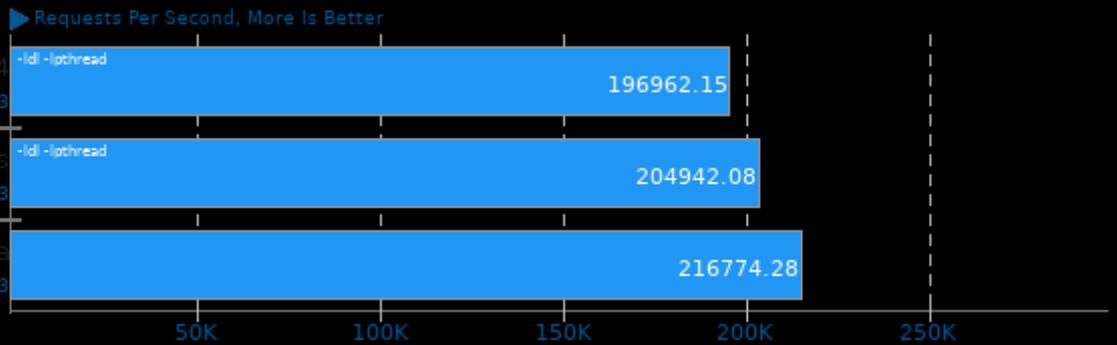
Concurrent Requests: 500



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

nginx 1.21.1

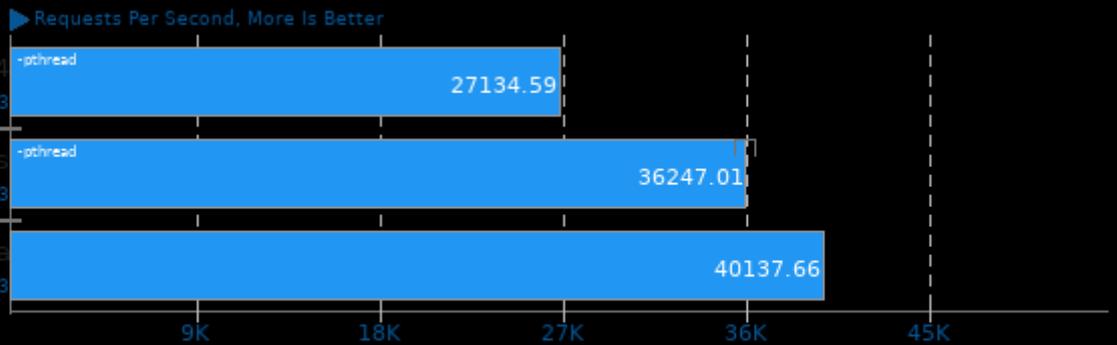
Concurrent Requests: 1000



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

Apache HTTP Server 2.4.48

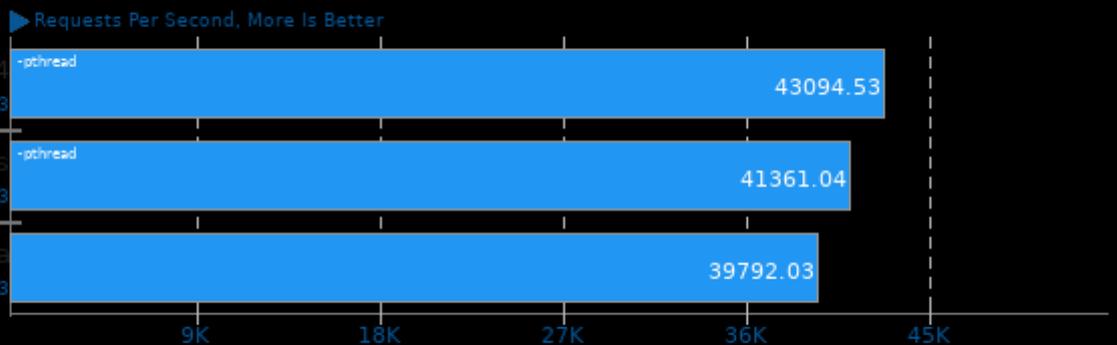
Concurrent Requests: 100



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

Apache HTTP Server 2.4.48

Concurrent Requests: 200

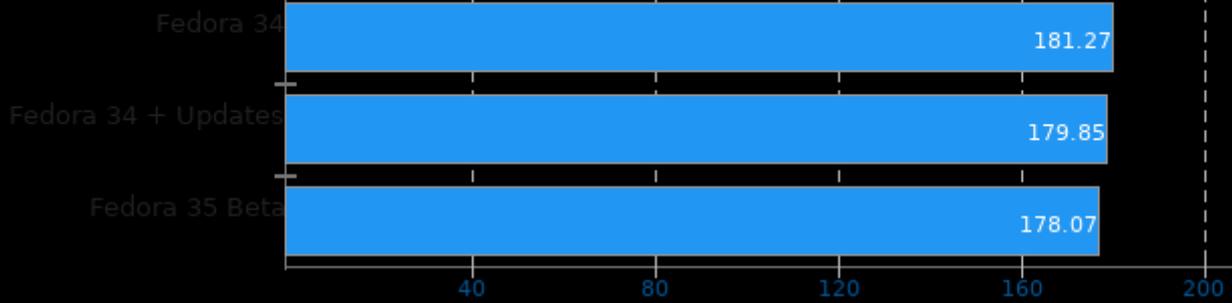


1. (CC) gcc options: -shared -fPIC -O2

Appleseed 2.0 Beta

Scene: Emily

