



## I5-11600k single tread test

Ryzen 9 5900x Single

### Automated Executive Summary

*11600k-single-test had the most wins, coming in first place for 70% of the tests.*

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

*R Benchmark at 3.571x*

*glibc bench (Benchmark: sqrt) at 2.088x*

*glibc bench (Benchmark: ffsll) at 2.066x*

*glibc bench (Benchmark: pthread\_once) at 2.047x*

*glibc bench (Benchmark: ffs) at 2.026x*

*glibc bench (Benchmark: modf) at 1.832x*

*CppPerformanceBenchmarks (Test: Ctype) at 1.752x*

*nginx (Concurrent Requests: 20) at 1.611x*

*BenchmarkMutex (Benchmark: Semaphore Release And Acquire) at 1.578x*

*Multichase Pointer Chaser (Test: 4MB Array, 64 Byte Stride) at 1.47x.*

## Test Systems:

### 11600k-single-test

Processor: Intel Core i5-11600K @ 4.90GHz (6 Cores / 12 Threads), Motherboard: Gigabyte Z590 UD AC (F2 BIOS), Chipset: Intel Device 43ef, Memory: 2 x 8192 MB DDR4-3600MT/s, Disk: 2000GB CT2000MX500SSD1, Graphics: llvmpipe, Audio: Realtek ALC897, Network: Realtek RTL8125 2.5GbE + Intel Device 43f0

OS: Ubuntu 20.04, Kernel: 5.11.0-38-generic (x86\_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.11, Display Driver: NVIDIA, OpenGL: 4.5 Mesa 21.0.3 (LLVM 12.0.0 256 bits), Vulkan: 1.0.2, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: madvise

Compiler Notes: --build=x86\_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86\_64-linux-gnu --program-prefix=x86\_64-linux-gnu- --target=x86\_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v

Processor Notes: Scaling Governor: intel\_pstate performance - CPU Microcode: 0x40 - Thermalid 1.9.1

Java Notes: OpenJDK Runtime Environment (build 11.0.11+9-Ubuntu-0ubuntu2.20.04)

Python Notes: Python 3.8.10

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 + srbds: Not affected + tsx\_async\_abort: Not affected

## Ryzen 9 5900x Single Thread Test

### ryzen 9 5900x Single Thread Test

#### Single

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS TUF GAMING B550-PLUS (WI-FI) (1202 BIOS), Chipset: AMD Starship/Matisse, Memory: 2 x 8192 MB DDR4-3600MT/s CRUCIAL, Disk: 500GB MQ01ABF050 + 480GB SanDisk SSD PLUS, Graphics: llvmpipe, Audio: NVIDIA GK208 HDMI/DP, Network: Realtek RTL8125 2.5GbE + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.11.0-38-generic (x86\_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.11, OpenGL: 4.5 Mesa 21.0.3 (LLVM 12.0.0 256 bits), Vulkan: 1.0.2, Compiler: GCC 9.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86\_64-linux-gnu --program-prefix=x86\_64-linux-gnu- --target=x86\_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v

Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa201009

Java Notes: OpenJDK Runtime Environment (build 11.0.11+9-Ubuntu-0ubuntu2.20.04)

Python Notes: Python 3.8.10

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 Full AMD retpoline IBPB: conditional IBRS\_FW STIBP: always-on RSB filling + srbds: Not affected + tsx\_async\_abort: Not affected

	11600k-single-test	Ryzen 9 5900x Single Thread	ryzen 9 5900x Single Thread	Single
<b>PolyBench-C - C.C (sec)</b>	2.622			
Standard Deviation	0.3%			
<b>PolyBench-C - C.C (sec)</b>	2.632			
Standard Deviation	4.1%			
<b>PolyBench-C - 3.M.M (sec)</b>	2.287			
Standard Deviation	0.1%			
<b>Polyhedron Fortran Benchmarks - ac (sec)</b>				5.97
<b>Polyhedron Fortran Benchmarks - air (sec)</b>				1.52
<b>Polyhedron Fortran Benchmarks - mdbx (sec)</b>				3.91
<b>Polyhedron Fortran Benchmarks - doduc (sec)</b>				6.02
<b>Polyhedron Fortran Benchmarks - linpk (sec)</b>				1.53
<b>Polyhedron Fortran Benchmarks - tfft2 (sec)</b>				12.72
<b>Polyhedron Fortran Benchmarks - aermod (sec)</b>				5.04
<b>Polyhedron Fortran Benchmarks - rnflow (sec)</b>				14.45
<b>Polyhedron Fortran Benchmarks - induct2 (sec)</b>				20.3
<b>Polyhedron Fortran Benchmarks - protein (sec)</b>				10.18
<b>Polyhedron Fortran Benchmarks - capacita (sec)</b>				11.26
<b>Polyhedron Fortran Benchmarks - channel2 (sec)</b>				30.51
<b>Polyhedron Fortran Benchmarks - fatigue2 (sec)</b>				44.94
<b>Polyhedron Fortran Benchmarks - gas_dyn2 (sec)</b>				21.53
<b>Polyhedron Fortran Benchmarks - test_fpu2 (sec)</b>				21.21
<b>Polyhedron Fortran Benchmarks - mp_prop_design (sec)</b>				51.66
<b>Izbench - XZ 0 - Compression (MB/s)</b>	<b>55</b>			<b>48</b>
Normalized	100%			87.27%
<b>Izbench - XZ 0 - Decompression</b>	151			151
Standard Deviation				5.2%
<b>Izbench - Zstd 1 - Compression (MB/s)</b>	<b>668</b>			<b>629</b>
Normalized	100%			94.16%
Standard Deviation	0.2%			2.5%
<b>Izbench - Zstd 1 - Decompression</b>	<b>2282</b>			<b>2110</b>
Normalized	100%			92.46%
Standard Deviation	1.7%			3.2%

Izbench - Zstd 8 - Compression (MB/s)	128	116
Normalized	100%	90.63%
Standard Deviation		1%
Izbench - Zstd 8 - Decompression	2543	2286
Normalized	100%	89.89%
Standard Deviation	0.4%	0.1%
Izbench - Crush 0 - Compression	148	144
Normalized	100%	97.3%
Izbench - Crush 0 - Decompression (MB/s)	587	570
Normalized	100%	97.1%
Standard Deviation		2.2%
Izbench - Brotli 0 - Compression	623	569
Normalized	100%	91.33%
Standard Deviation		0.5%
Izbench - Brotli 0 - Decompression (MB/s)	785	697
Normalized	100%	88.79%
Standard Deviation	0.8%	0.2%
Izbench - Brotli 2 - Compression	254	246
Normalized	100%	96.85%
Standard Deviation		0.5%
Izbench - Brotli 2 - Decompression (MB/s)	922	888
Normalized	100%	96.31%
Standard Deviation	0.7%	0.2%
Izbench - Libdeflate 1 - Compression (MB/s)	326	299
Normalized	100%	91.72%
Standard Deviation		0.3%
Izbench - Libdeflate 1 - Decompression (MB/s)	1420	1426
Normalized	99.58%	100%
Standard Deviation	0.2%	0.6%
BLAKE2 (Cycles/Byte)	5.20	7.68
Normalized	100%	67.71%
Standard Deviation	6.1%	0.3%
GNU GMP GMPbench - Total Time (GMPbench Score)	6620	6388
Normalized	100%	96.5%
Java SciMark - Composite (Mflops)	3028	3509
Normalized	86.29%	100%
Standard Deviation	0.6%	3.2%
Java SciMark - Monte Carlo (Mflops)	1208	1768
Normalized	68.31%	100%
Standard Deviation	0.1%	5.3%
Java SciMark - F.F.T (Mflops)	2186	2556
Normalized	85.51%	100%
Standard Deviation	2%	2.4%
Java SciMark - S.M.M (Mflops)	3000	2990
Normalized	100%	99.67%
Standard Deviation	0.1%	2.6%
Java SciMark - D.L.M.F (Mflops)	6638	7961
Normalized	83.38%	100%

	Standard Deviation	0.7%	2.8%
<b>Java SciMark - J.S.O.R (Mflops)</b>	<b>2110</b>		<b>2189</b>
	Normalized	96.36%	100%
	Standard Deviation	0.1%	5.8%
<b>Bork File Encrypter - F.E.T (sec)</b>	<b>6.610</b>		<b>7.161</b>
	Normalized	100%	92.31%
	Standard Deviation	0.5%	2.4%
<b>Fhourstones - C.C.4.S (Kpos / sec)</b>	<b>17996</b>		<b>19414</b>
	Normalized	92.7%	100%
	Standard Deviation	0.4%	2.4%
<b>BYTE Unix Benchmark - Dhrystone 2 (LPS)</b>	<b>61969025</b>		<b>51225622</b>
	Normalized	100%	82.66%
	Standard Deviation	0.2%	1.2%
<b>CacheBench - Read (MB/s)</b>	<b>4115</b>		<b>2894</b>
	Normalized	100%	70.32%
	Standard Deviation	0%	0.3%
<b>CacheBench - Write (MB/s)</b>	<b>32773</b>		<b>33384</b>
	Normalized	98.17%	100%
	Standard Deviation	0%	0%
<b>CacheBench - R.M.W (MB/s)</b>	<b>50614</b>		<b>62323</b>
	Normalized	81.21%	100%
	Standard Deviation	0.1%	0.6%
<b>LuaJIT - Composite (Mflops)</b>	<b>1909</b>		<b>1784</b>
	Normalized	100%	93.45%
	Standard Deviation	0.8%	1.7%
<b>LuaJIT - Monte Carlo (Mflops)</b>	<b>639.21</b>		<b>537.65</b>
	Normalized	100%	84.11%
	Standard Deviation	0.1%	5.2%
<b>LuaJIT - F.F.T (Mflops)</b>	<b>668.76</b>		<b>470.43</b>
	Normalized	100%	70.34%
	Standard Deviation	1.2%	2.2%
<b>LuaJIT - S.M.M (Mflops)</b>	<b>1977</b>		<b>1529</b>
	Normalized	100%	77.31%
	Standard Deviation	0.3%	2.9%
<b>LuaJIT - D.L.M.F (Mflops)</b>	<b>4412</b>		<b>4130</b>
	Normalized	100%	93.6%
	Standard Deviation	1.9%	1.5%
<b>LuaJIT - J.S.O.R (Mflops)</b>	<b>1846</b>		<b>2251</b>
	Normalized	81.99%	100%
	Standard Deviation	0.1%	1.3%
<b>SciMark - Composite (Mflops)</b>	<b>920.31</b>		<b>844.39</b>
	Normalized	100%	91.75%
	Standard Deviation	1.9%	0%
<b>SciMark - Monte Carlo (Mflops)</b>	<b>192.49</b>		<b>184.35</b>
	Normalized	100%	95.77%
	Standard Deviation	4.2%	0.3%
<b>SciMark - F.F.T (Mflops)</b>	<b>377.77</b>		<b>513.79</b>
	Normalized	73.53%	100%
	Standard Deviation	0.2%	0.4%
<b>SciMark - S.M.M (Mflops)</b>	<b>1092</b>		<b>815.01</b>
	Normalized	100%	74.66%
	Standard Deviation	7.1%	0%
<b>SciMark - D.L.M.F (Mflops)</b>	<b>1549</b>		<b>1407</b>
	Normalized	100%	90.82%

Standard Deviation	0.1%	0.2%
<b>SciMark - J.S.O.R (Mflops)</b>	<b>1390</b>	<b>1302</b>
Normalized	100%	93.63%
Standard Deviation	0.1%	0%
<b>Botan - KASUMI (MiB/s)</b>	<b>113.193</b>	<b>97.656</b>
Normalized	100%	86.27%
Standard Deviation	0.2%	4.2%
<b>Botan - KASUMI - Decrypt (MiB/s)</b>	<b>108.871</b>	<b>96.558</b>
Normalized	100%	88.69%
Standard Deviation	0%	4.9%
<b>Botan - AES-256 (MiB/s)</b>	<b>8158</b>	<b>6996</b>
Normalized	100%	85.76%
Standard Deviation	0.1%	0.1%
<b>Botan - AES-256 - Decrypt (MiB/s)</b>	<b>8134</b>	<b>6976</b>
Normalized	100%	85.77%
Standard Deviation	0%	0.1%
<b>Botan - Twofish (MiB/s)</b>	<b>437.368</b>	<b>434.735</b>
Normalized	100%	99.4%
Standard Deviation	0.2%	1%
<b>Botan - Twofish - Decrypt (MiB/s)</b>	<b>437.405</b>	<b>425.779</b>
Normalized	100%	97.34%
Standard Deviation	0.1%	0.9%
<b>Botan - Blowfish (MiB/s)</b>	<b>557.378</b>	<b>505.352</b>
Normalized	100%	90.67%
Standard Deviation	0%	2.1%
<b>Botan - Blowfish - Decrypt (MiB/s)</b>	<b>555.485</b>	<b>508.211</b>
Normalized	100%	91.49%
Standard Deviation	0.1%	1.7%
<b>Botan - CAST-256 (MiB/s)</b>	<b>169.398</b>	<b>171.925</b>
Normalized	98.53%	100%
Standard Deviation	0%	2.4%
<b>Botan - CAST-256 - Decrypt (MiB/s)</b>	<b>169.302</b>	<b>171.839</b>
Normalized	98.52%	100%
Standard Deviation	0.1%	2.6%
<b>Botan - ChaCha20Poly1305 (MiB/s)</b>	<b>1000</b>	<b>814.388</b>
Normalized	100%	81.42%
Standard Deviation	0.2%	0%
<b>Botan - ChaCha20Poly1305 - Decrypt (MiB/s)</b>	<b>999.602</b>	<b>804.118</b>
Normalized	100%	80.44%
Standard Deviation	0.2%	0.1%
<b>Node.js Express HTTP Load Test (Reqs/sec)</b>	<b>14253</b>	<b>13523</b>
Normalized	100%	94.88%
Standard Deviation	0.6%	2.1%
<b>Swet - Average (Operations/sec)</b>	<b>1026508832</b>	<b>988736313</b>
Normalized	100%	96.32%
Standard Deviation	0.6%	0.4%
<b>Node.js Octane Benchmark (Score)</b>	<b>68936</b>	<b>65806</b>
Normalized	100%	95.46%
Standard Deviation	0.3%	2.5%
<b>Numpy Benchmark (Score)</b>	<b>479.94</b>	<b>541.17</b>
Normalized	88.69%	100%
Standard Deviation	0.4%	0.1%
<b>Gzip Compression - L.S.T.A.T.t.g (sec)</b>	<b>26.328</b>	<b>31.303</b>

	Normalized	100%	84.11%
	Standard Deviation	0.4%	1.1%
dcrow - R.T.P.I.C (sec)		<b>30.599</b>	<b>36.315</b>
	Normalized	100%	84.26%
	Standard Deviation	0.8%	0.4%
FLAC Audio Encoding - WAV To		<b>13.711</b>	<b>13.611</b>
FLAC (sec)			
	Normalized	99.27%	100%
	Standard Deviation	0.5%	1.2%
LAME MP3 Encoding - WAV To MP3		<b>6.280</b>	<b>6.357</b>
(sec)			
	Normalized	100%	98.79%
	Standard Deviation	0.1%	2.4%
Ogg Audio Encoding - WAV To Ogg		15.535	
(sec)			
	Standard Deviation	0.2%	
eSpeak-NG Speech Engine - T.T.S.S		<b>26.303</b>	<b>25.405</b>
(sec)			
	Normalized	96.59%	100%
	Standard Deviation	3.4%	4.3%
Minion - Graceful (sec)		<b>36.673114</b>	<b>36.907581</b>
	Normalized	100%	99.36%
	Standard Deviation	0.5%	0.2%
Minion - Solitaire (sec)		<b>49.942104</b>	<b>59.117365</b>
	Normalized	100%	84.48%
	Standard Deviation	1.5%	1.1%
Minion - Quasigroup (sec)		<b>87.747874</b>	<b>93.165571</b>
	Normalized	100%	94.18%
	Standard Deviation	0.1%	2.2%
Perl Benchmarks - Pod2html (sec)		<b>0.08129076</b>	<b>0.10406131</b>
	Normalized	100%	78.12%
	Standard Deviation	0.3%	2.3%
Perl Benchmarks - Interpreter (sec)		<b>0.00062498</b>	<b>0.00065817</b>
	Normalized	100%	94.96%
	Standard Deviation	0.4%	0.6%
Radiance Benchmark - Serial (sec)		<b>469.329</b>	<b>467.005</b>
	Normalized	99.5%	100%
R Benchmark (sec)		<b>0.1555</b>	<b>0.5553</b>
	Normalized	100%	28%
	Standard Deviation	1%	0.9%
Sudokut - Total Time (sec)		<b>7.794</b>	<b>8.727</b>
	Normalized	100%	89.31%
	Standard Deviation	0.1%	1%
glibc bench - cos (nanoseconds)		<b>37.6921</b>	<b>41.1676</b>
	Normalized	100%	91.56%
	Standard Deviation	0.5%	0.5%
glibc bench - exp (nanoseconds)		<b>4.07427</b>	<b>5.37977</b>
	Normalized	100%	75.73%
	Standard Deviation	0%	0%
glibc bench - ffs (nanoseconds)		<b>1.34898</b>	<b>2.73360</b>
	Normalized	100%	49.35%
	Standard Deviation	0%	1.8%
glibc bench - sin (nanoseconds)		<b>36.9815</b>	<b>42.3975</b>
	Normalized	100%	87.23%
	Standard Deviation	0%	3.7%

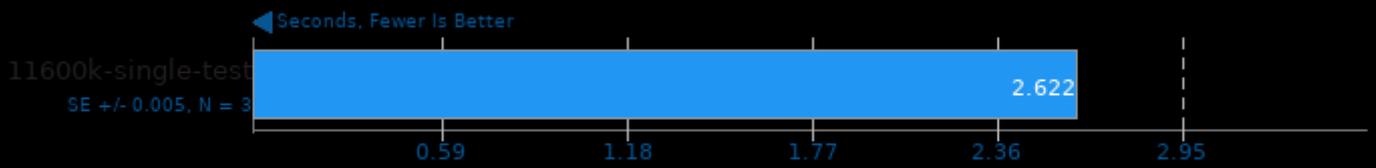
<b>glibc bench - log2 (nanoseconds)</b>	<b>5.52734</b>	<b>5.30981</b>
Normalized	96.06%	100%
Standard Deviation	0.1%	0.3%
<b>glibc bench - modf (nanoseconds)</b>	<b>1.37809</b>	<b>2.52430</b>
Normalized	100%	54.59%
Standard Deviation	0.1%	3.6%
<b>glibc bench - sinh (nanoseconds)</b>	<b>5.93475</b>	<b>7.47185</b>
Normalized	100%	79.43%
Standard Deviation	0.1%	0.8%
<b>glibc bench - sqrt (nanoseconds)</b>	<b>1.34890</b>	<b>2.81592</b>
Normalized	100%	47.9%
Standard Deviation	0%	0.4%
<b>glibc bench - tanh (nanoseconds)</b>	<b>8.17424</b>	<b>9.08496</b>
Normalized	100%	89.98%
Standard Deviation	0.1%	0%
<b>glibc bench - asinh (nanoseconds)</b>	<b>6.61989</b>	<b>6.76972</b>
Normalized	100%	97.79%
Standard Deviation	0.3%	0.1%
<b>glibc bench - atanh (nanoseconds)</b>	<b>8.90594</b>	<b>9.23095</b>
Normalized	100%	96.48%
Standard Deviation	0.5%	2.7%
<b>glibc bench - ffsll (nanoseconds)</b>	<b>1.14402</b>	<b>2.36344</b>
Normalized	100%	48.4%
Standard Deviation	0.2%	0.3%
<b>glibc bench - sincos (nanoseconds)</b>	<b>10.09685</b>	<b>11.1047</b>
Normalized	100%	90.92%
Standard Deviation	2.3%	2.5%
<b>glibc bench - pthread_once (nanoseconds)</b>	<b>1.14343</b>	<b>2.34043</b>
Normalized	100%	48.86%
Standard Deviation	0.1%	0.9%
<b>Multichase Pointer Chaser - 4.A.6.B.S (ns)</b>	<b>5.970</b>	<b>8.777</b>
Normalized	100%	68.02%
Standard Deviation	0.1%	0%
<b>Multichase Pointer Chaser - 1.A.2.B.S (ns)</b>	<b>47.736</b>	<b>68.258</b>
Normalized	100%	69.93%
Standard Deviation	0.2%	0.5%
<b>Multichase Pointer Chaser - 2.A.2.B.S (ns)</b>	<b>47.492</b>	<b>49.165</b>
Normalized	100%	96.6%
Standard Deviation	0.1%	2.2%
<b>Multichase Pointer Chaser - 1.A.2.B.S.2.T (ns)</b>	<b>48.830</b>	<b>69.262</b>
Normalized	100%	70.5%
Standard Deviation	0.1%	0.2%
<b>Multichase Pointer Chaser - 1.A.2.B.S.4.T (ns)</b>	<b>51.855</b>	<b>70.398</b>
Normalized	100%	73.66%
Standard Deviation	0.1%	0.5%
<b>libjpeg-turbo tjbench - D.T (Megapixels/sec)</b>	<b>242.719823</b>	<b>265.826805</b>
Normalized	91.31%	100%