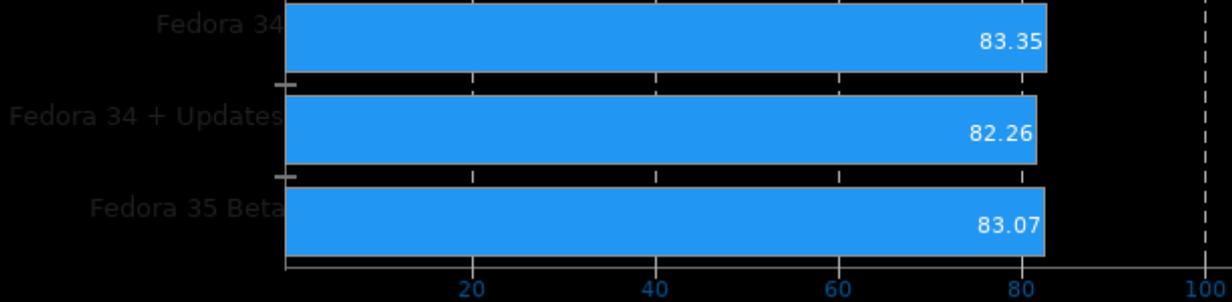
◀ Seconds, Fewer Is Better



Appleseed 2.0 Beta

Scene: Disney Material

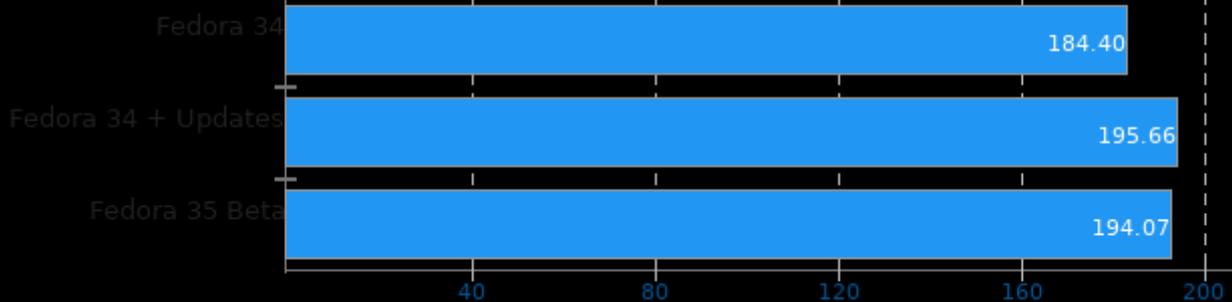
◀ Seconds, Fewer Is Better



Appleseed 2.0 Beta

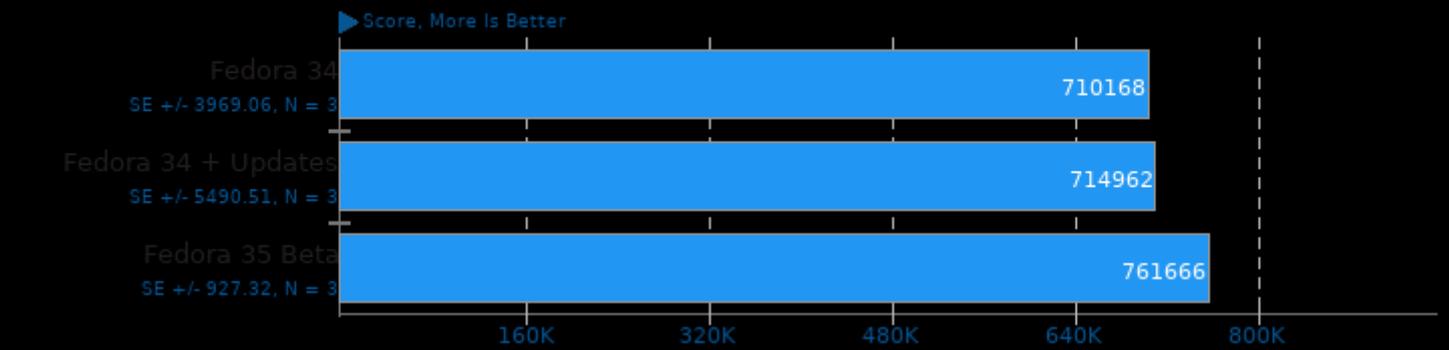
Scene: Material Tester

◀ Seconds, Fewer Is Better



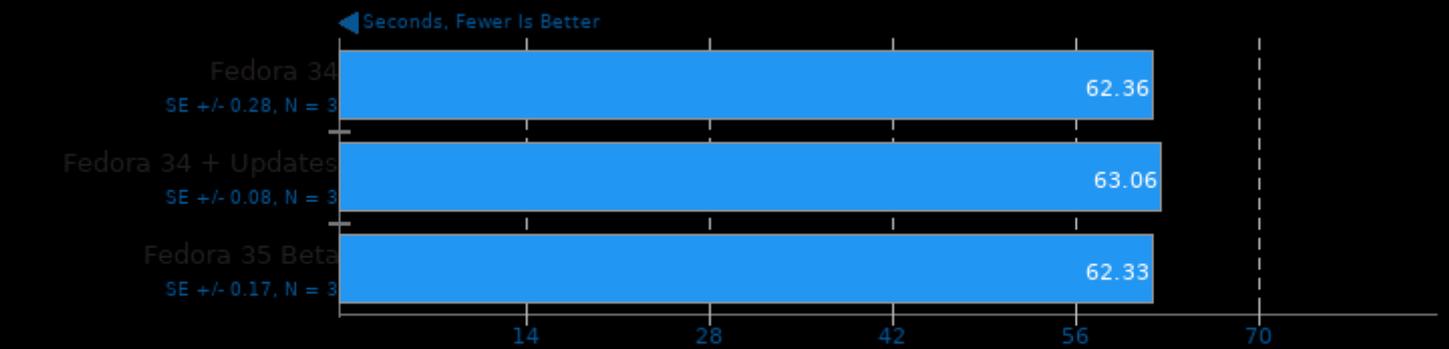
PHPBench 0.8.1

PHP Benchmark Suite



Git

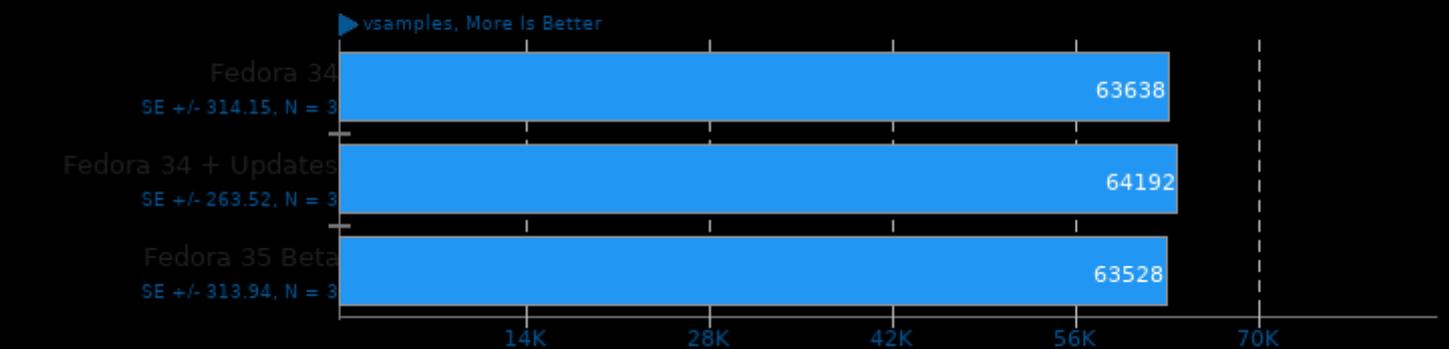
Time To Complete Common Git Commands



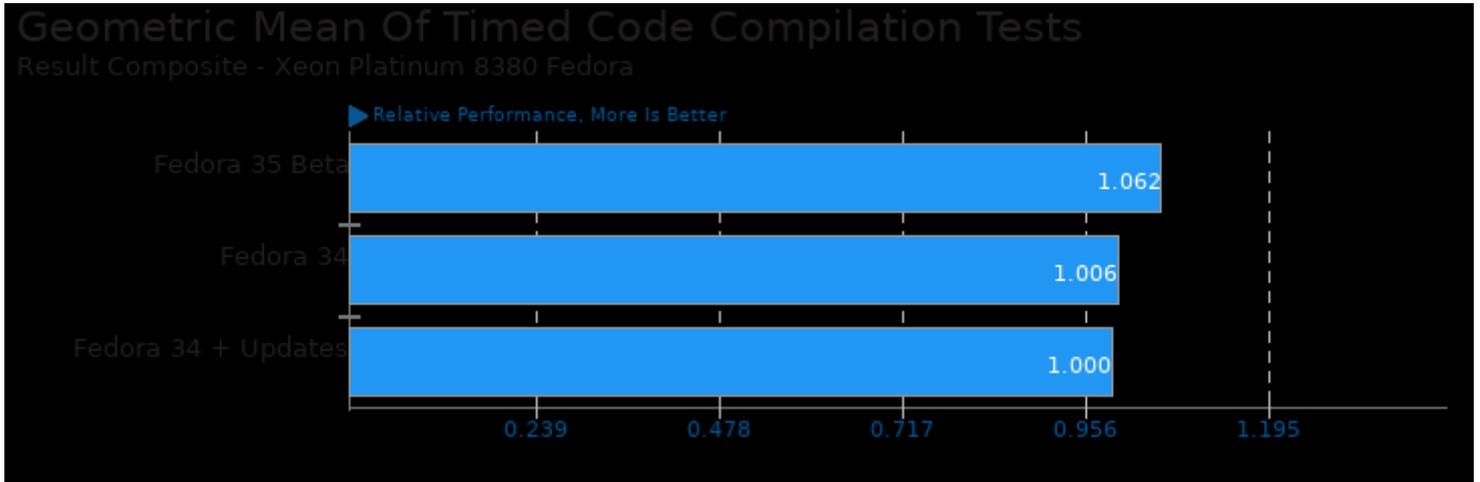
1. Fedora 34: git version 2.31.1
2. Fedora 34 + Updates: git version 2.31.1
3. Fedora 35 Beta: git version 2.32.0

Chaos Group V-RAY 5

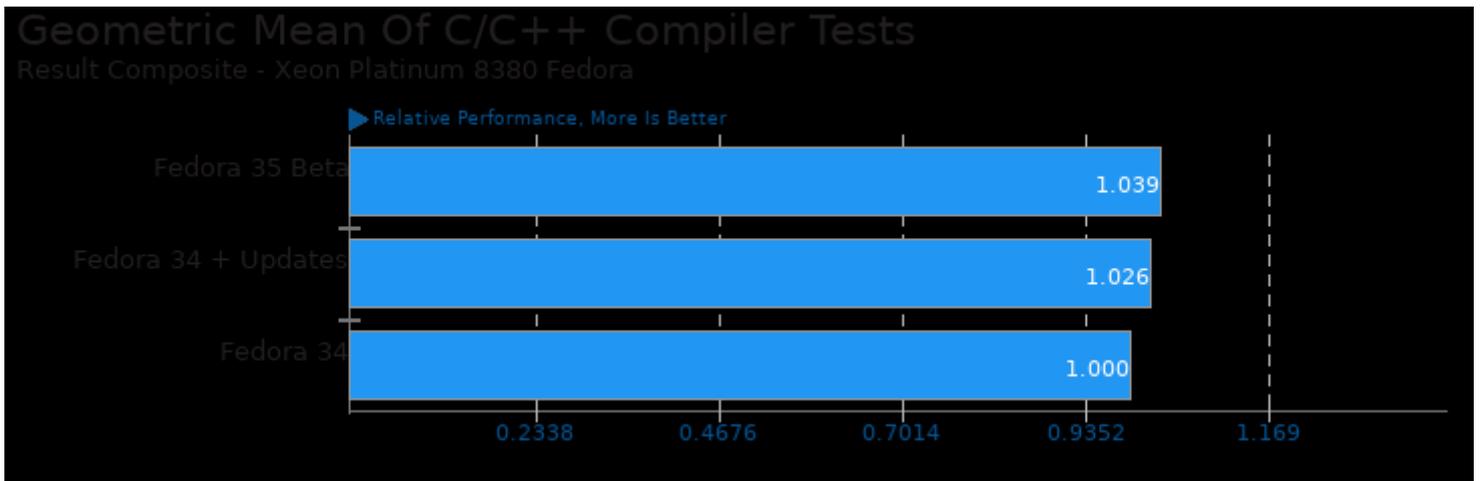
Mode: CPU



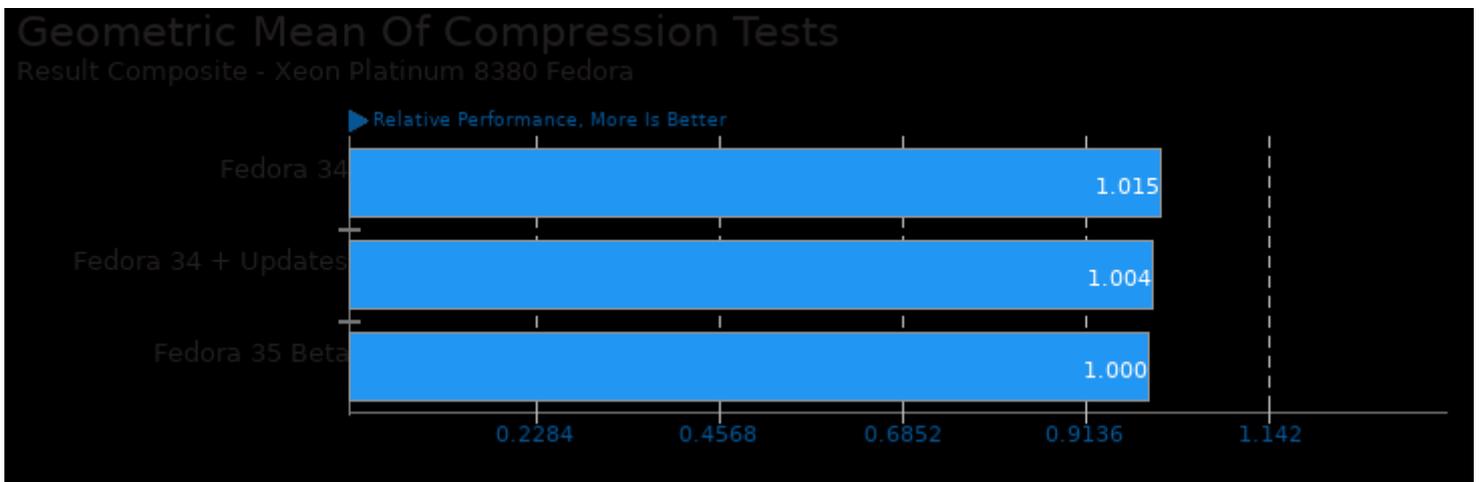
These geometric means are based upon test groupings / test suites for this result file.



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



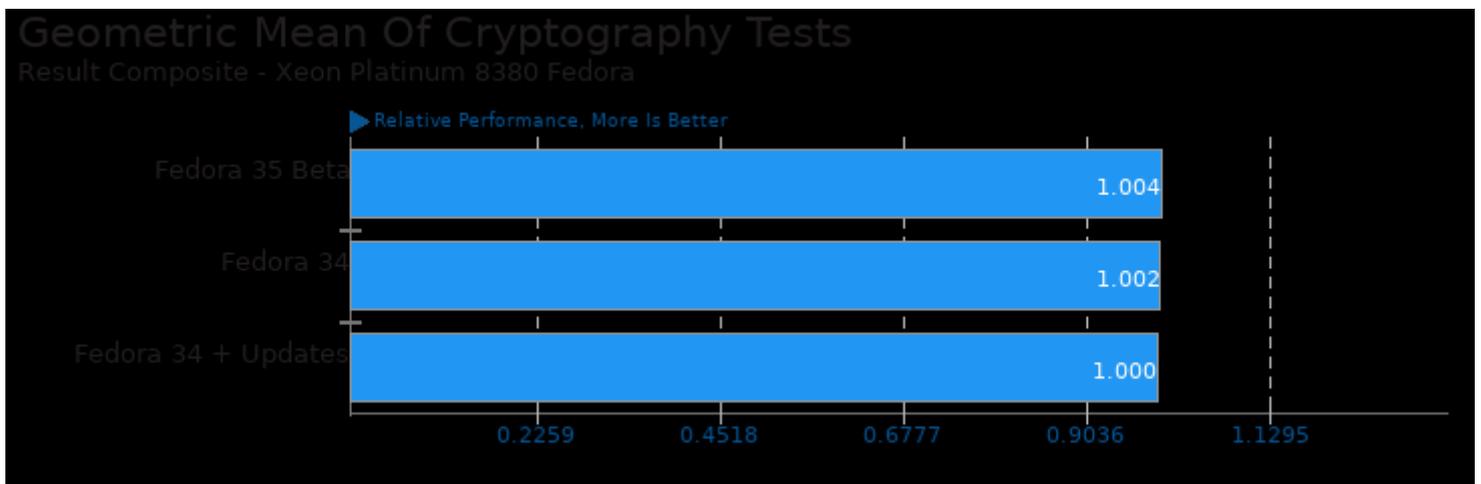
Geometric mean based upon tests: pts/stockfish, pts/build-llvm, pts/compress-7zip, pts/pgbench, pts/apache, pts/sqlite-speedtest, pts/x265, pts/compress-zstd, pts/openssl, pts/nginx, pts/svt-av1, pts/svt-vp9 and pts/gromacs



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



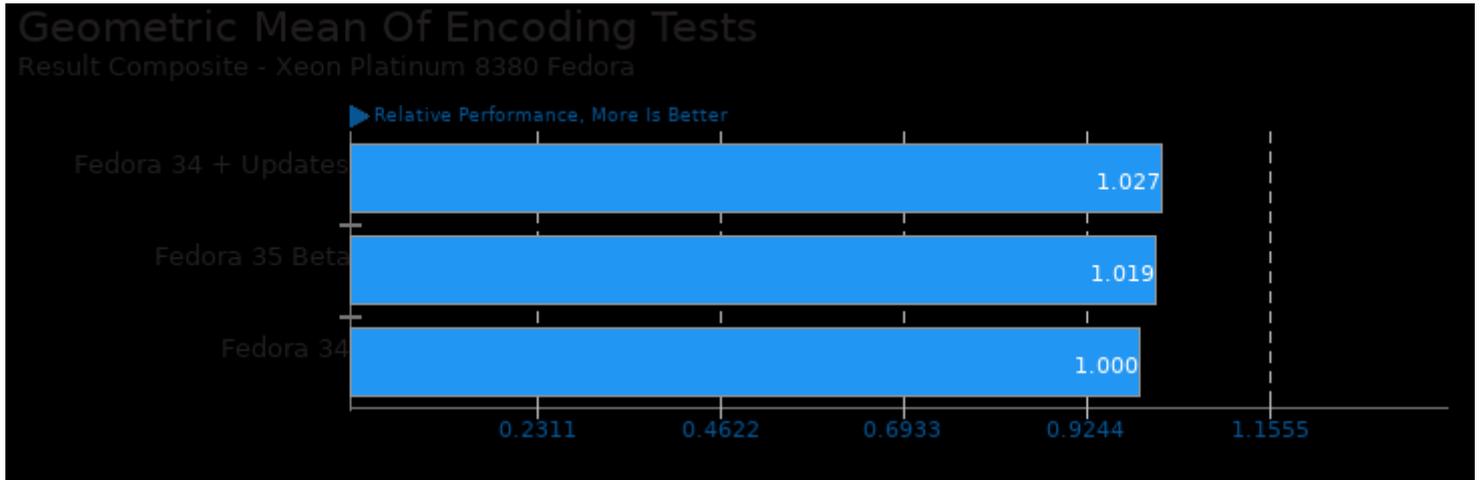
Geometric mean based upon tests: pts/ospray, pts/blender, pts/appleseed, pts/v-ray, pts/svt-vp9, pts/svt-hevc, pts/x265, pts/svt-av1, pts/jpegxl, pts/embree, pts/oidn, pts/opencv, pts/build-godot and pts/synthmark