Standard Deviation	0.4%	0.2%
<b>CppPerformanceBenchmarks - Atol</b>	<b>36.484</b>	<b>37.716</b>
Normalized	100%	96.73%
Standard Deviation	1%	0.2%
<b>CppPerformanceBenchmarks - Ctype (sec)</b>	<b>22.707</b>	<b>39.790</b>
Normalized	100%	57.07%
Standard Deviation	0.3%	0.3%
<b>CppPerformanceBenchmarks - Math Library (sec)</b>	<b>214.925</b>	<b>256.752</b>
Normalized	100%	83.71%
Standard Deviation	0.5%	0.2%
<b>CppPerformanceBenchmarks - Rand Numbers (sec)</b>	<b>905.666</b>	<b>1006</b>
Normalized	100%	90.04%
Standard Deviation	0%	0.7%
<b>CppPerformanceBenchmarks - Stepanov Vector (sec)</b>	<b>68.143</b>	<b>48.134</b>
Normalized	70.64%	100%
Standard Deviation	0.1%	0%
<b>CppPerformanceBenchmarks - Function Objects (sec)</b>	<b>11.756</b>	<b>13.713</b>
Normalized	100%	85.73%
Standard Deviation	0.1%	0.5%
<b>CppPerformanceBenchmarks - S.A</b>	<b>26.955</b>	<b>21.404</b>
Normalized	79.41%	100%
Standard Deviation	0.1%	0.1%
<b>Inkscape - SVG Files To PNG (sec)</b>	<b>16.894</b>	<b>16.394</b>
Normalized	97.04%	100%
Standard Deviation	0.7%	1%
<b>BenchmarkMutex - S.M.L.S (ns)</b>	<b>16.5</b>	<b>16.5</b>
Standard Deviation	0.3%	2.2%
<b>BenchmarkMutex - M.L.U.s (ns)</b>	<b>30.1</b>	<b>37.3</b>
Normalized	100%	80.7%
Standard Deviation	0.5%	0.9%
<b>BenchmarkMutex - M.L.U.s.m (ns)</b>	<b>14.8</b>	<b>15.5</b>
Normalized	100%	95.48%
Standard Deviation	1.8%	0.6%
<b>BenchmarkMutex - M.L.U.s.m (ns)</b>	<b>19.3</b>	<b>15.5</b>
Normalized	80.31%	100%
Standard Deviation	0.5%	2.4%
<b>BenchmarkMutex - S.R.A.A (ns)</b>	<b>14.9</b>	<b>9.44</b>
Normalized	63.36%	100%
Standard Deviation	0.4%	0.4%
<b>BenchmarkMutex - M.L.U.s (ns)</b>	<b>32.0</b>	<b>40.2</b>
Normalized	100%	79.6%
Standard Deviation	0.5%	0.4%
<b>BenchmarkMutex - M.L.U.p (ns)</b>	<b>13.0</b>	<b>8.98</b>
Normalized	69.08%	100%
Standard Deviation	1.8%	2.3%
<b>BenchmarkMutex - M.L.U.t (ns)</b>	<b>22.9</b>	<b>23.8</b>
Normalized	100%	96.22%
Standard Deviation	0.9%	0.5%
<b>Redis - LPOP (Reqs/sec)</b>	<b>3867993</b>	<b>3147249</b>

	Normalized	100%	81.37%
	Standard Deviation	0.2%	2.1%
<b>Redis - SADD (Reqs/sec)</b>		<b>3055859</b>	<b>2480114</b>
	Normalized	100%	81.16%
	Standard Deviation	1.6%	5.4%
<b>Redis - LPUSH (Reqs/sec)</b>		<b>2309671</b>	<b>1880163</b>
	Normalized	100%	81.4%
	Standard Deviation	1%	4.2%
<b>Redis - GET (Reqs/sec)</b>		<b>3548120</b>	<b>2850846</b>
	Normalized	100%	80.35%
	Standard Deviation	2.2%	4.6%
<b>Redis - SET (Reqs/sec)</b>		<b>2712382</b>	<b>2184091</b>
	Normalized	100%	80.52%
	Standard Deviation	2.5%	4.5%
<b>Optcarrot - O.B (FPS)</b>		<b>192.74</b>	<b>151.10</b>
	Normalized	100%	78.4%
	Standard Deviation	0.9%	2.4%
<b>PyBench - T.F.A.T.T (Milliseconds)</b>		<b>665</b>	<b>802</b>
	Normalized	100%	82.92%
	Standard Deviation	0.7%	0.2%
<b>Hierarchical INTEgration - FLOAT (QUIPs)</b>		<b>611110941</b>	<b>459291403</b>
	Normalized	100%	75.16%
	Standard Deviation	1.4%	0.1%
<b>nginx - 1 (Reqs/sec)</b>		<b>118031</b>	<b>102976</b>
	Normalized	100%	87.24%
	Standard Deviation	0.2%	0.1%
<b>nginx - 20 (Reqs/sec)</b>		<b>534246</b>	<b>331667</b>
	Normalized	100%	62.08%
	Standard Deviation	0.3%	0.4%
<b>nginx - 100 (Reqs/sec)</b>		<b>514092</b>	<b>352871</b>
	Normalized	100%	68.64%
	Standard Deviation	0.5%	0.4%
<b>nginx - 200 (Reqs/sec)</b>		<b>506632</b>	<b>349889</b>
	Normalized	100%	69.06%
	Standard Deviation	0.2%	0.2%
<b>nginx - 500 (Reqs/sec)</b>		<b>485278</b>	<b>341237</b>
	Normalized	100%	70.32%
	Standard Deviation	0.3%	0.3%
<b>nginx - 1000 (Reqs/sec)</b>		<b>457584</b>	<b>330983</b>
	Normalized	100%	72.33%
	Standard Deviation	0.2%	0.3%
<b>PHPBench - P.B.S (Score)</b>		<b>1070084</b>	<b>818814</b>
	Normalized	100%	76.52%
	Standard Deviation	0.3%	1%
<b>Git - T.T.C.C.G.C (sec)</b>		<b>41.720</b>	<b>41.140</b>
	Normalized	98.61%	100%
	Standard Deviation	0.1%	0.8%
<b>GnuPG - 2.7.S.F.E (sec)</b>		<b>53.571</b>	<b>59.379</b>
	Normalized	100%	90.22%
	Standard Deviation	0.9%	3.9%
<b>Tesseract OCR - T.T.O.7.I (sec)</b>		<b>17.872</b>	<b>20.445</b>
	Normalized	100%	87.42%
	Standard Deviation	0.2%	0.2%