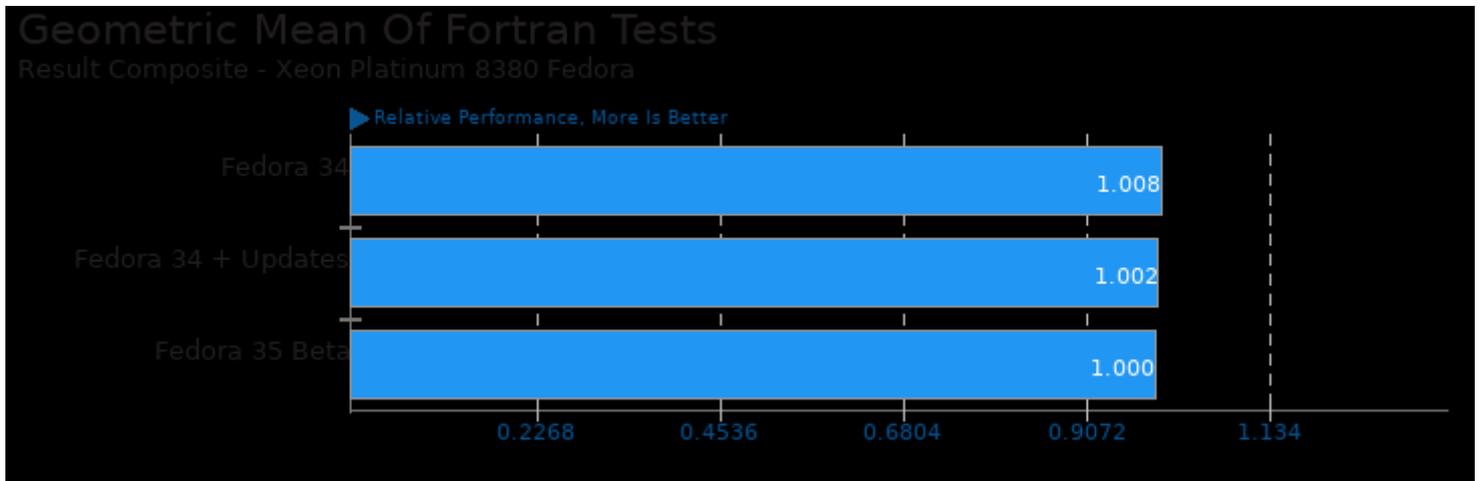
Geometric mean based upon tests: pts/openssl and pts/securemark



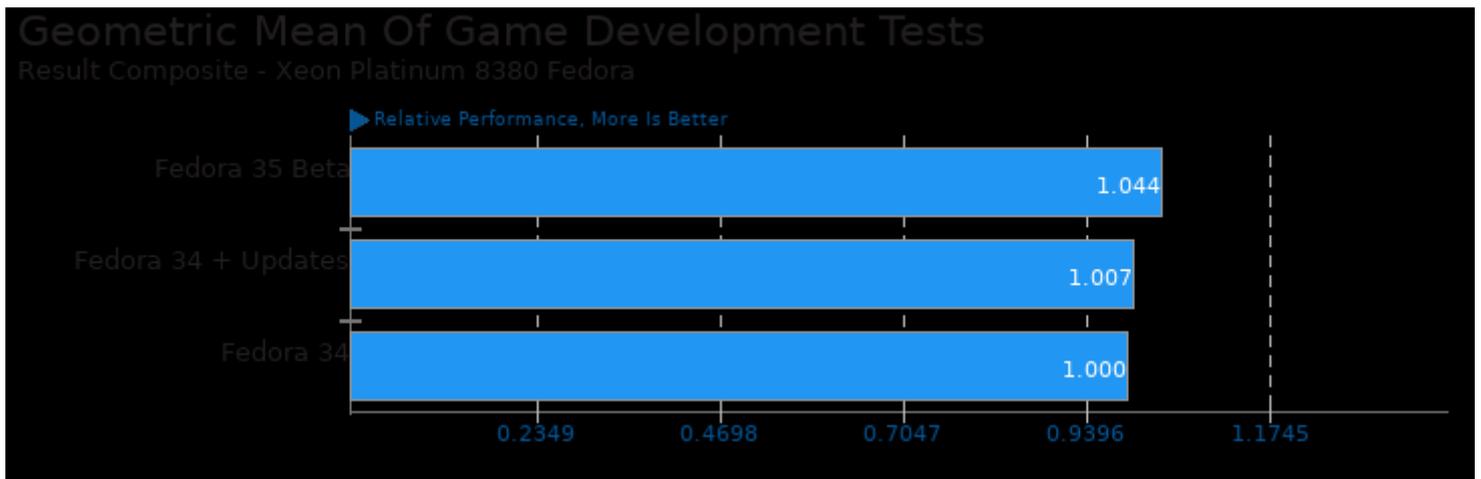
Geometric mean based upon tests: pts/sqlite-speedtest, pts/rocksdb, pts/cassandra and pts/pgbench



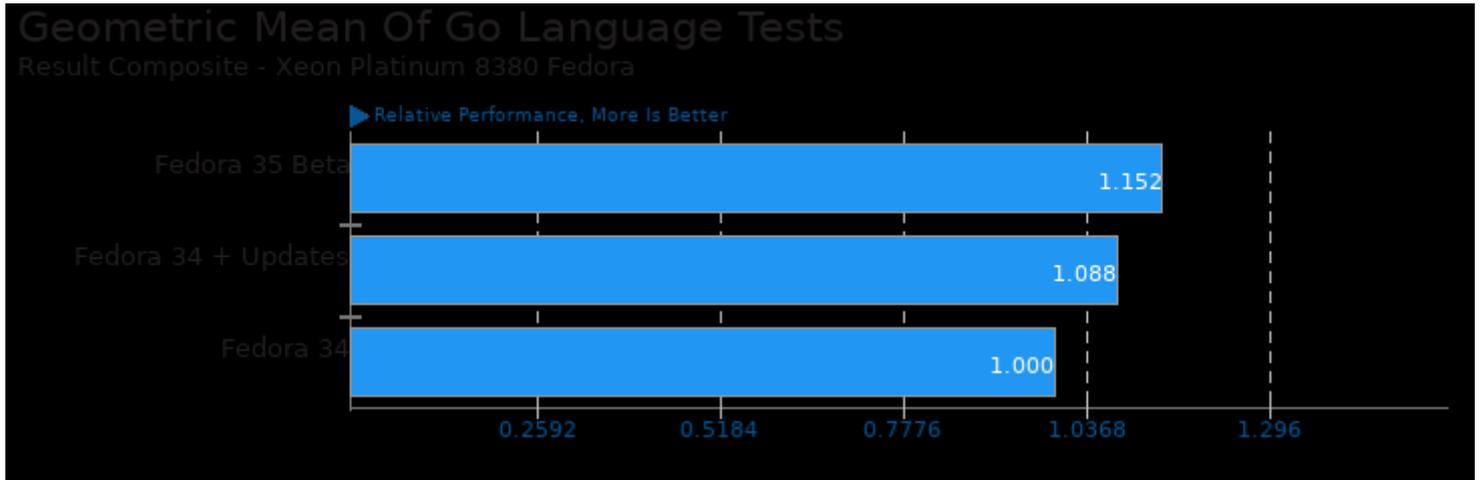
Geometric mean based upon tests: pts/svt-vp9, pts/svt-hevc, pts/x265 and pts/svt-av1



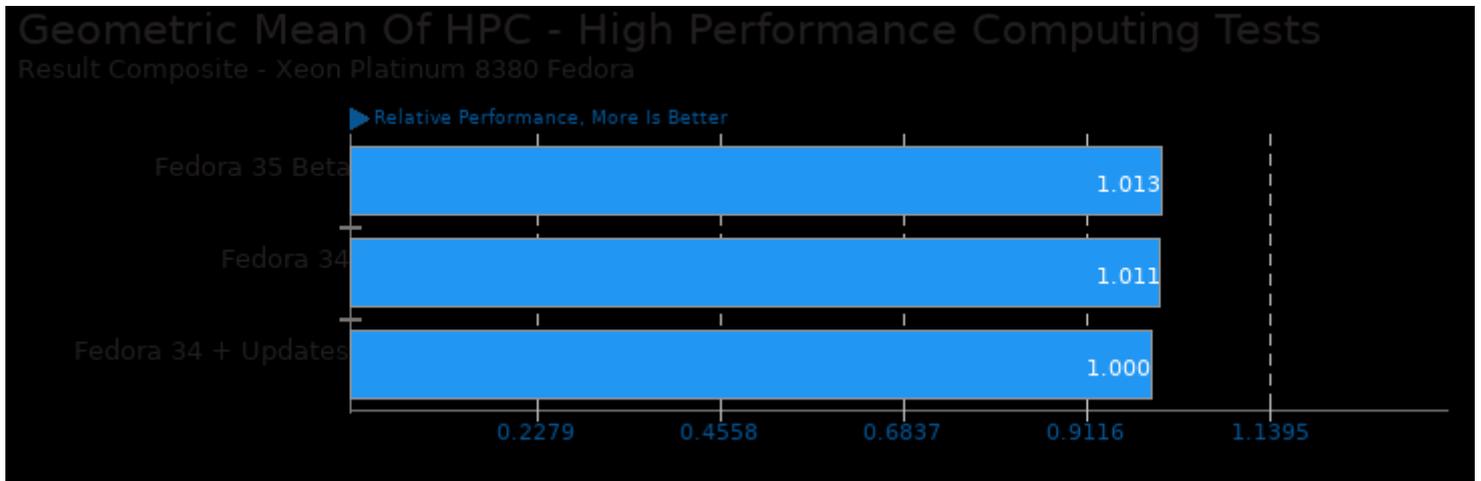
Geometric mean based upon tests: pts/hpcg and pts/npb



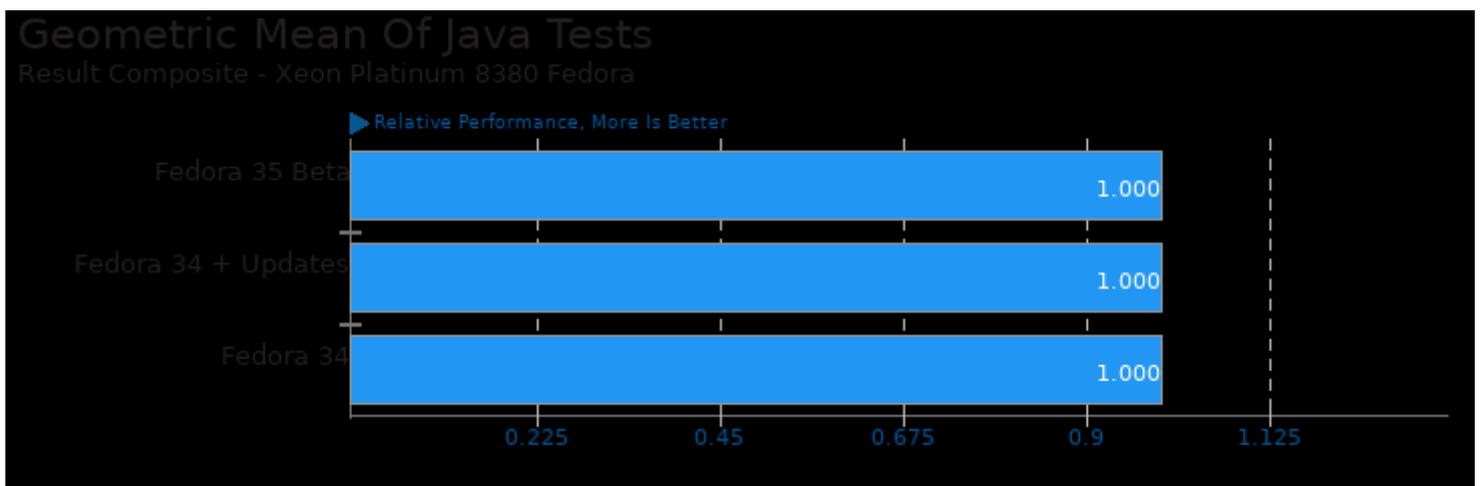
Geometric mean based upon tests: pts/build-godot, pts/blender, pts/oidn and pts/opencv1



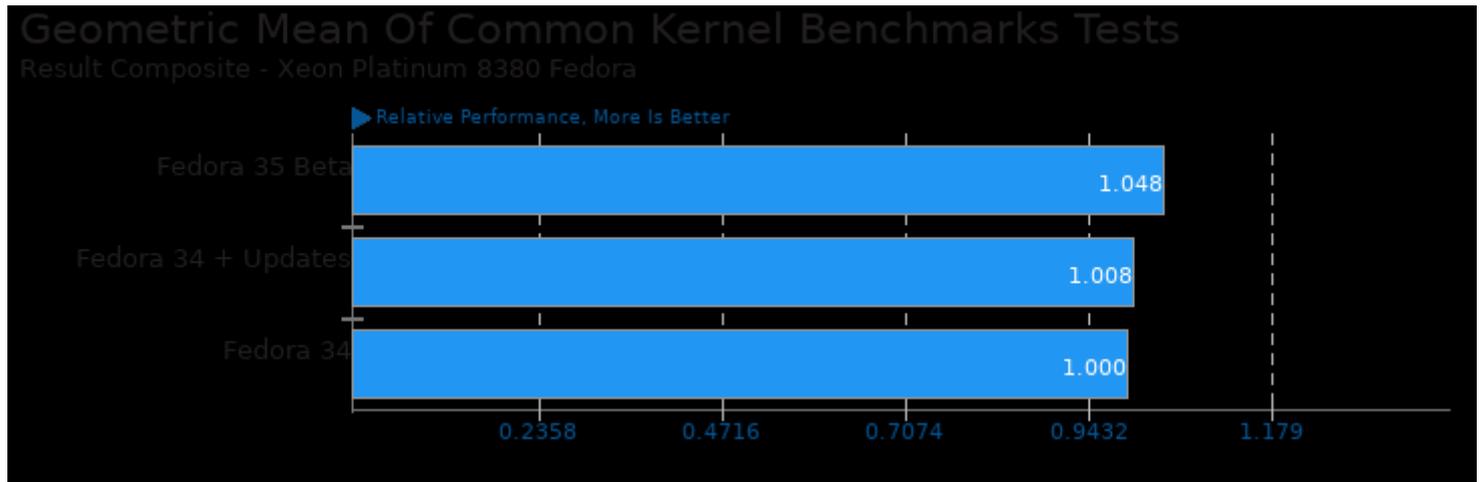
Geometric mean based upon tests: pts/nginx and pts/apache