## PolyBench-C 4.2

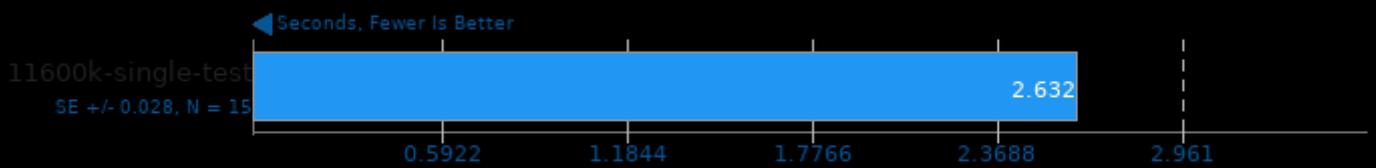
Test: Covariance Computation



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

## PolyBench-C 4.2

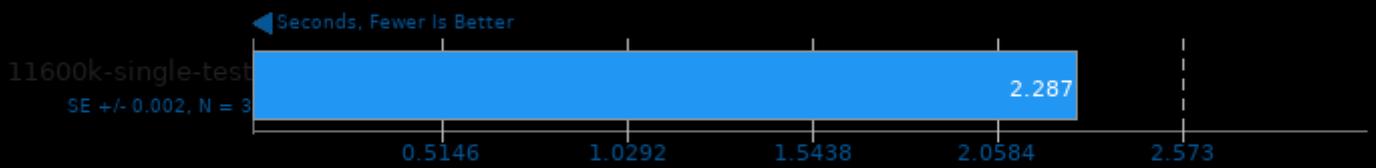
Test: Correlation Computation



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

## PolyBench-C 4.2

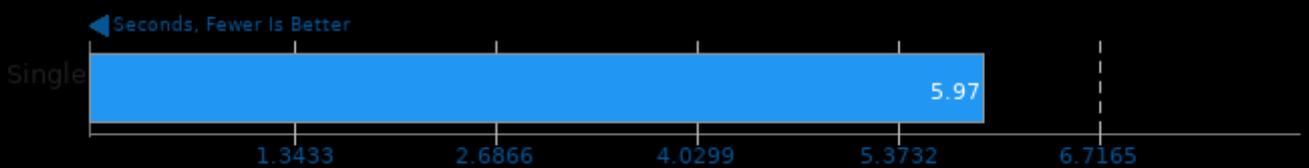
Test: 3 Matrix Multiplications



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

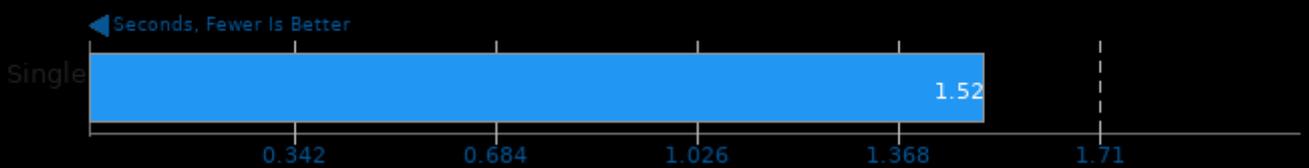
## Polyhedron Fortran Benchmarks

Benchmark: ac



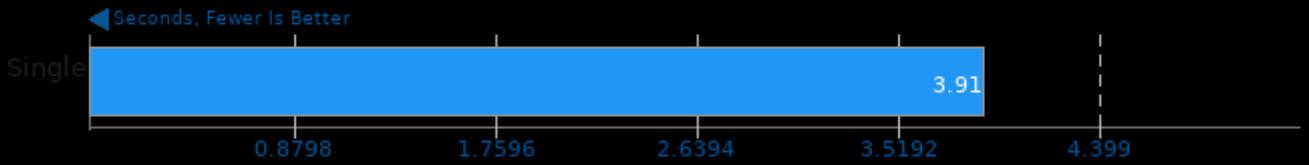
## Polyhedron Fortran Benchmarks

Benchmark: air



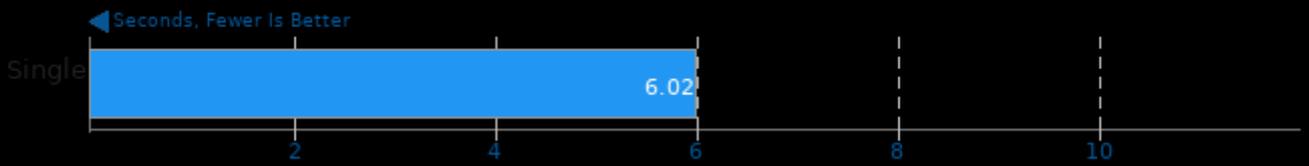
### Polyhedron Fortran Benchmarks

Benchmark: mdbx



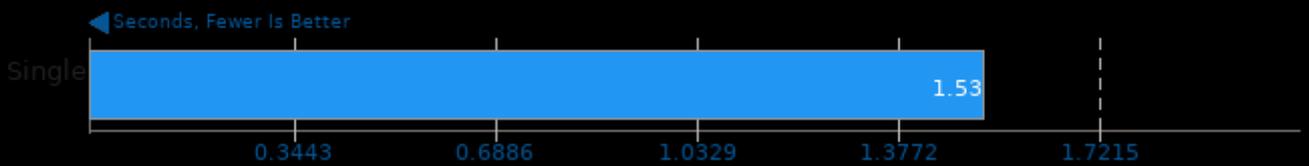
### Polyhedron Fortran Benchmarks

Benchmark: doduc



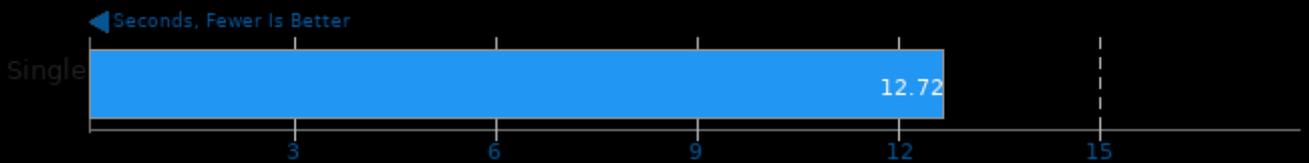
### Polyhedron Fortran Benchmarks

Benchmark: linpk



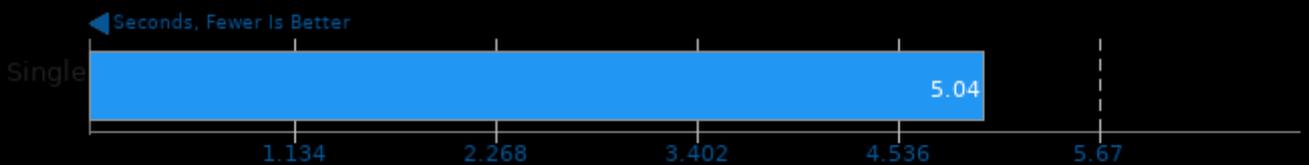
### Polyhedron Fortran Benchmarks

Benchmark: tfft2



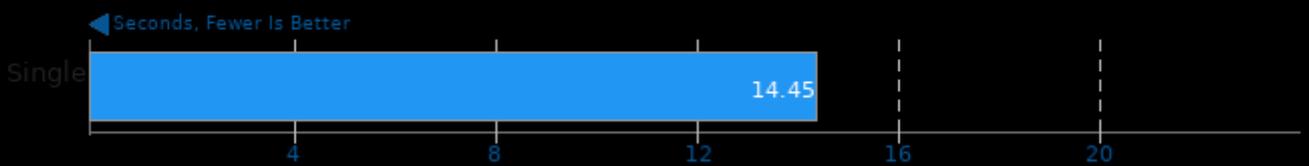
### Polyhedron Fortran Benchmarks

Benchmark: aermod



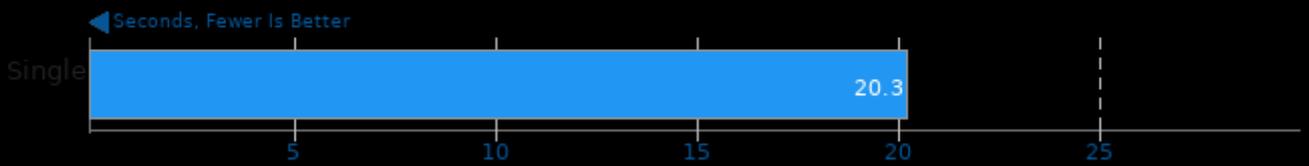
### Polyhedron Fortran Benchmarks

Benchmark: rnflow



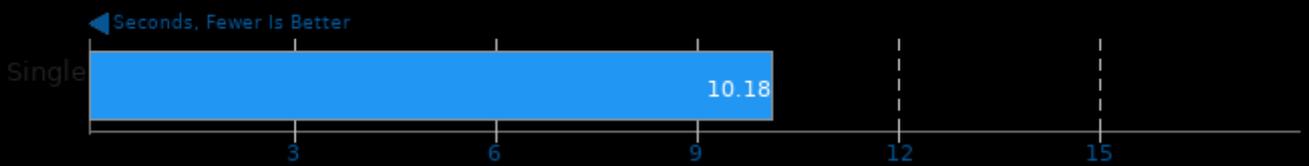
### Polyhedron Fortran Benchmarks

Benchmark: induct2



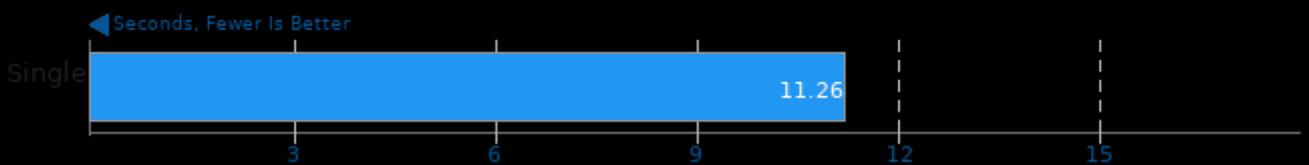
### Polyhedron Fortran Benchmarks

Benchmark: protein



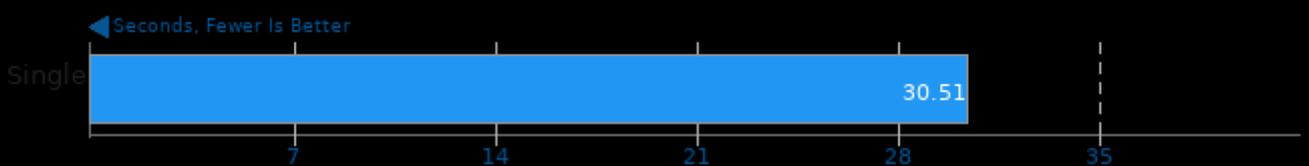
### Polyhedron Fortran Benchmarks

Benchmark: capacita



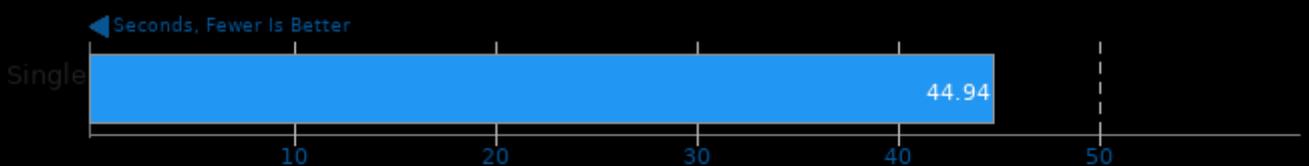
### Polyhedron Fortran Benchmarks

Benchmark: channel2



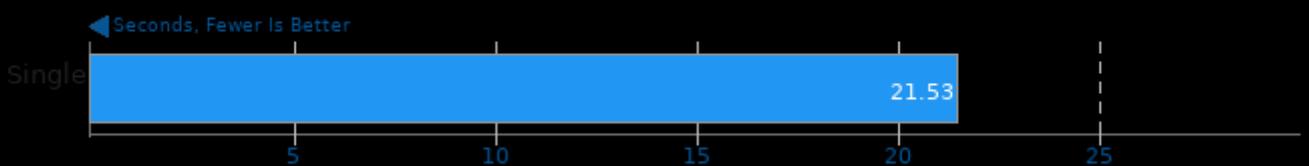
### Polyhedron Fortran Benchmarks

Benchmark: fatigue2



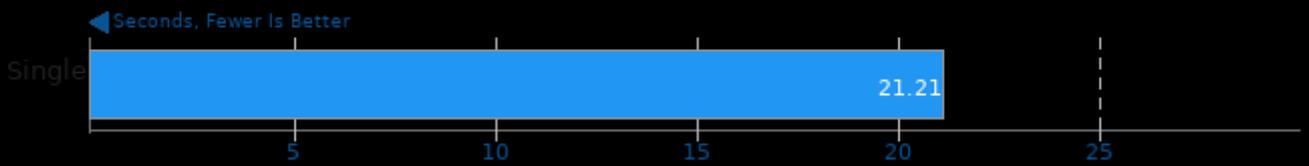
### Polyhedron Fortran Benchmarks

Benchmark: gas\_dyn2



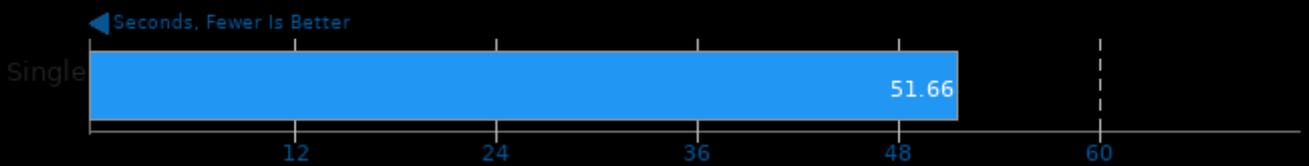
## Polyhedron Fortran Benchmarks

Benchmark: test\_fpu2



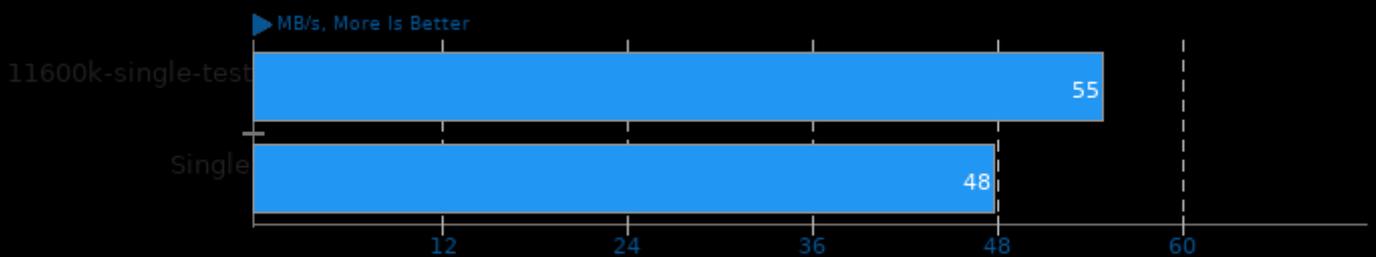
## Polyhedron Fortran Benchmarks

Benchmark: mp\_prop\_design



## Izbench 1.8

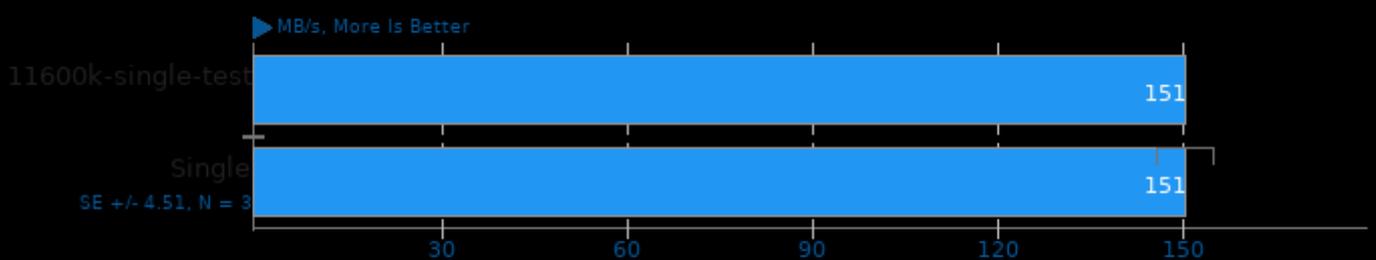
Test: XZ 0 - Process: Compression



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

## Izbench 1.8

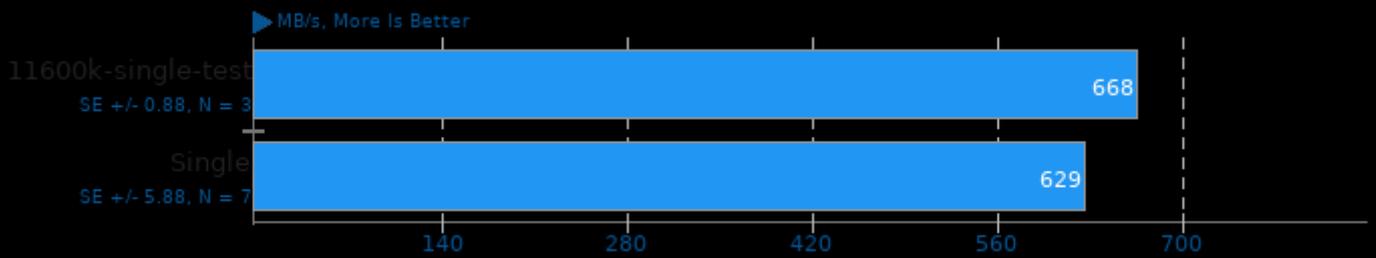
Test: XZ 0 - Process: Decompression



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

## Izbench 1.8

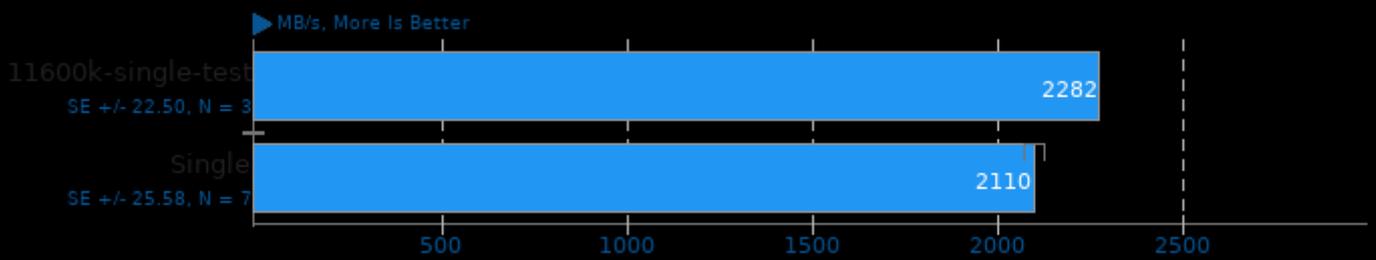
Test: Zstd 1 - Process: Compression



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

## Izbench 1.8

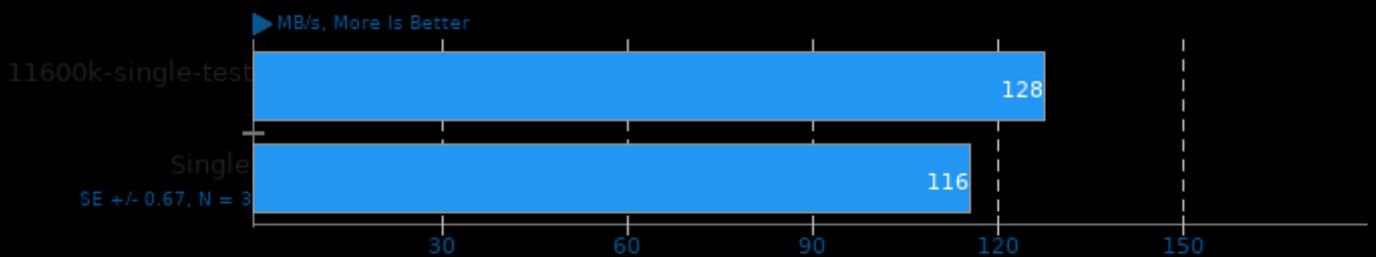
Test: Zstd 1 - Process: Decompression



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

## Izbench 1.8

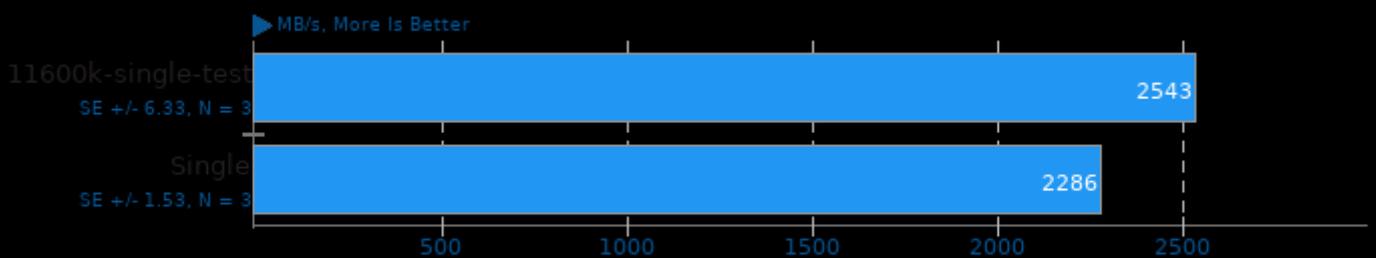
Test: Zstd 8 - Process: Compression



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

## Izbench 1.8

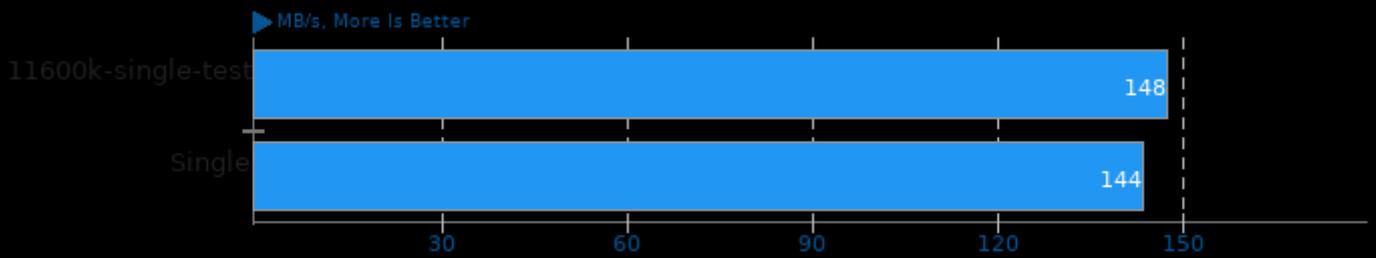
Test: Zstd 8 - Process: Decompression



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

## Izbench 1.8

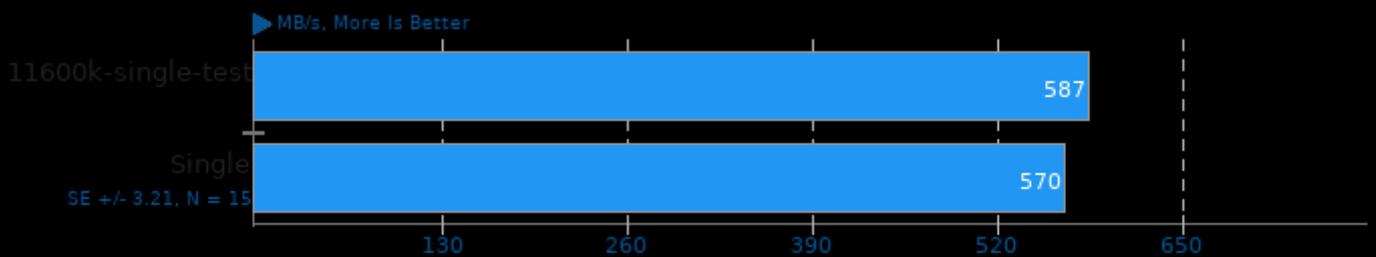
Test: Crush 0 - Process: Compression



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

## Izbench 1.8

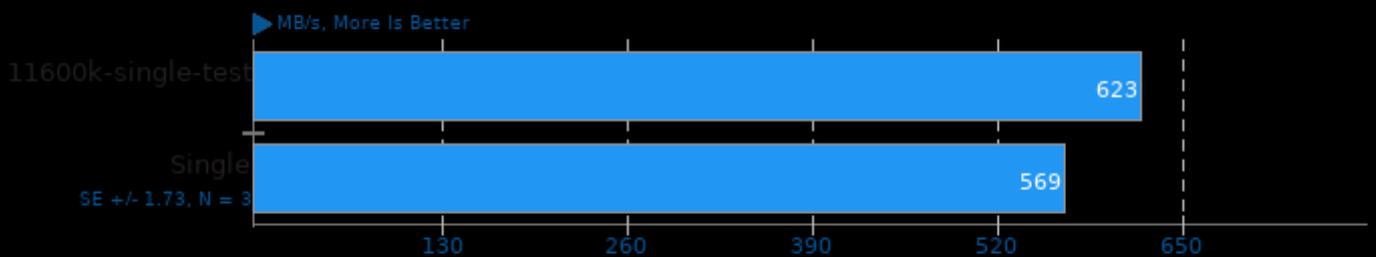
Test: Crush 0 - Process: Decompression



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

## Izbench 1.8

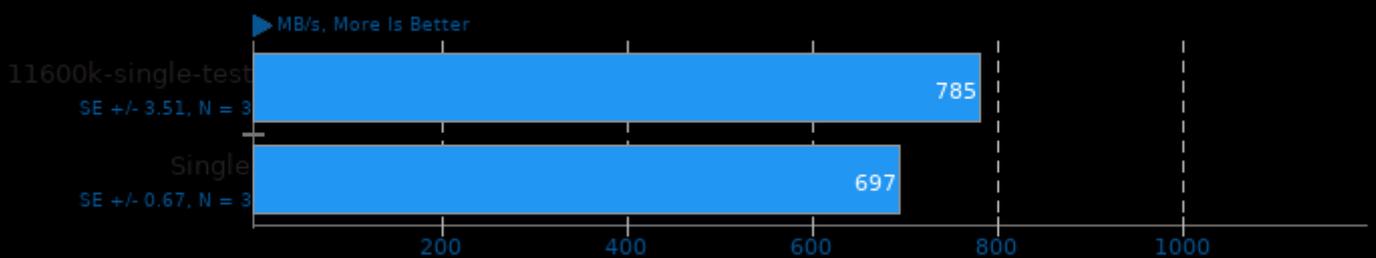
Test: Brotli 0 - Process: Compression



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

## Izbench 1.8

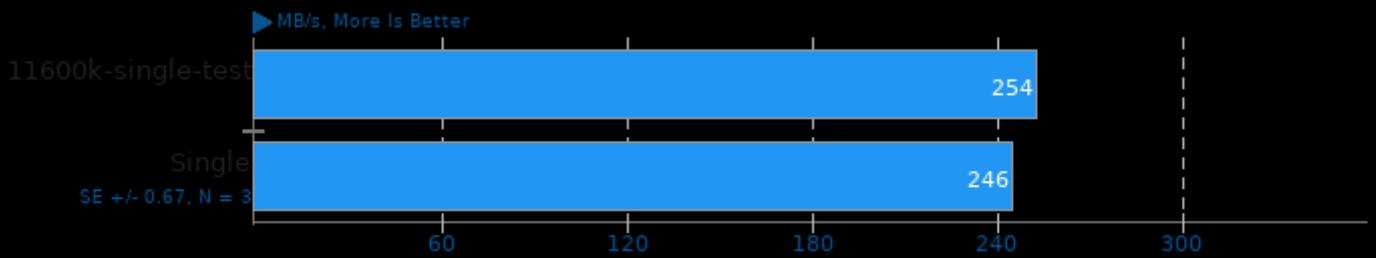
Test: Brotli 0 - Process: Decompression



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

## Izbench 1.8

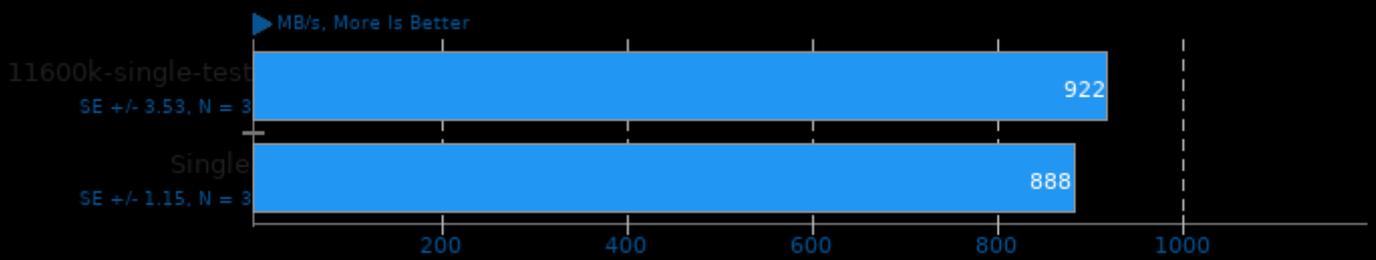
Test: Brotli 2 - Process: Compression



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

## Izbench 1.8

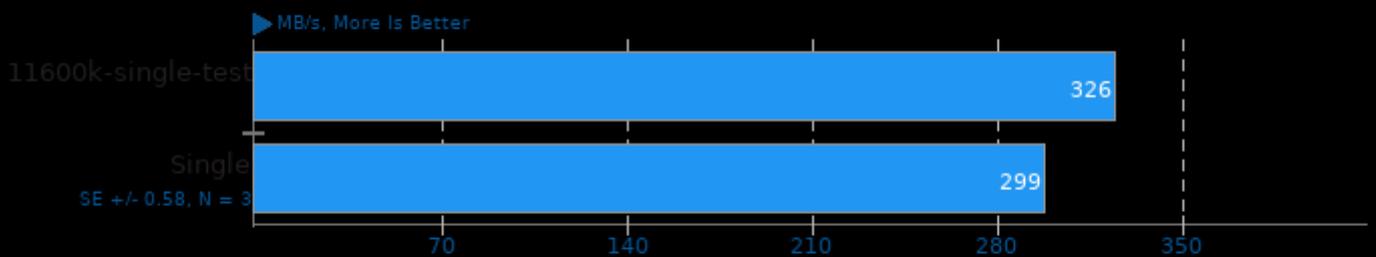
Test: Brotli 2 - Process: Decompression



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

## Izbench 1.8

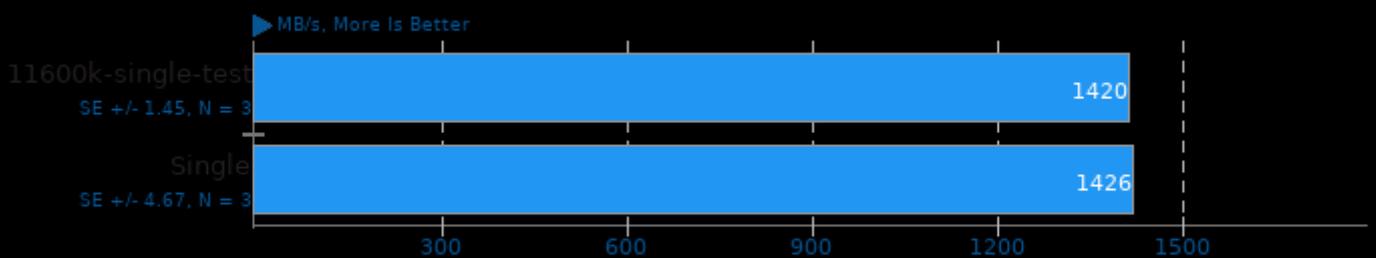
Test: Libdeflate 1 - Process: Compression



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

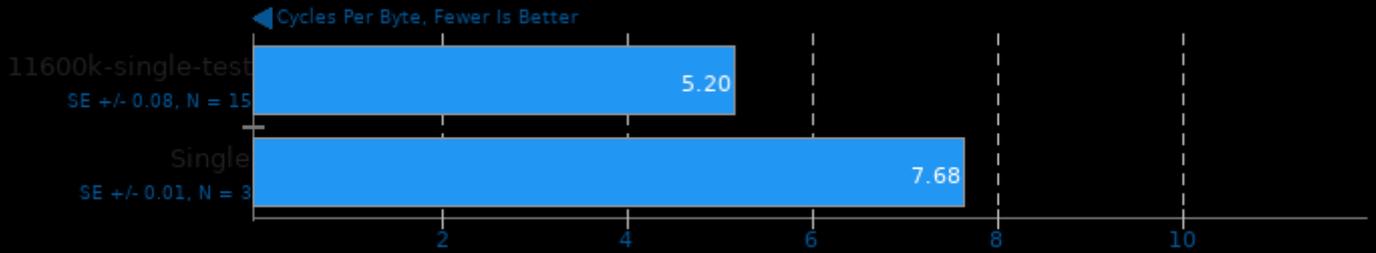
## Izbench 1.8

Test: Libdeflate 1 - Process: Decompression



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

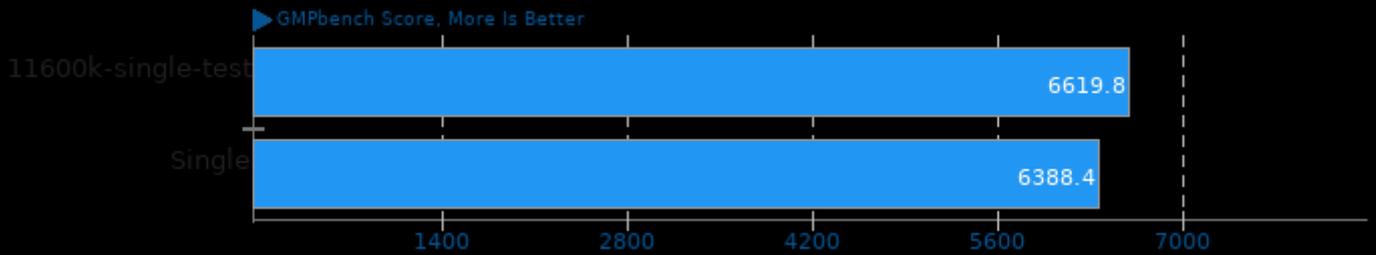
## BLAKE2 20170307



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

## GNU GMP GMPbench 6.2.1

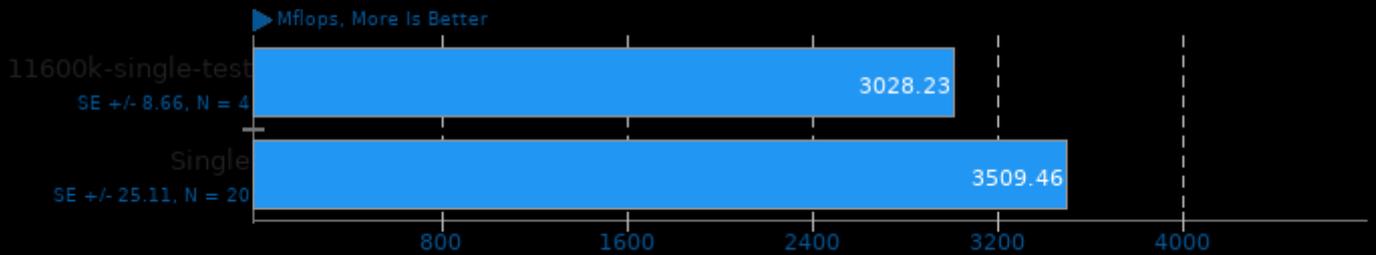
Total Time



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

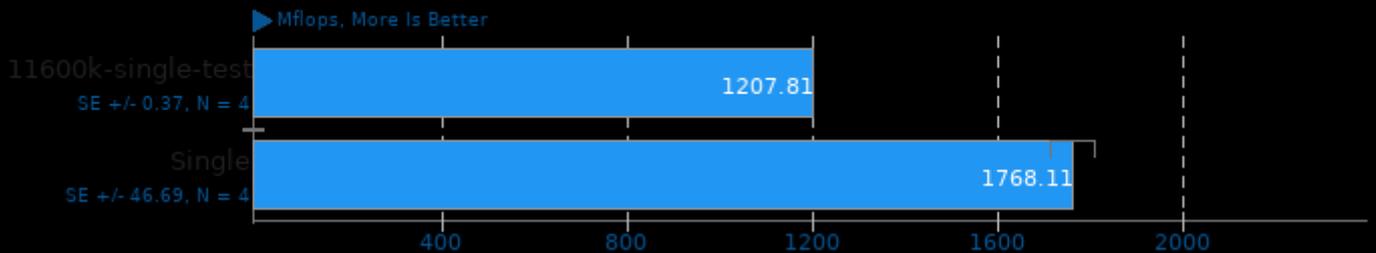
## Java SciMark 2.0

Computational Test: Composite



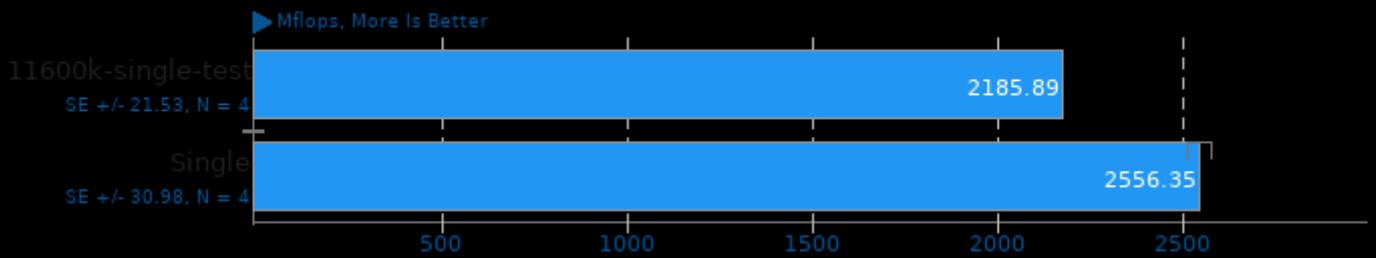
## Java SciMark 2.0

Computational Test: Monte Carlo



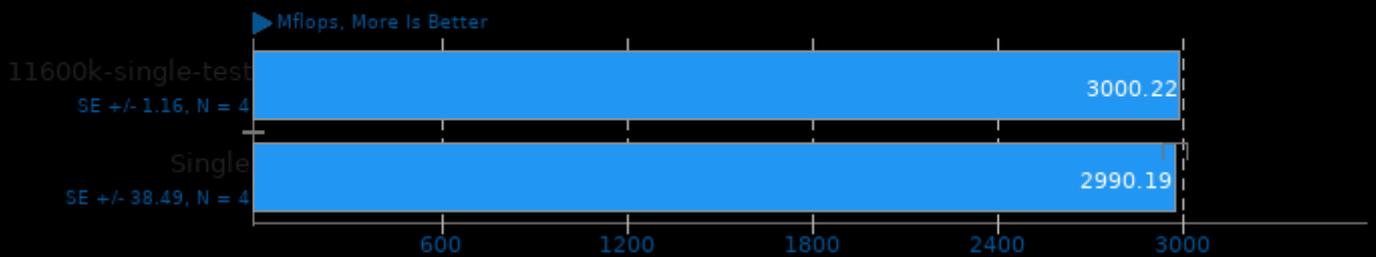
## Java SciMark 2.0

Computational Test: Fast Fourier Transform



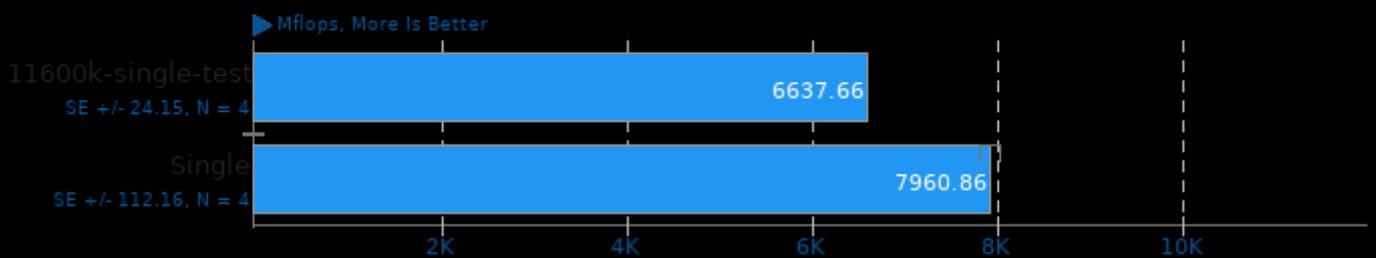
## Java SciMark 2.0

Computational Test: Sparse Matrix Multiply



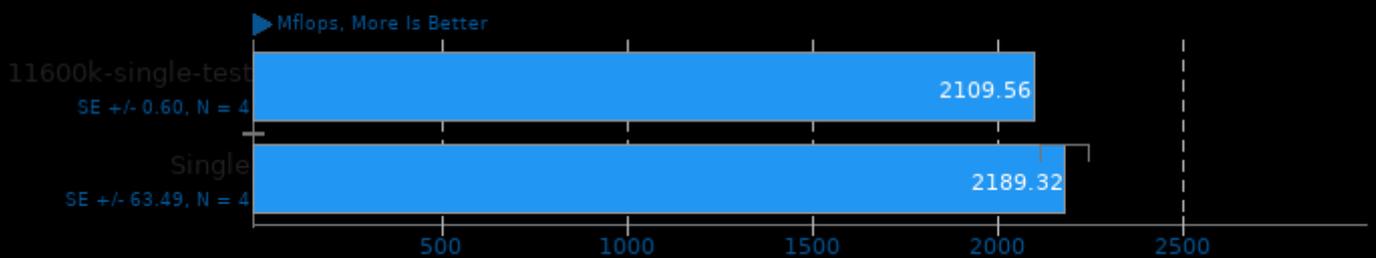
## Java SciMark 2.0

Computational Test: Dense LU Matrix Factorization



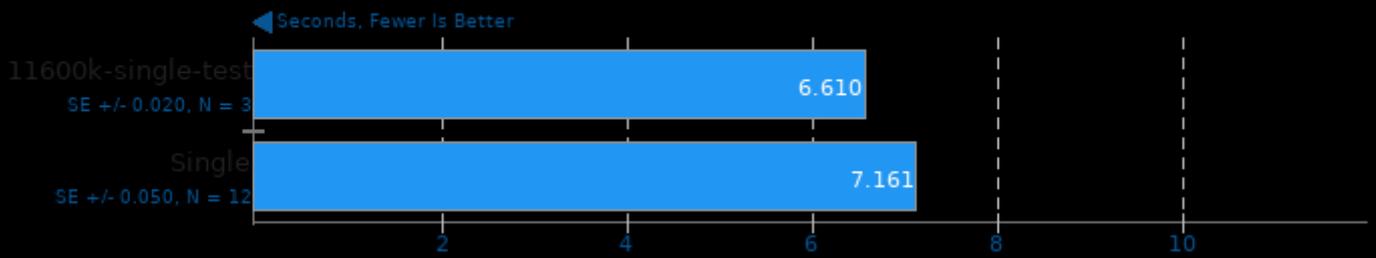
## Java SciMark 2.0

Computational Test: Jacobi Successive Over-Relaxation



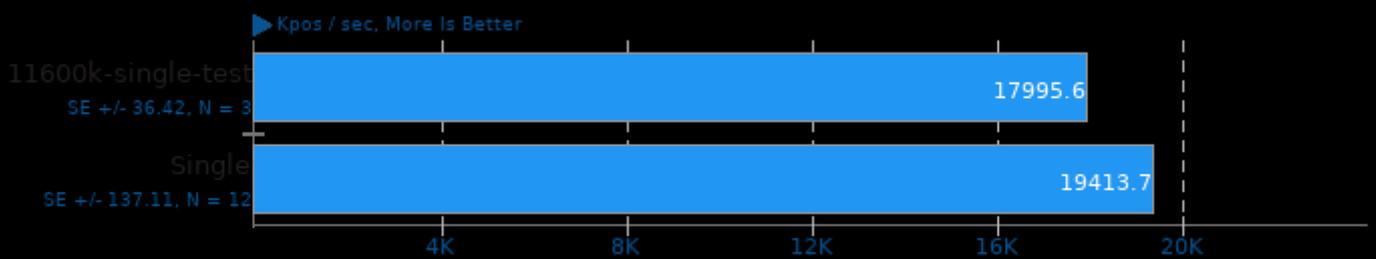
### Bork File Encrypter 1.4

File Encryption Time



### Fhourstones 3.1

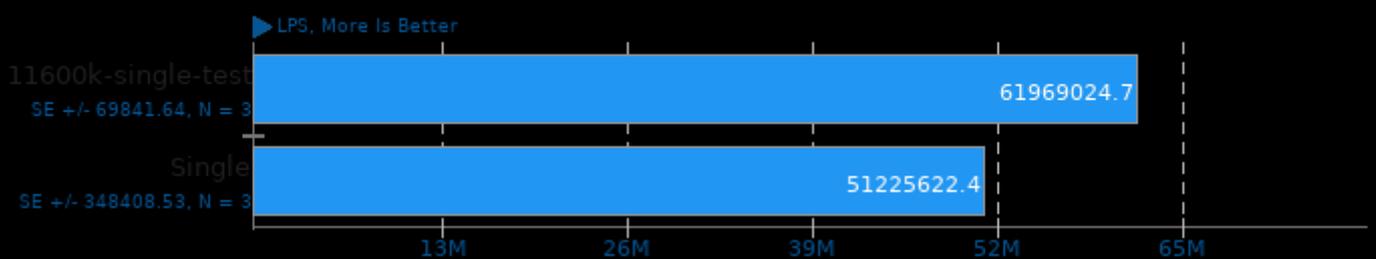
Complex Connect-4 Solving



1. (CC) gcc options: -O3

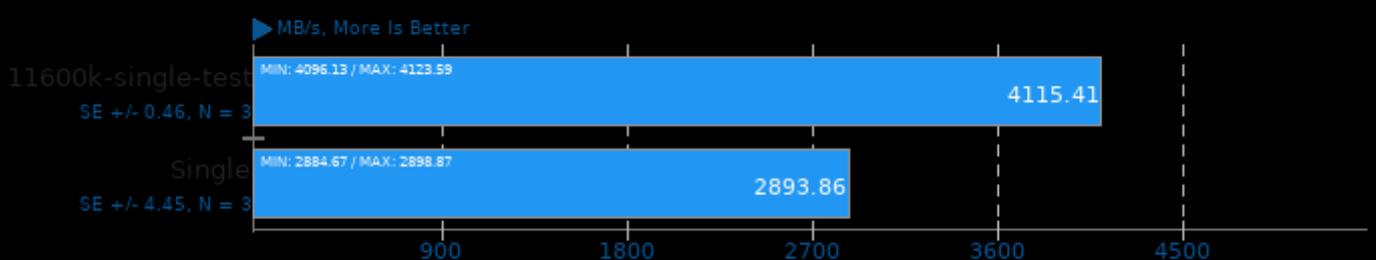
### BYTE Unix Benchmark 3.6

Computational Test: Dhrystone 2



### CacheBench

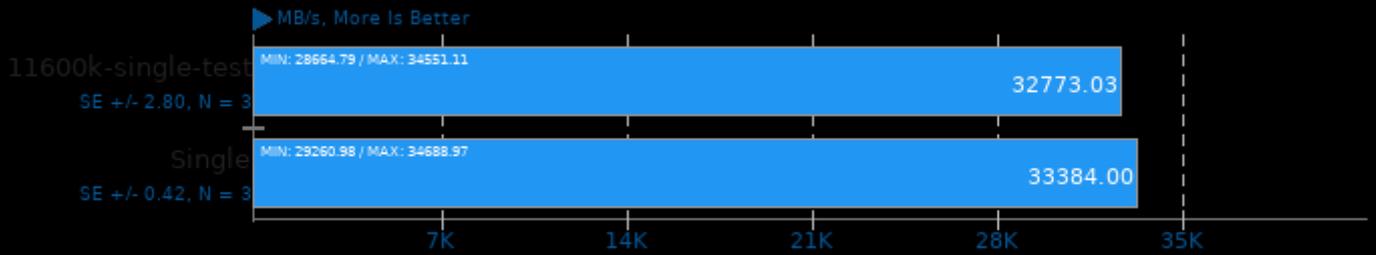
Test: Read



1. (CC) gcc options: -lrt

## CacheBench

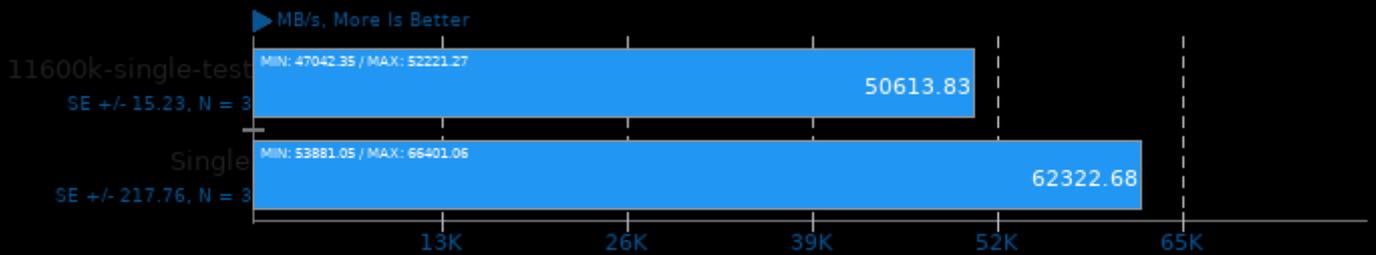
Test: Write



1. (CC) gcc options: -lrt

## CacheBench

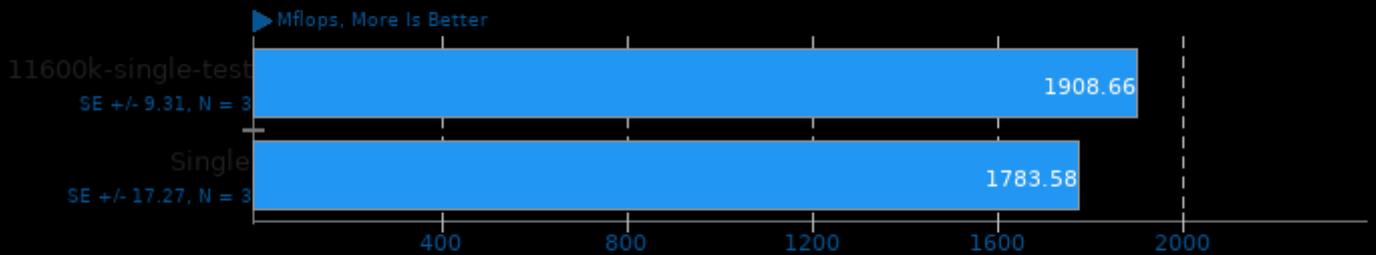
Test: Read / Modify / Write



1. (CC) gcc options: -lrt

## LuajIT 2.1-git

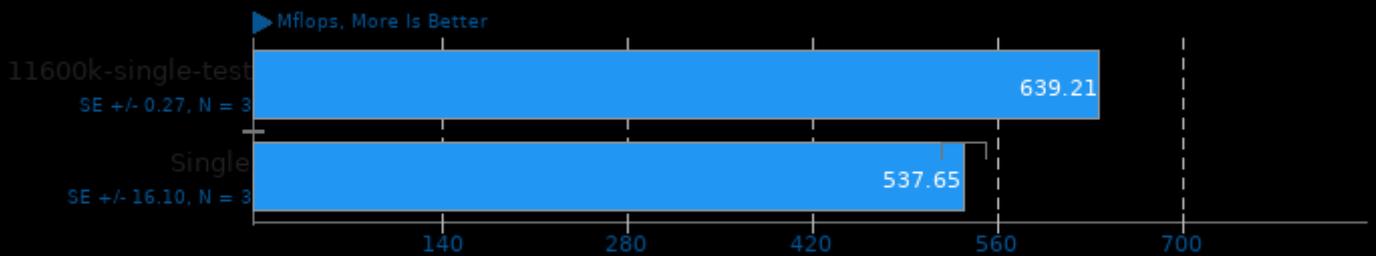
Test: Composite



1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U\_FORTIFY\_SOURCE -fno-stack-protector