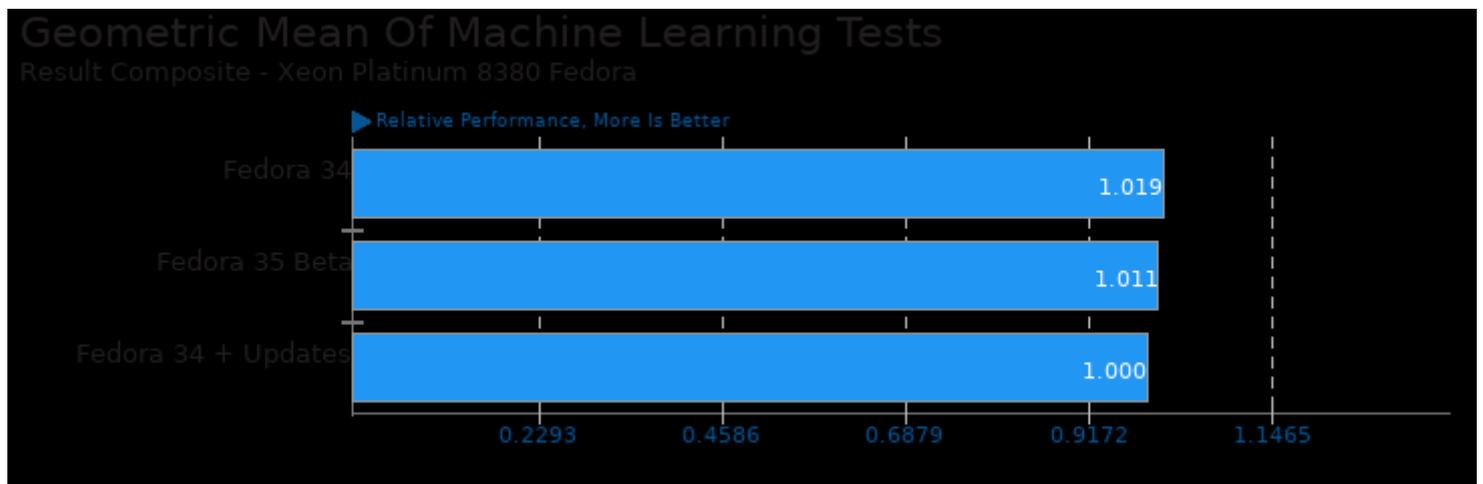
Geometric mean based upon tests: pts/npb, pts/rodinia, pts/hpcg, pts/namd, pts/gromacs, pts/mnn, pts/tnn, pts/tensorflow-lite and pts/onnx



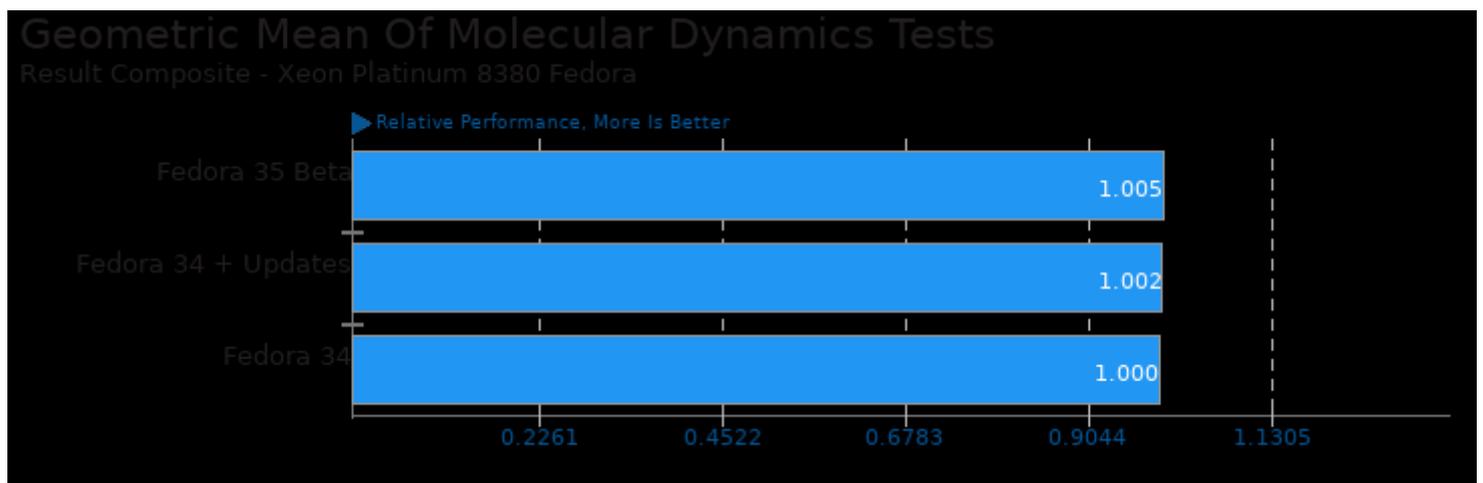
Geometric mean based upon tests: pts/dacapobench and pts/renaissance



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



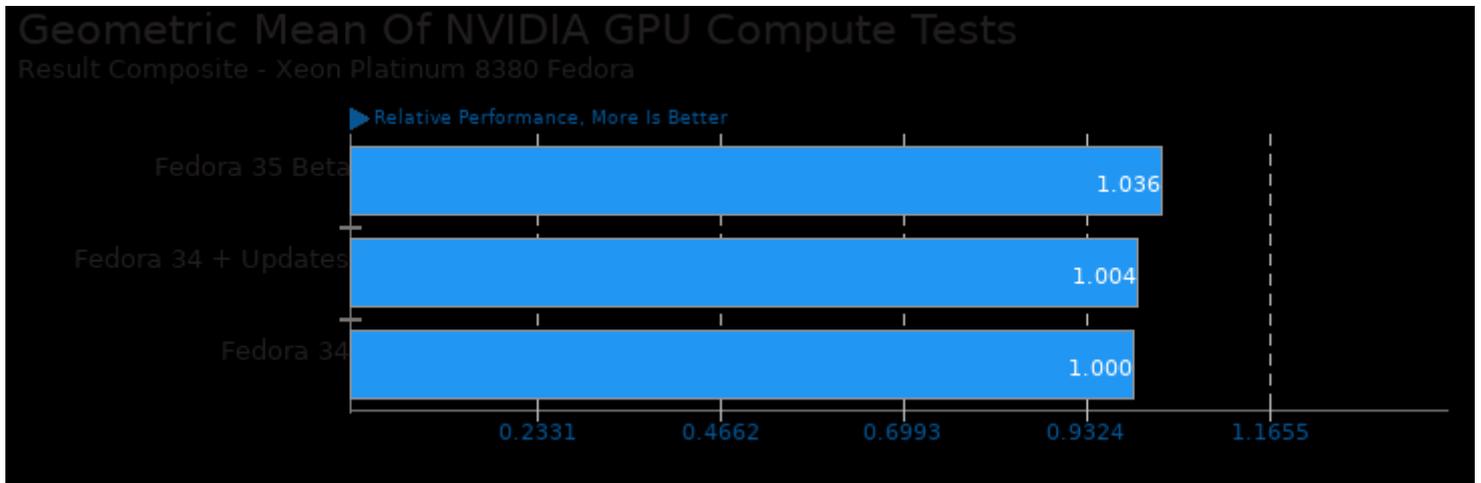
Geometric mean based upon tests: pts/mnn, pts/tnn, pts/tensorflow-lite and pts/onnx



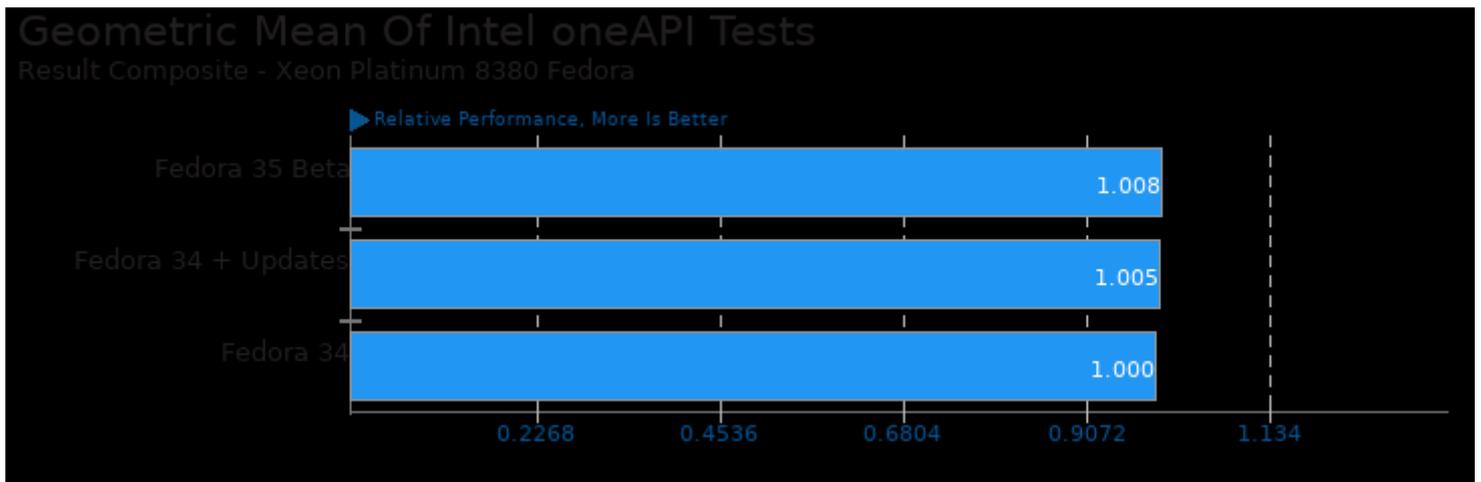
Geometric mean based upon tests: pts/namd and pts/gromacs



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



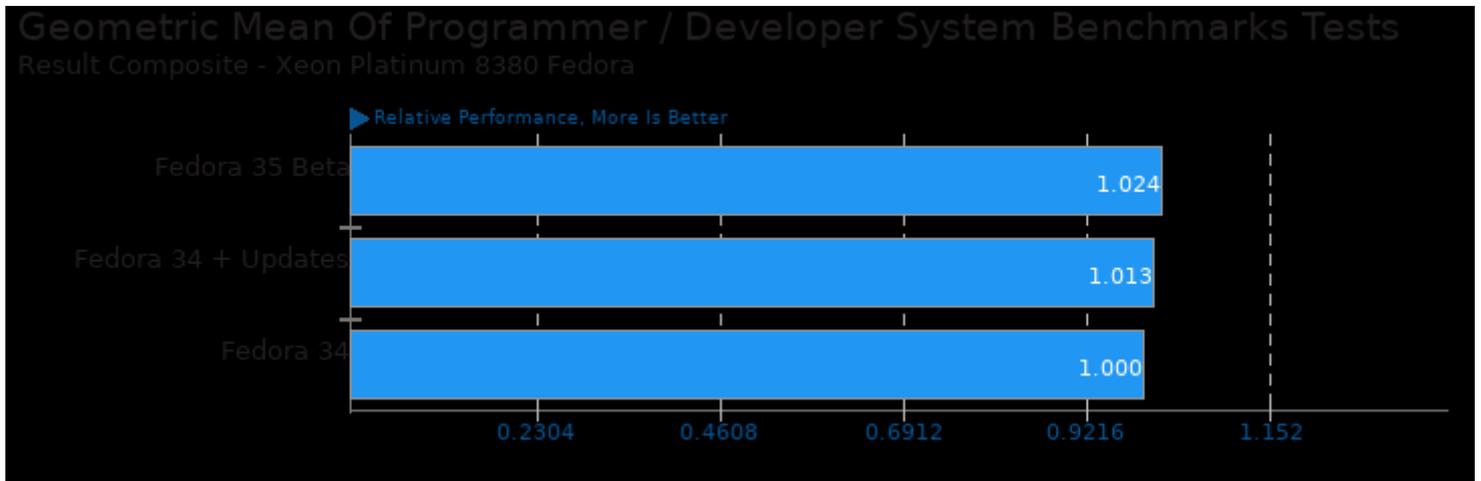
Geometric mean based upon tests: pts/gromacs, pts/rodinia, pts/v-ray and pts/blender



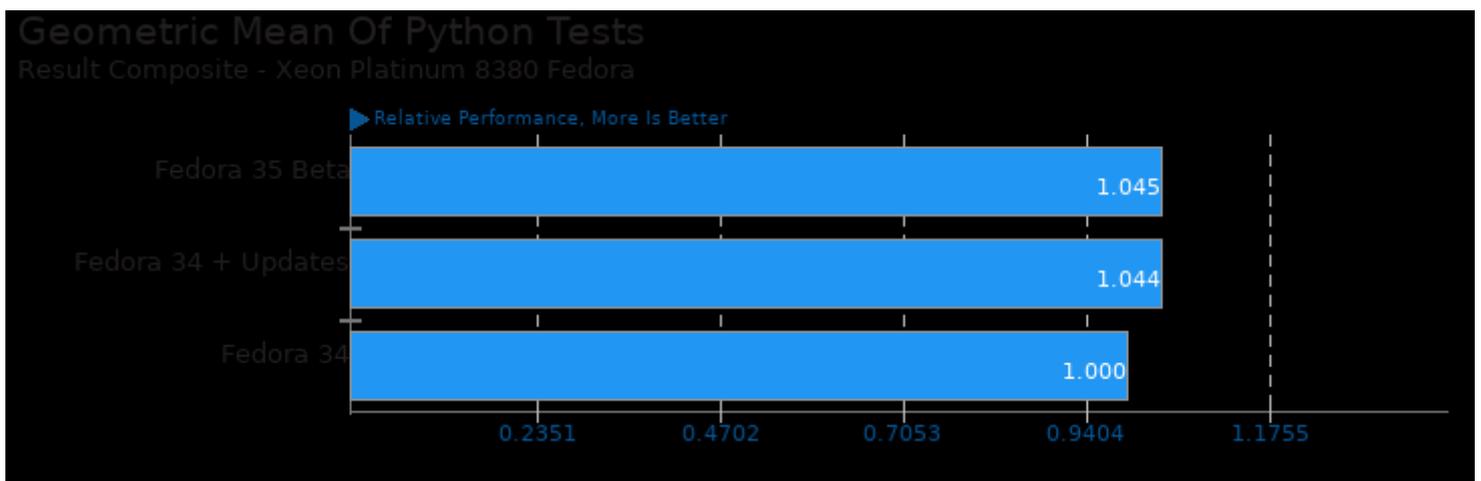
Geometric mean based upon tests: pts/embree, pts/oidn, pts/ospray and pts/openvkl



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



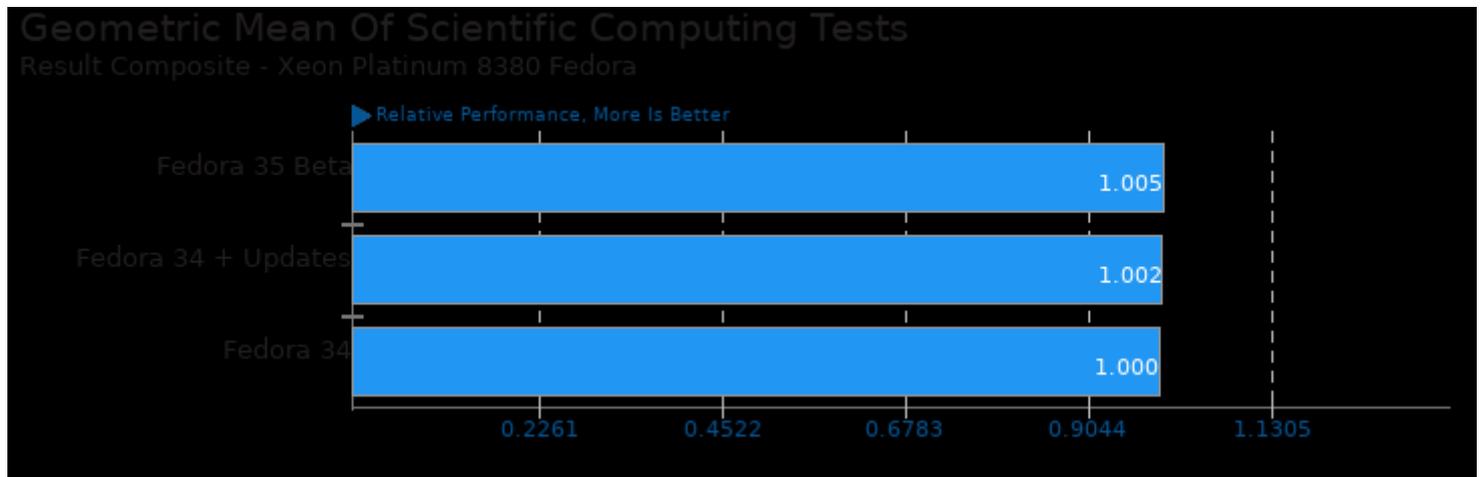
Geometric mean based upon tests: pts/simdjson, pts/sqlite-speedtest, pts/git, pts/compress-zstd, pts/pyperformance, pts/pybench, pts/build-linux-kernel, pts/build-llvm, pts/build-godot, pts/build-wasmer and pts/build-nodejs