## LuajIT 2.1-git

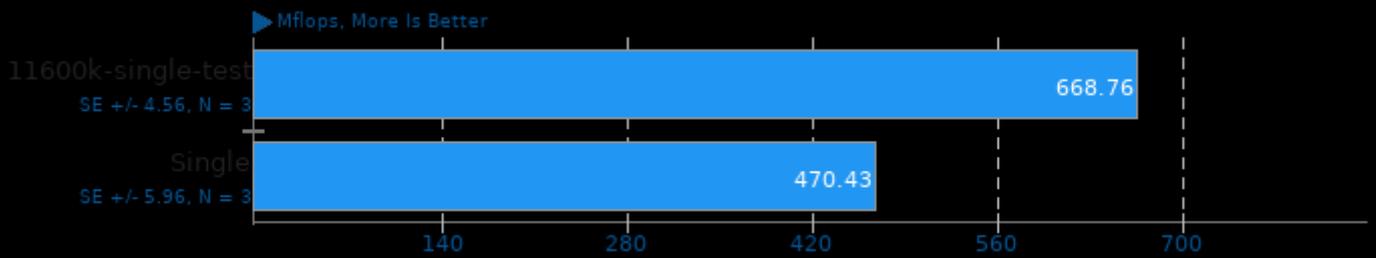
Test: Monte Carlo



1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U\_FORTIFY\_SOURCE -fno-stack-protector

## LuajIT 2.1-git

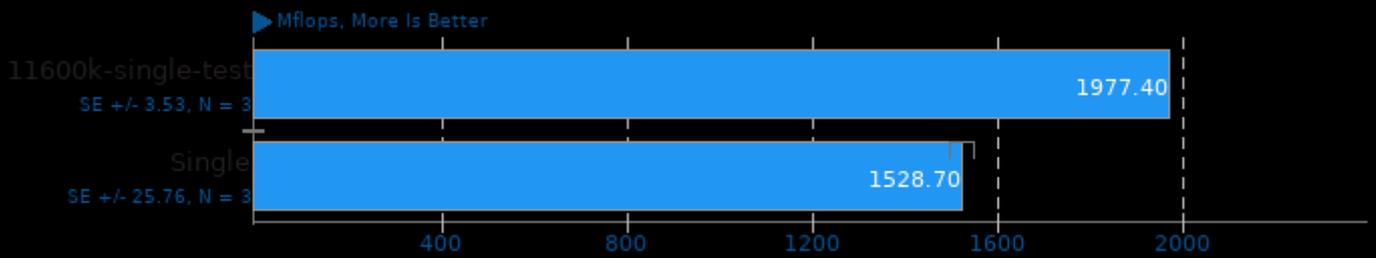
Test: Fast Fourier Transform



1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U\_FORTIFY\_SOURCE -fno-stack-protector

## LuajIT 2.1-git

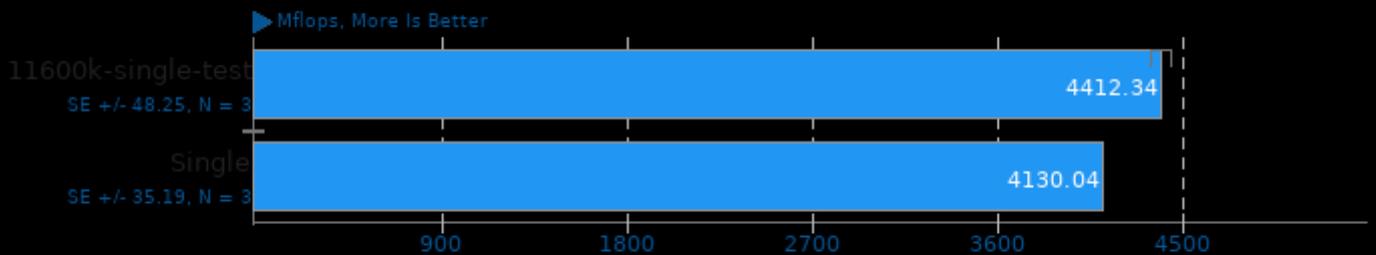
Test: Sparse Matrix Multiply



1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U\_FORTIFY\_SOURCE -fno-stack-protector

## LuajIT 2.1-git

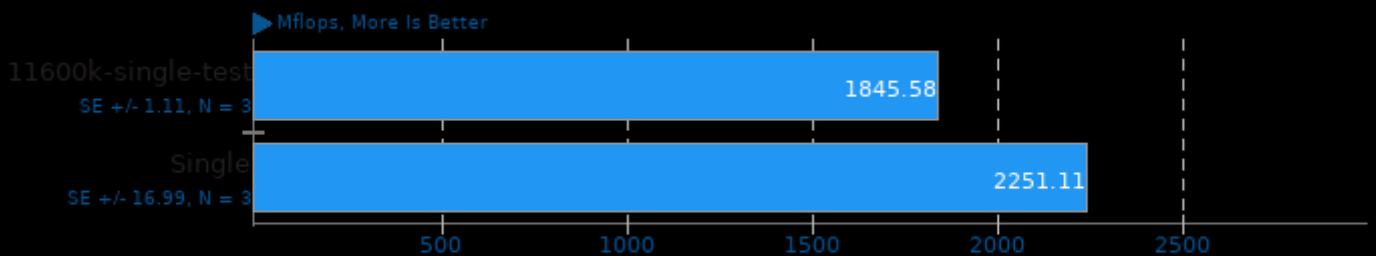
Test: Dense LU Matrix Factorization



1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U\_FORTIFY\_SOURCE -fno-stack-protector

## LuajIT 2.1-git

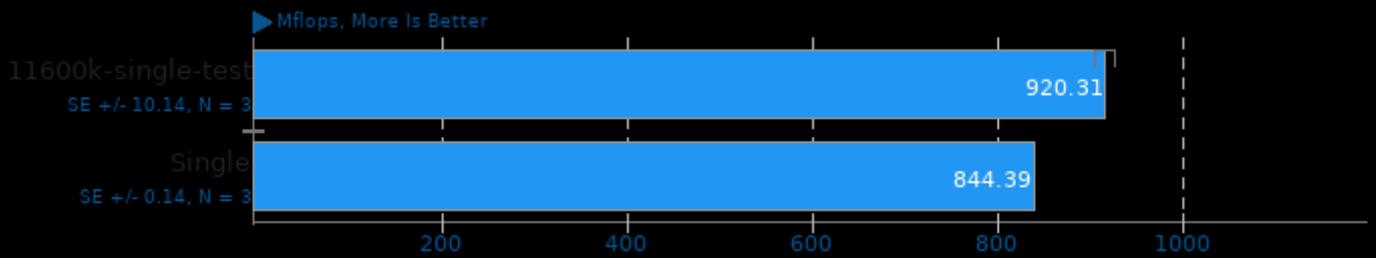
Test: Jacobi Successive Over-Relaxation



1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U\_FORTIFY\_SOURCE -fno-stack-protector

## SciMark 2.0

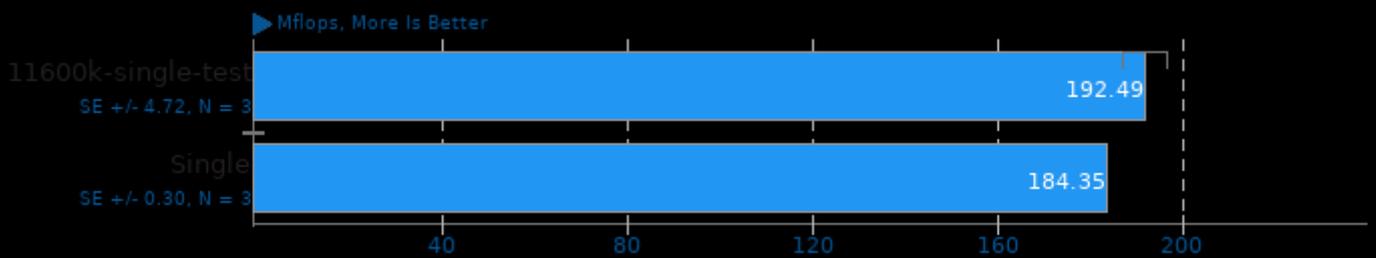
Computational Test: Composite



1. (CC) gcc options: -lm

## SciMark 2.0

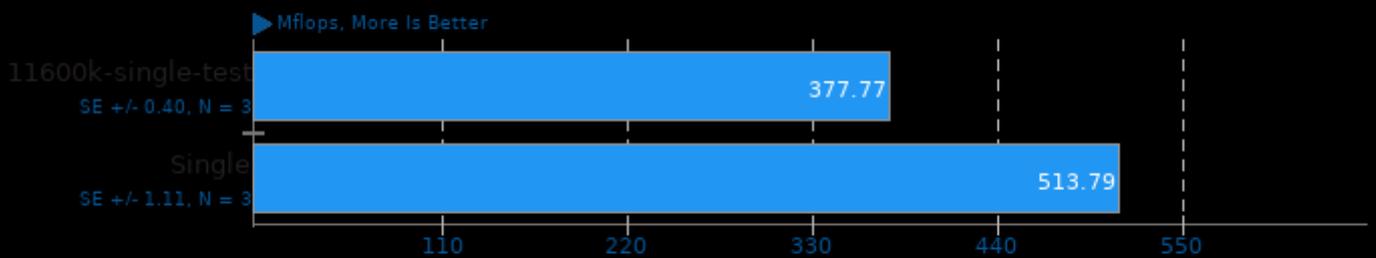
Computational Test: Monte Carlo



1. (CC) gcc options: -lm

## SciMark 2.0

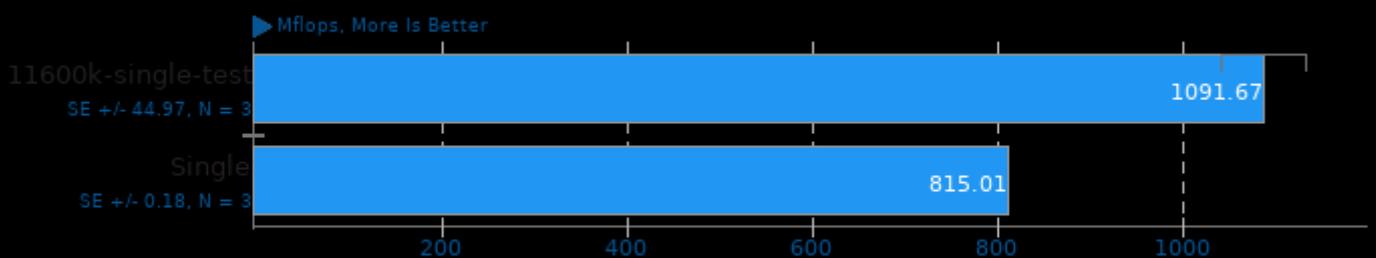
Computational Test: Fast Fourier Transform



1. (CC) gcc options: -lm

## SciMark 2.0

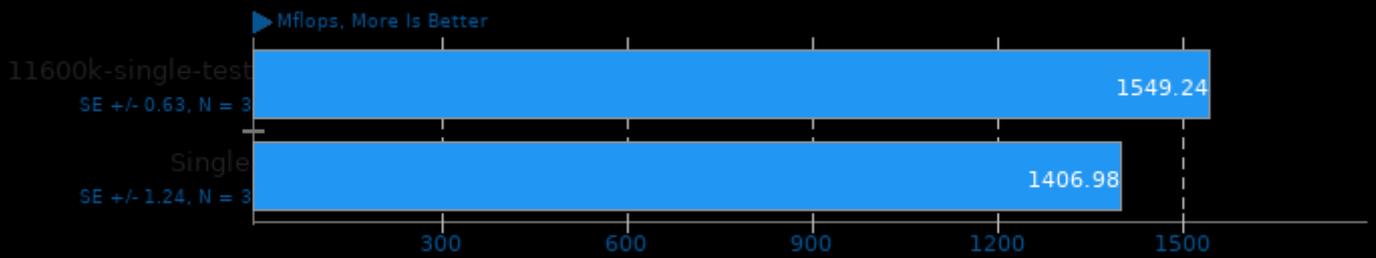
Computational Test: Sparse Matrix Multiply



1. (CC) gcc options: -lm

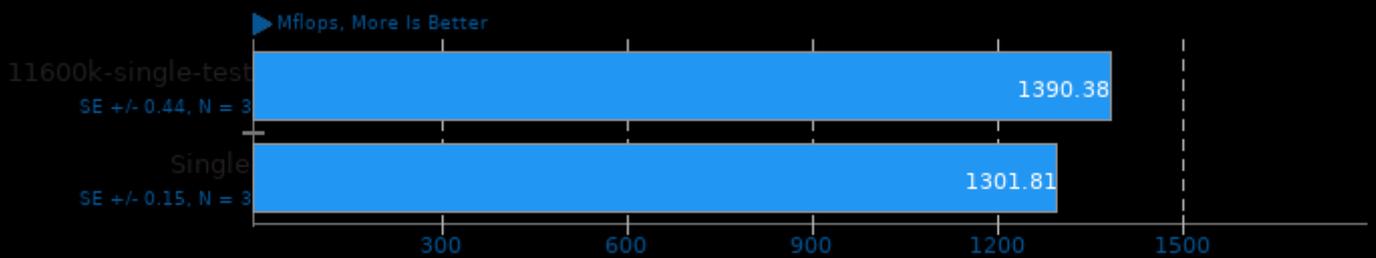
## SciMark 2.0

Computational Test: Dense LU Matrix Factorization



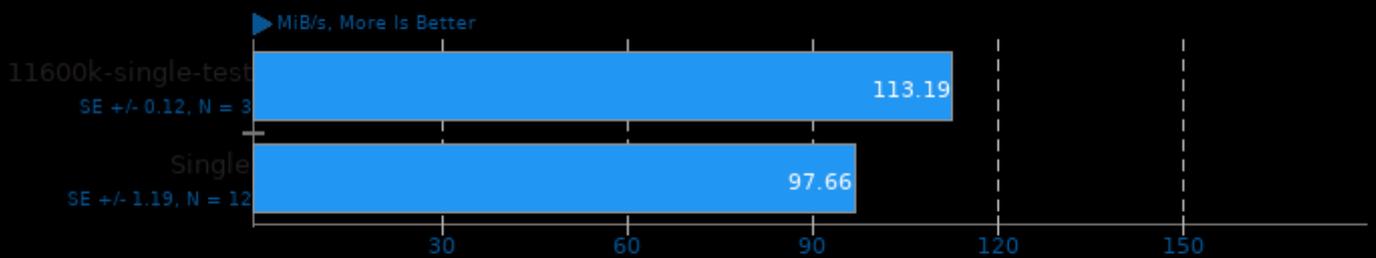
## SciMark 2.0

Computational Test: Jacobi Successive Over-Relaxation



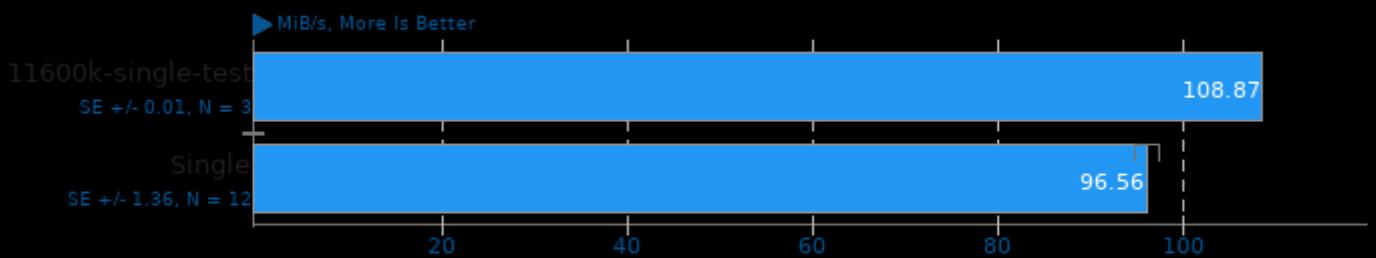
## Botan 2.17.3

Test: KASUMI



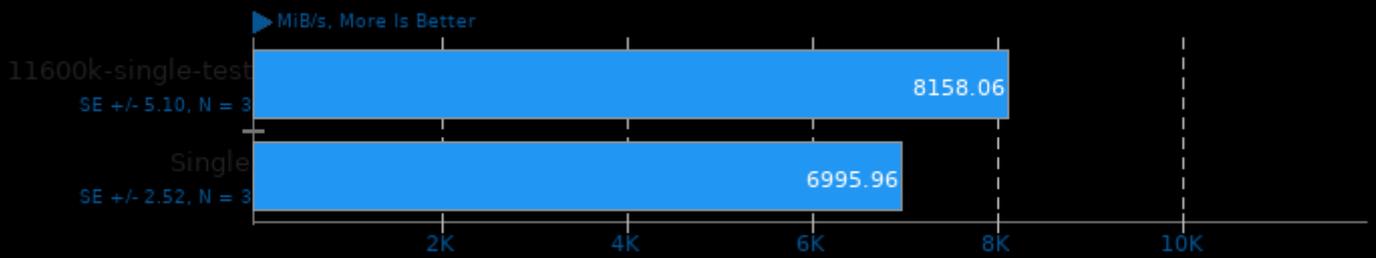
## Botan 2.17.3

Test: KASUMI - Decrypt



## Botan 2.17.3

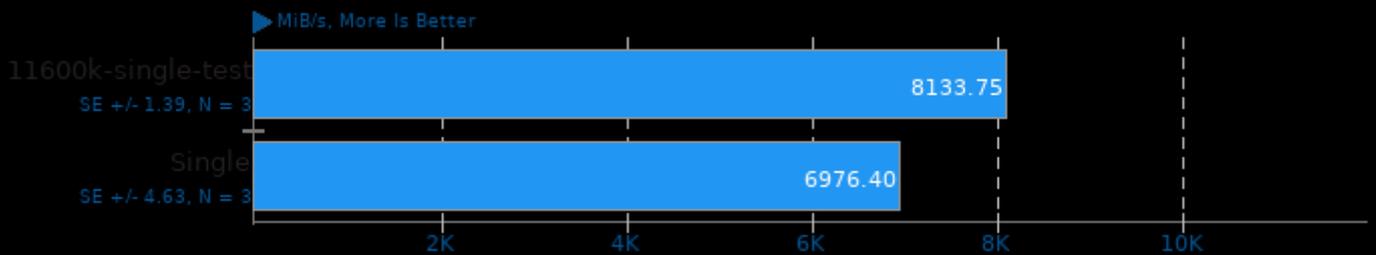
Test: AES-256



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

## Botan 2.17.3

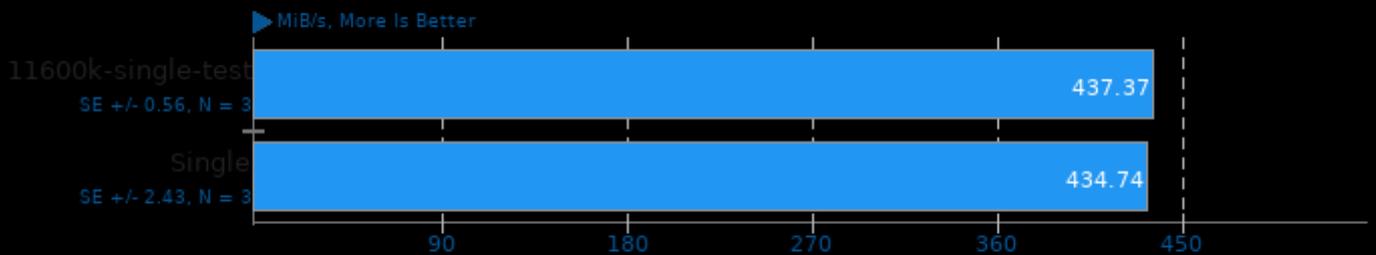
Test: AES-256 - Decrypt



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

## Botan 2.17.3

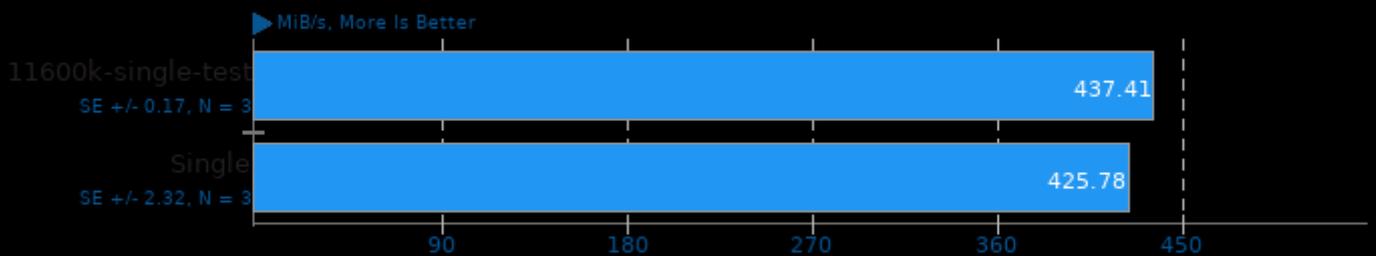
Test: Twofish



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

## Botan 2.17.3

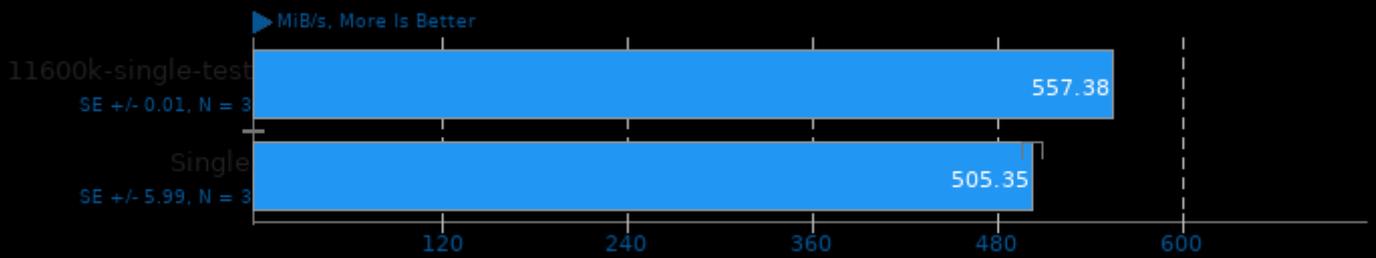
Test: Twofish - Decrypt



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

## Botan 2.17.3

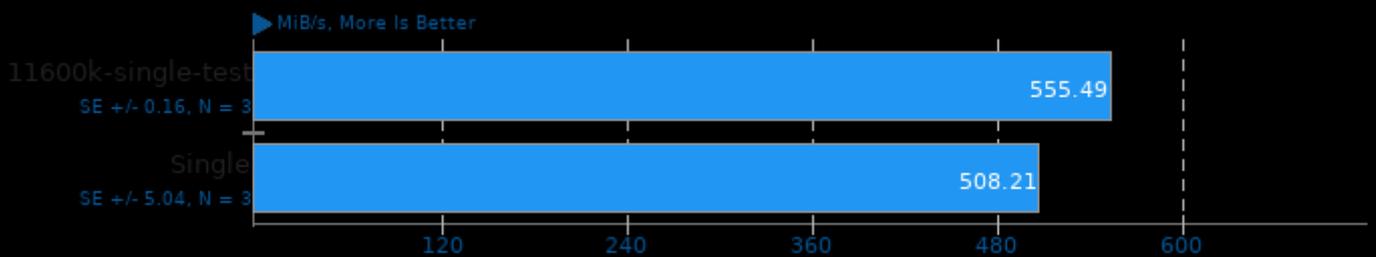
Test: Blowfish



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

## Botan 2.17.3

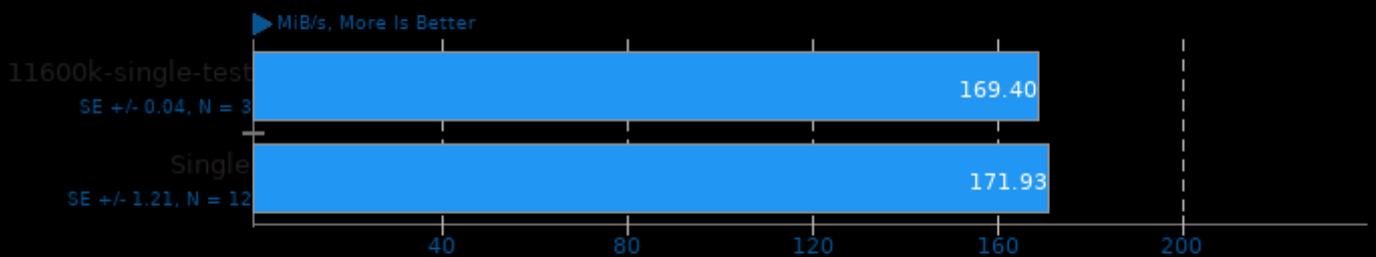
Test: Blowfish - Decrypt



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

## Botan 2.17.3

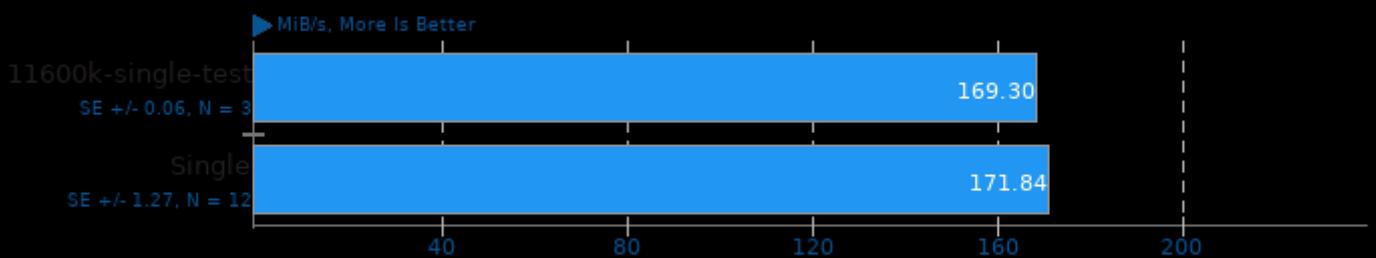
Test: CAST-256



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

## Botan 2.17.3

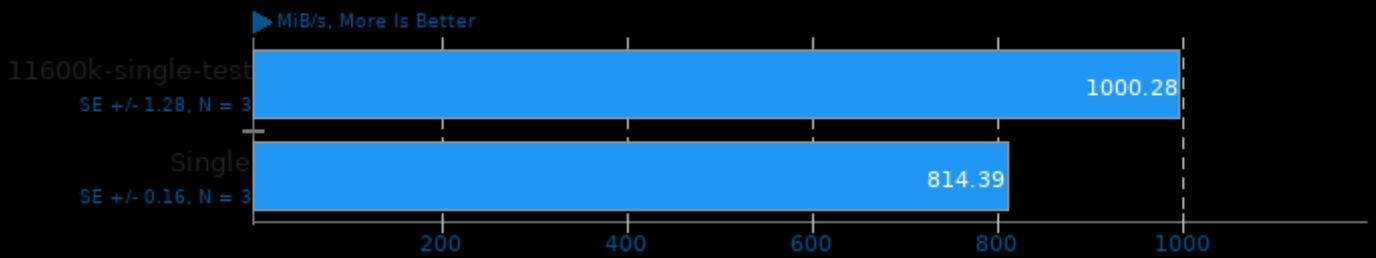
Test: CAST-256 - Decrypt



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