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



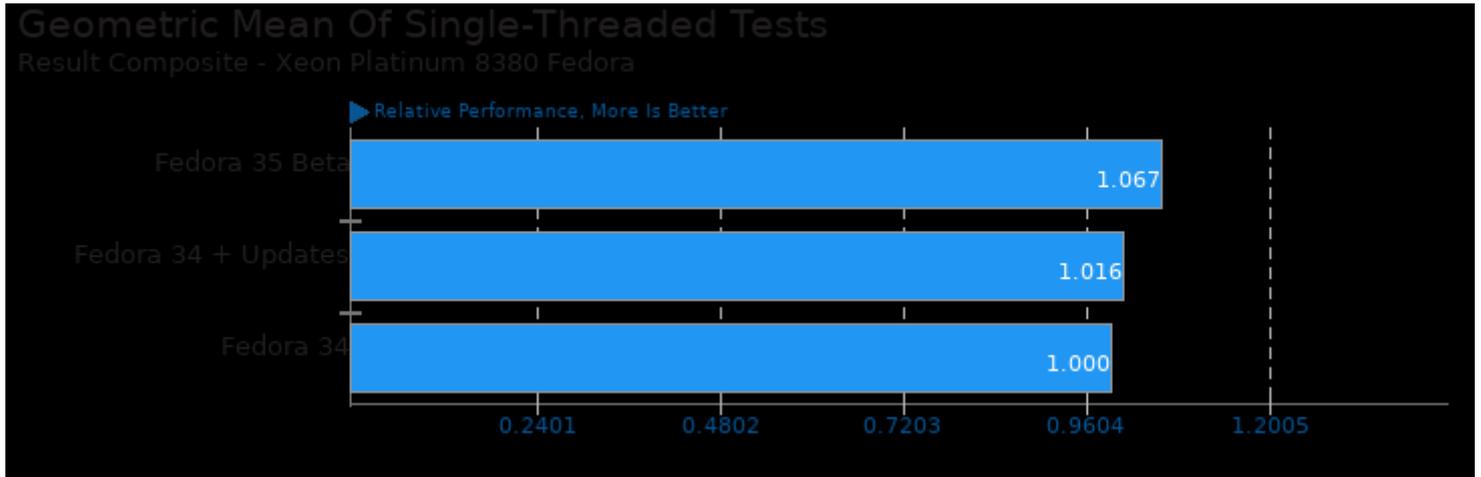
Geometric mean based upon tests: pts/ospray, pts/blender, pts/appleseed and pts/v-ray



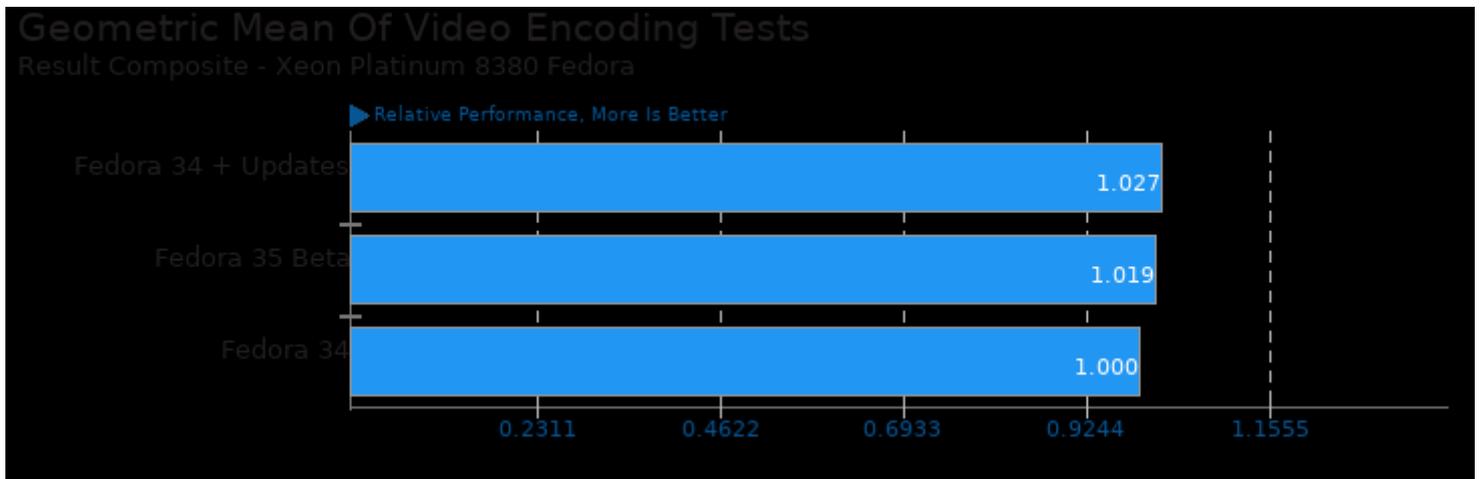
Geometric mean based upon tests: pts/namd and pts/gromacs



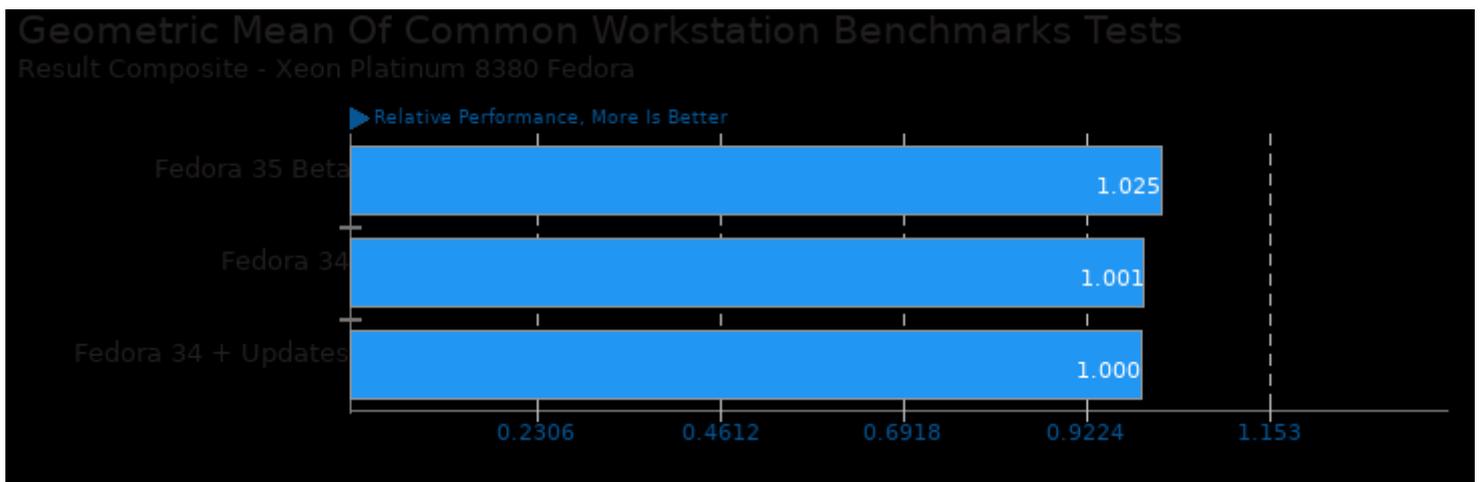
Geometric mean based upon tests: pts/apache, pts/nginx, pts/pgbench, pts/cassandra, pts/rocksdb, pts/phpbench, pts/node-express-loadtest, pts/openssl, pts/simdjson and pts/sqlite-speedtest



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



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



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

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 08:56.