## Botan 2.17.3

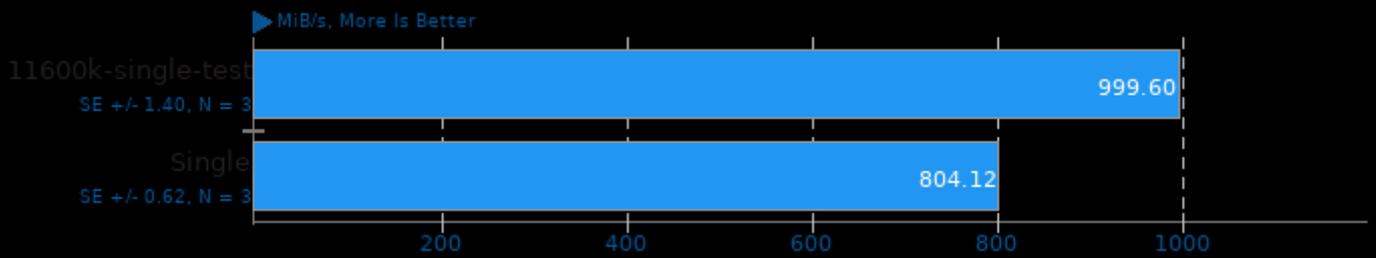
Test: ChaCha20Poly1305



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

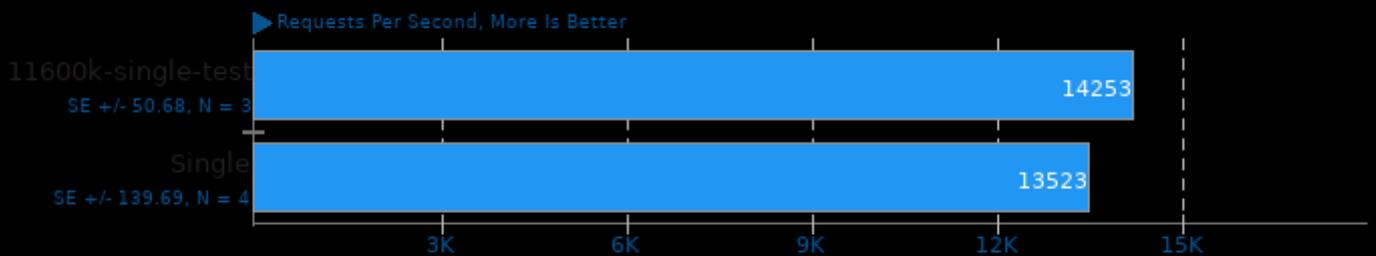
## Botan 2.17.3

Test: ChaCha20Poly1305 - Decrypt



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

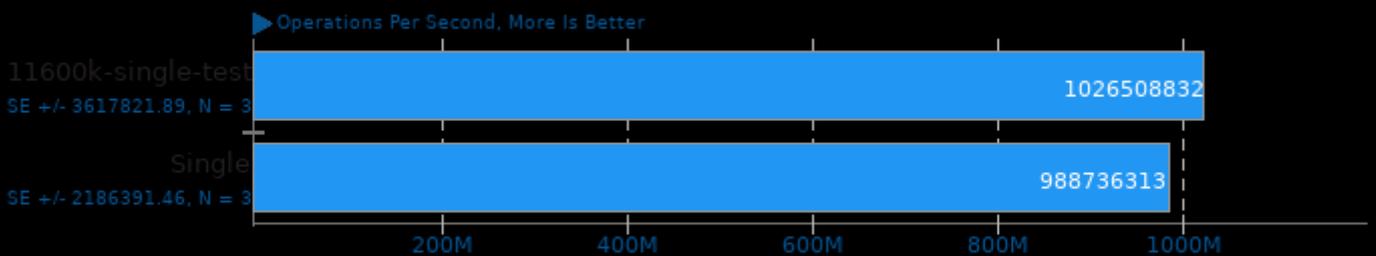
## Node.js Express HTTP Load Test



1. Nodejs v10.19.0

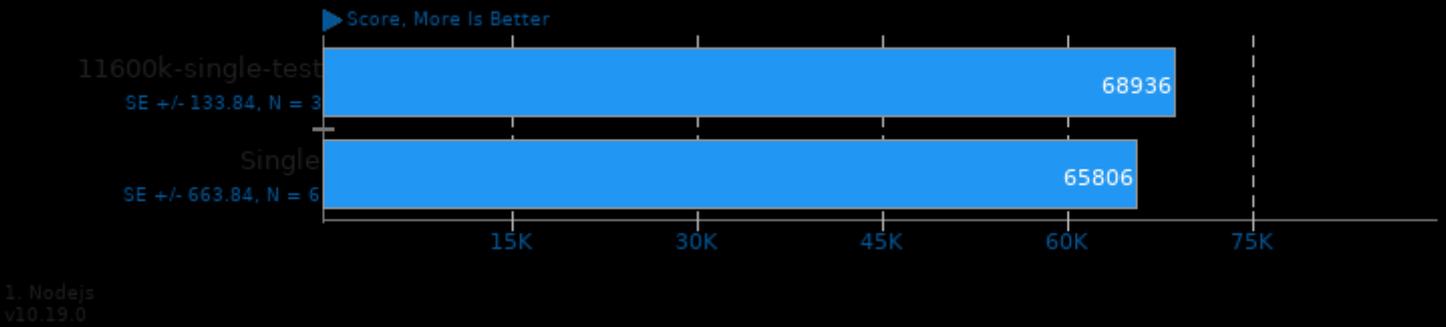
## Swet 1.5.16

Average

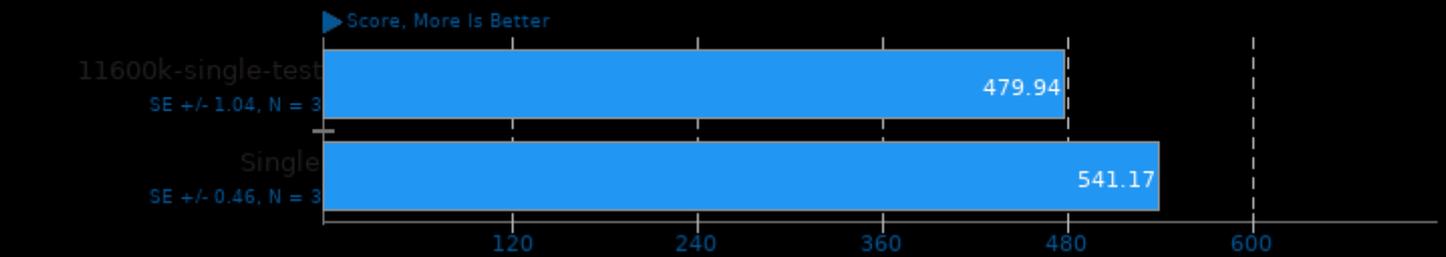


1. (CC) gcc options: -lm -pthread -lcurses -lrt

## Node.js Octane Benchmark

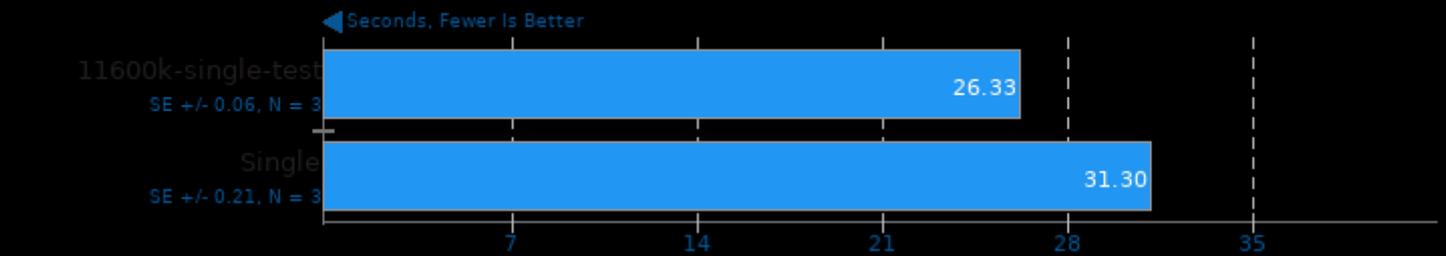


## Numpy Benchmark



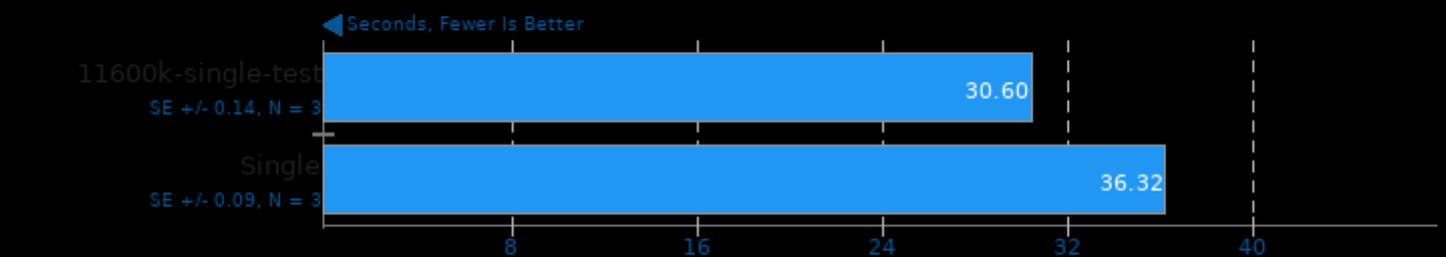
## Gzip Compression

Linux Source Tree Archiving To .tar.gz



## dcraw

RAW To PPM Image Conversion

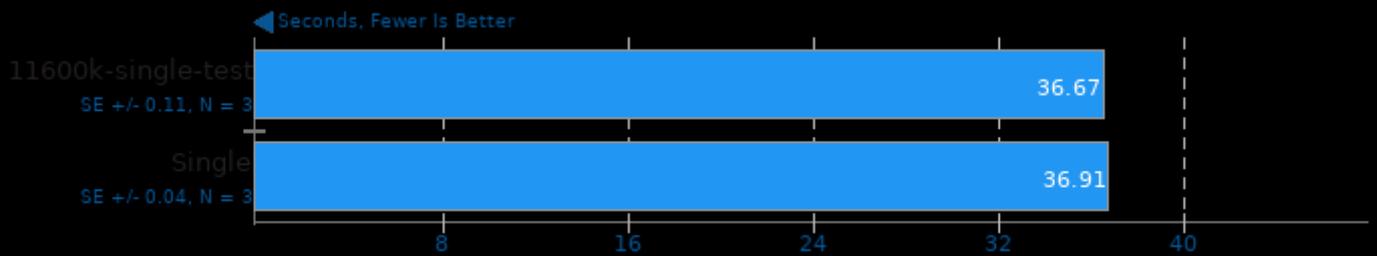


1. (CC) gcc options: -lm



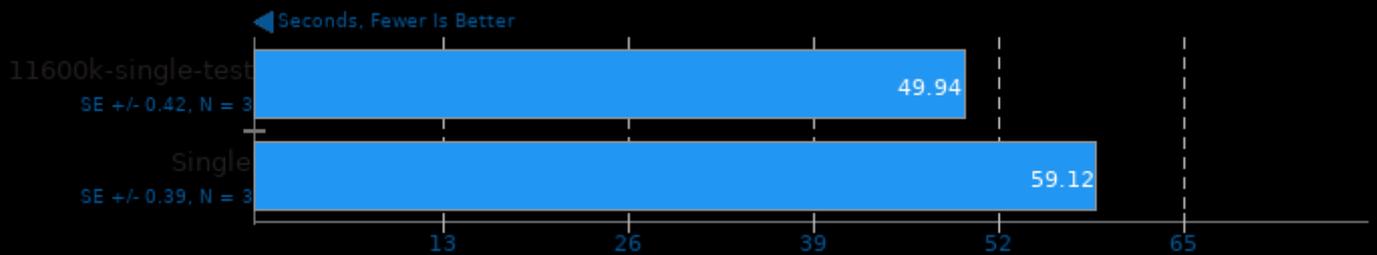
## Minion 1.8

Benchmark: Graceful



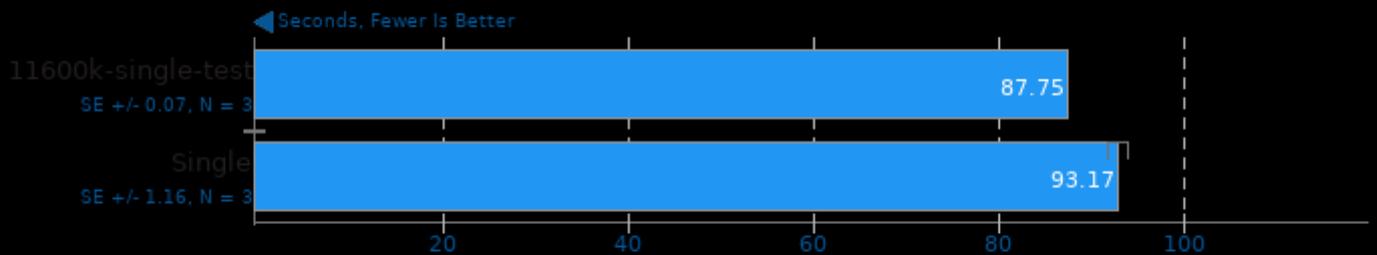
## Minion 1.8

Benchmark: Solitaire



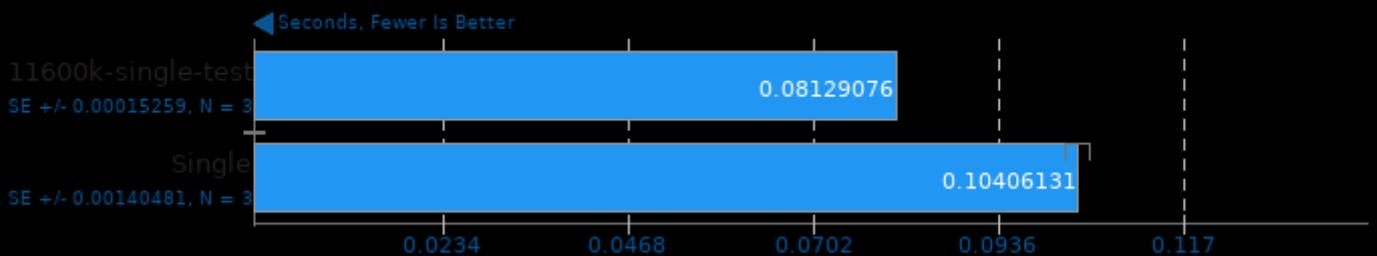
## Minion 1.8

Benchmark: Quasigroup



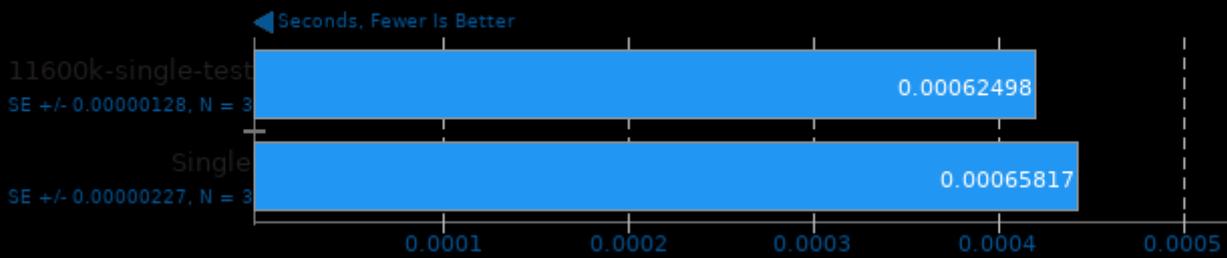
## Perl Benchmarks

Test: Pod2html



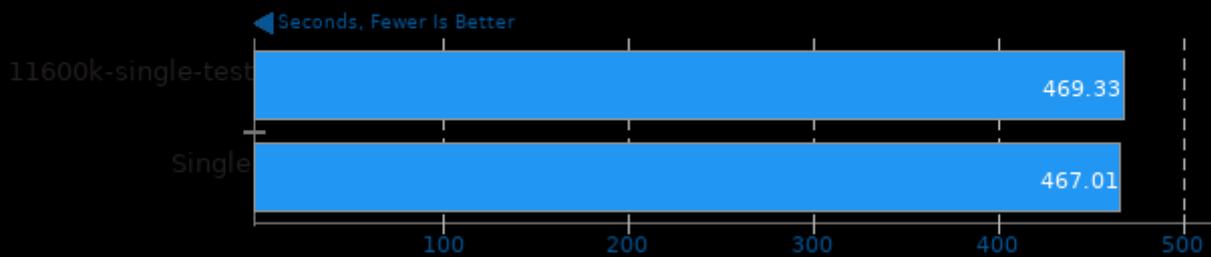
## Perl Benchmarks

Test: Interpreter

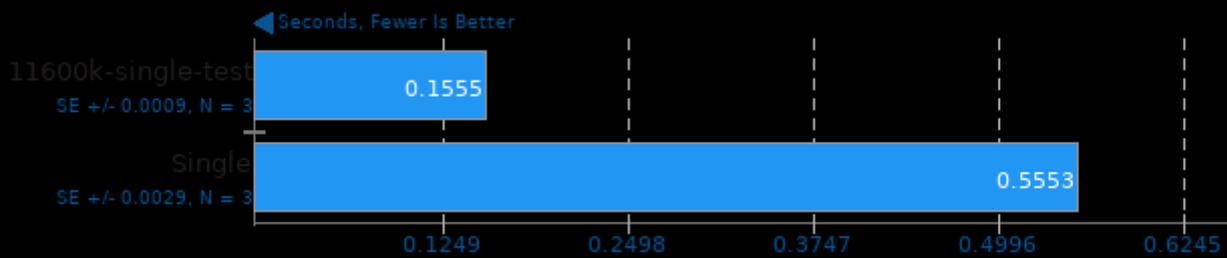


## Radiance Benchmark 5.0

Test: Serial



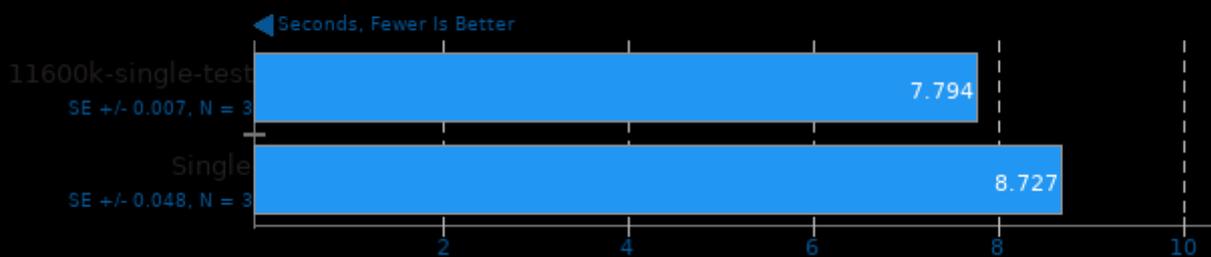
## R Benchmark

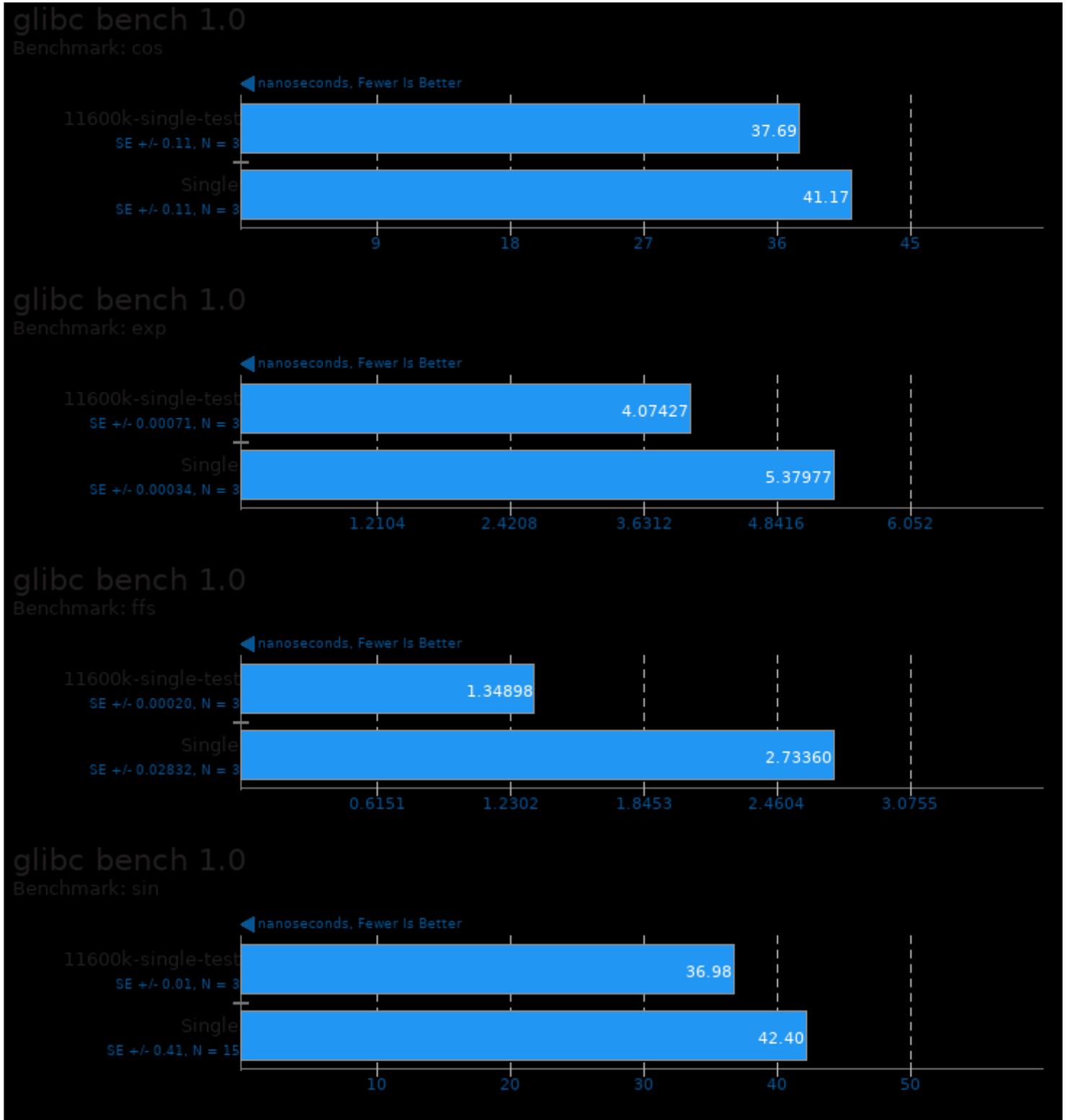


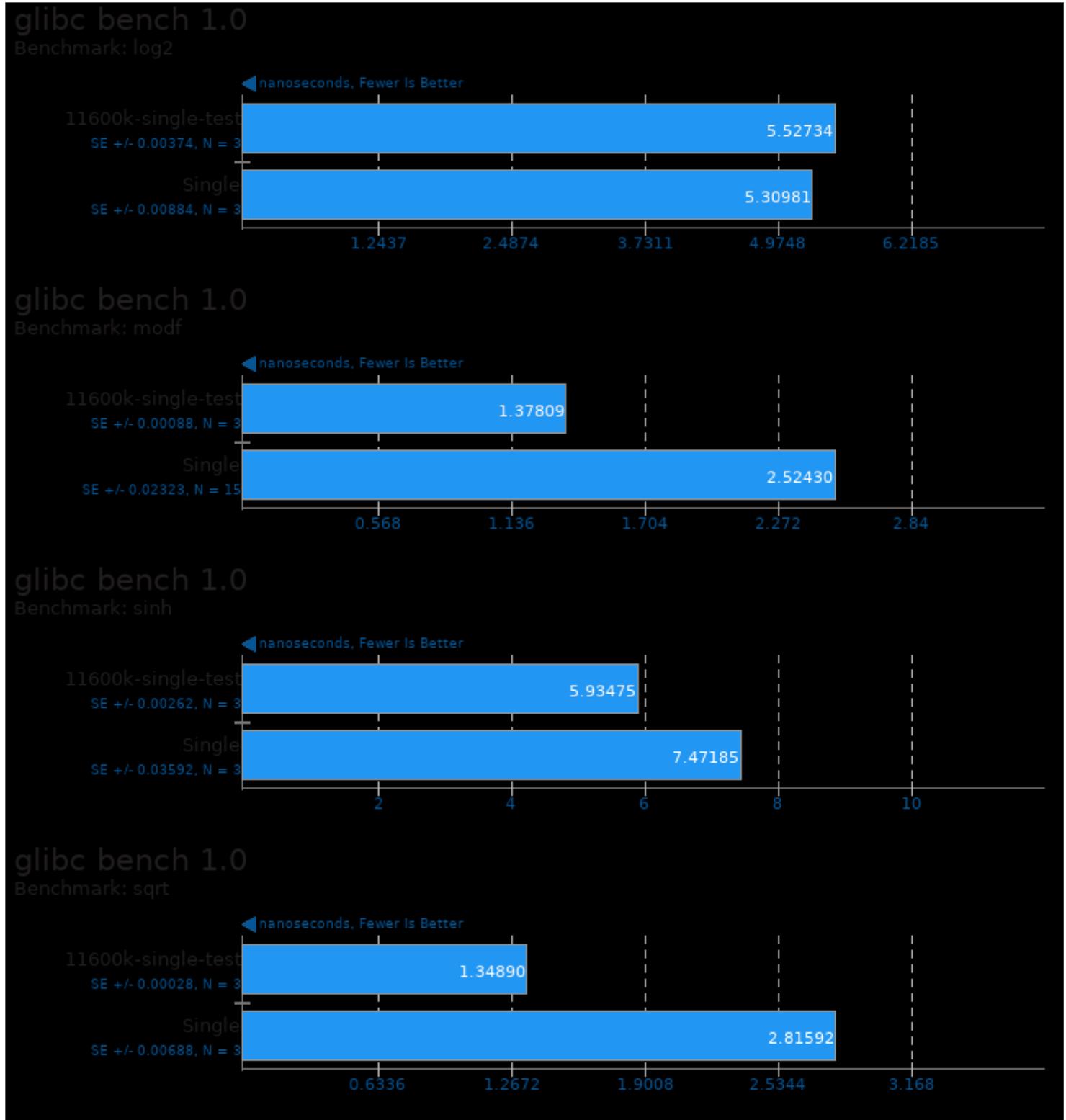
1. R scripting front-end version 3.6.3 (2020-02-29)

## Sudoku 0.4

Total Time

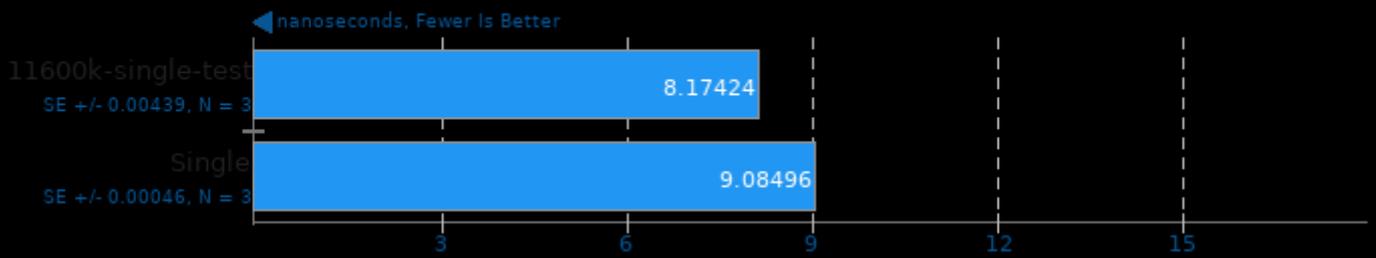






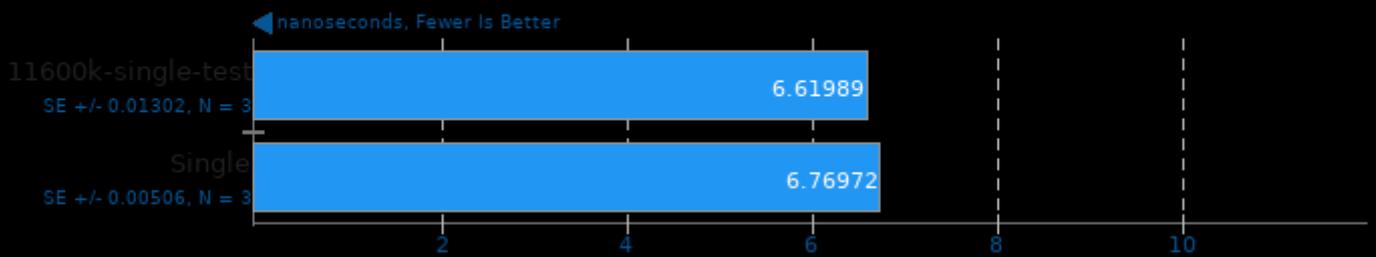
## glibc bench 1.0

Benchmark: tanh



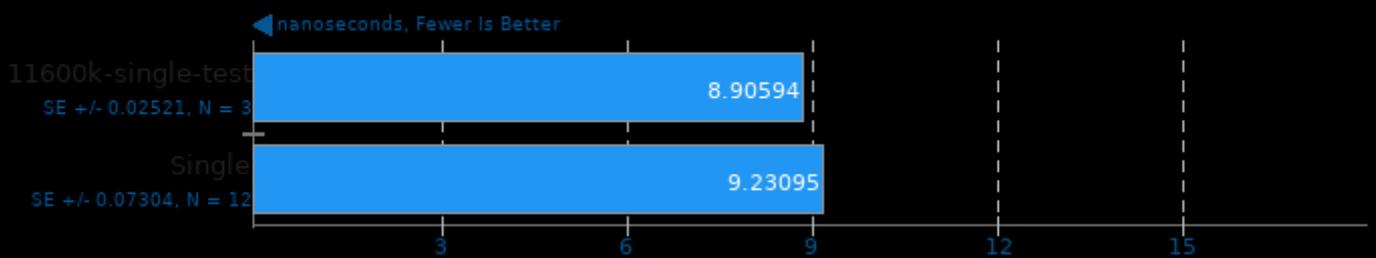
## glibc bench 1.0

Benchmark: asinh



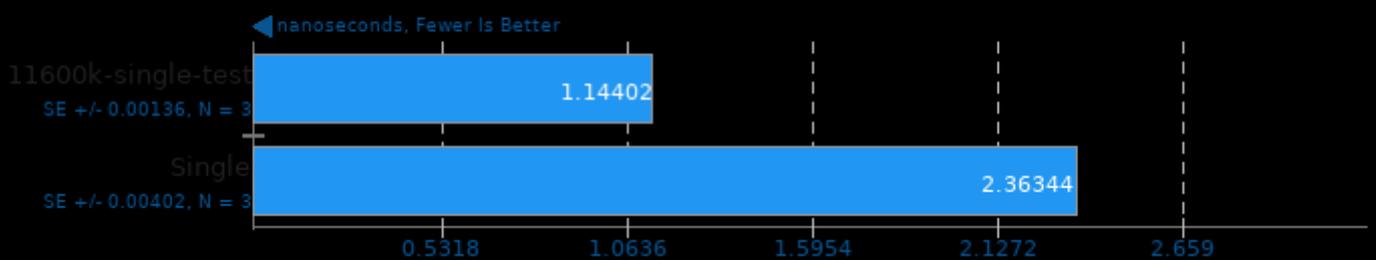
## glibc bench 1.0

Benchmark: atanh



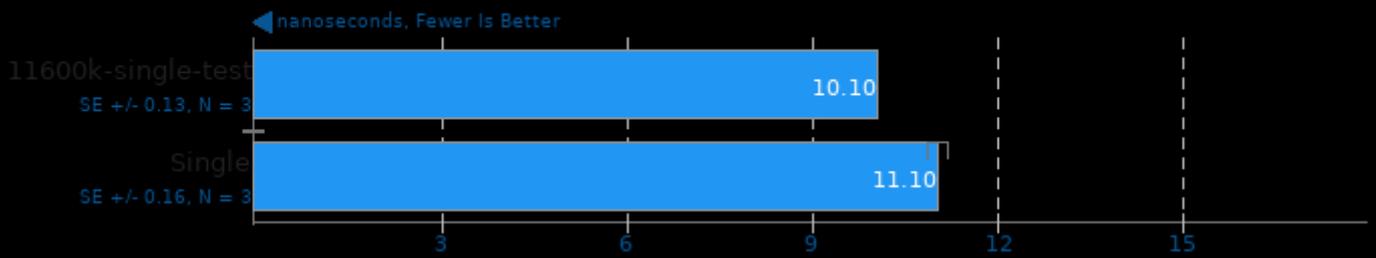
## glibc bench 1.0

Benchmark: ffsll



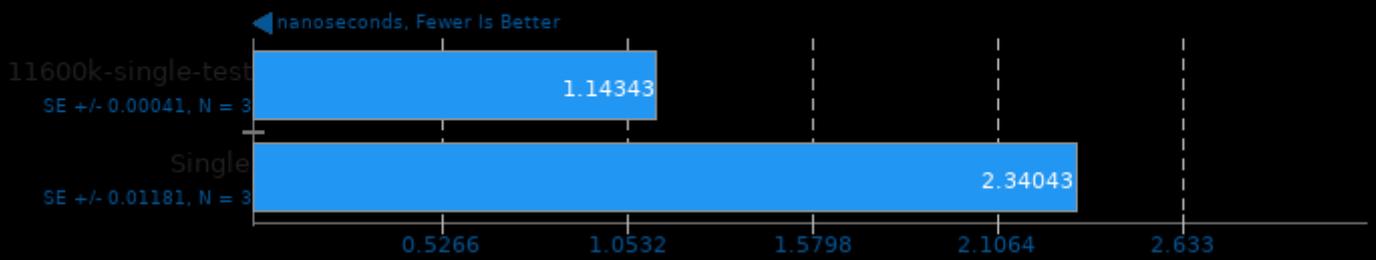
glibc bench 1.0

Benchmark: sincos



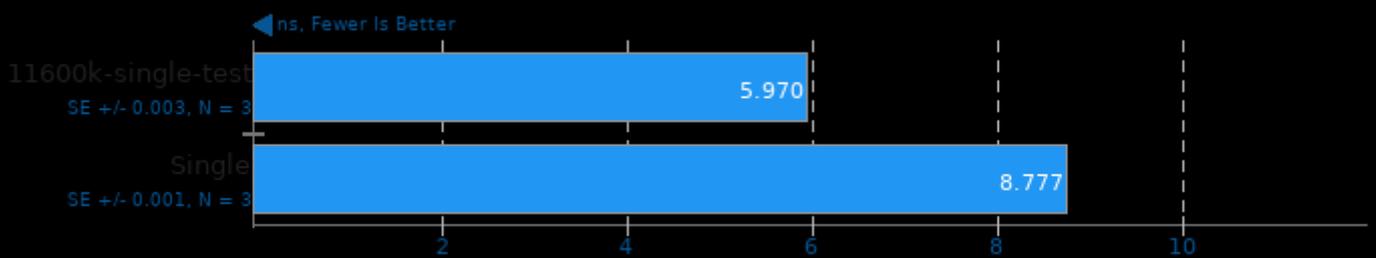
glibc bench 1.0

Benchmark: pthread\_once



Multichase Pointer Chaser

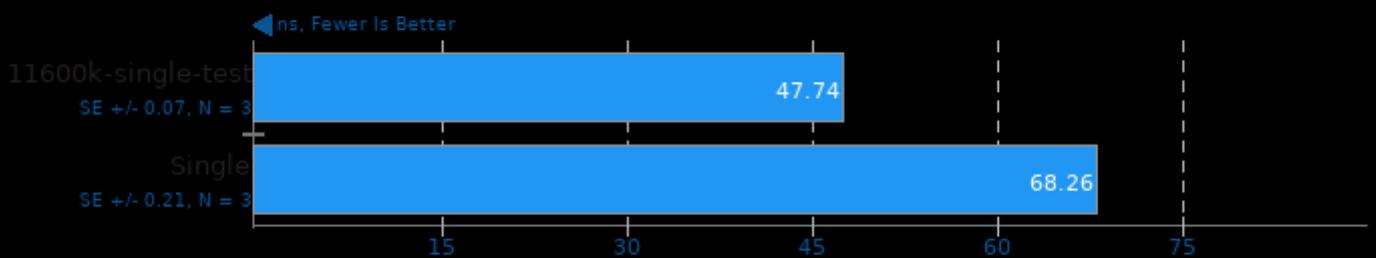
Test: 4MB Array, 64 Byte Stride



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

Multichase Pointer Chaser

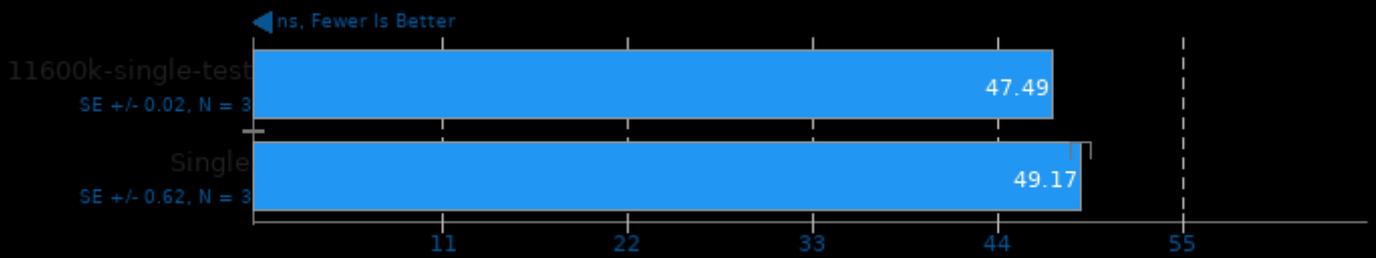
Test: 1GB Array, 256 Byte Stride



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

## Multichase Pointer Chaser

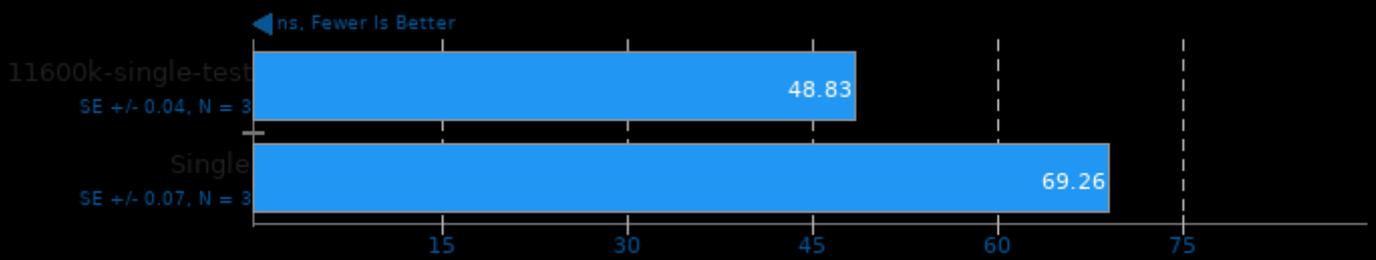
Test: 256MB Array, 256 Byte Stride



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

## Multichase Pointer Chaser

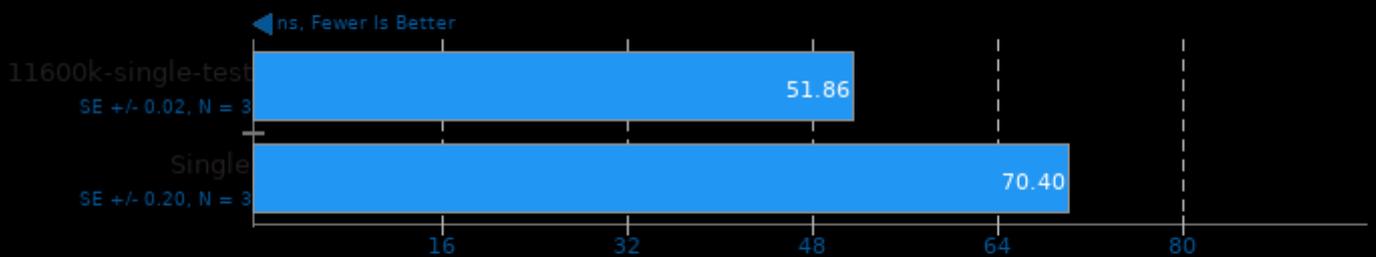
Test: 1GB Array, 256 Byte Stride, 2 Threads



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

## Multichase Pointer Chaser

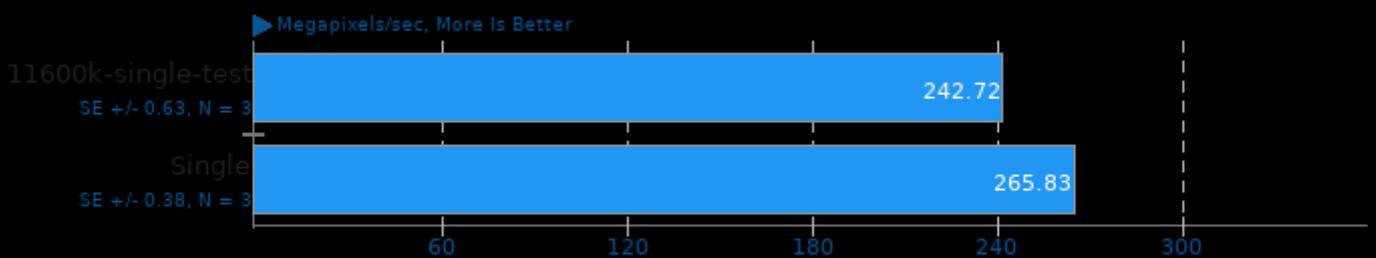
Test: 1GB Array, 256 Byte Stride, 4 Threads



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

## libjpeg-turbo tjbench 2.1.0

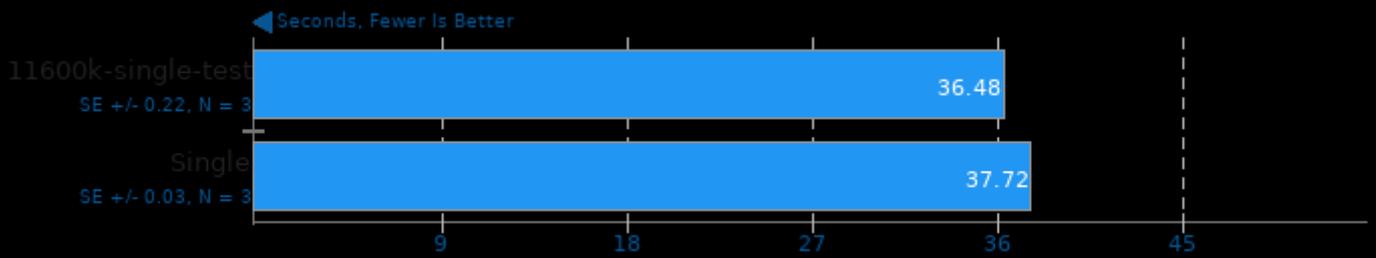
Test: Decompression Throughput



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

## CppPerformanceBenchmarks 9

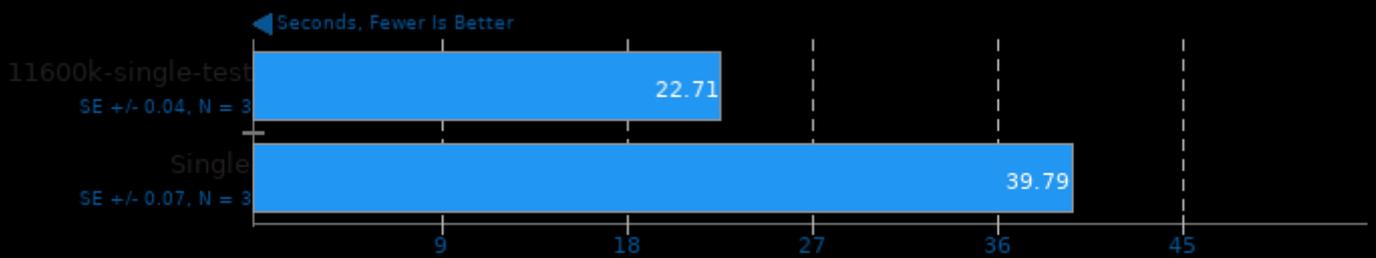
Test: Atol



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

## CppPerformanceBenchmarks 9

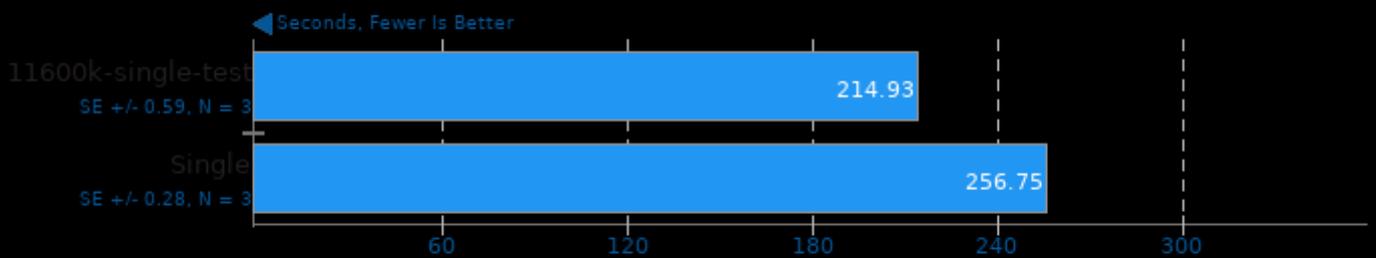
Test: CType



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

## CppPerformanceBenchmarks 9

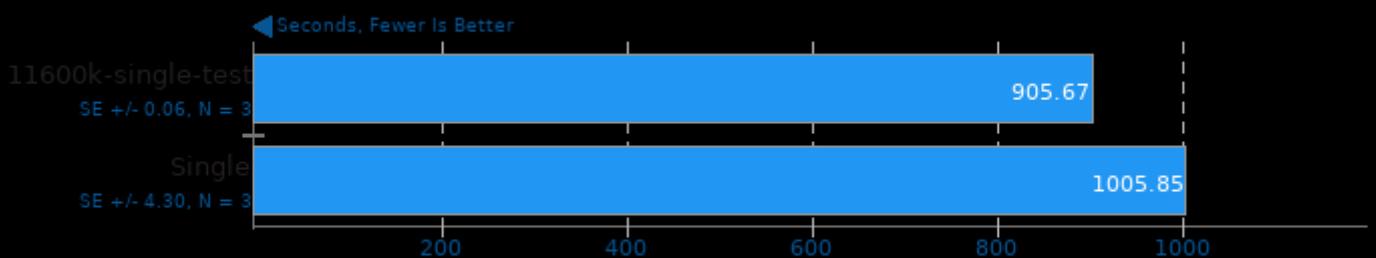
Test: Math Library



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

## CppPerformanceBenchmarks 9

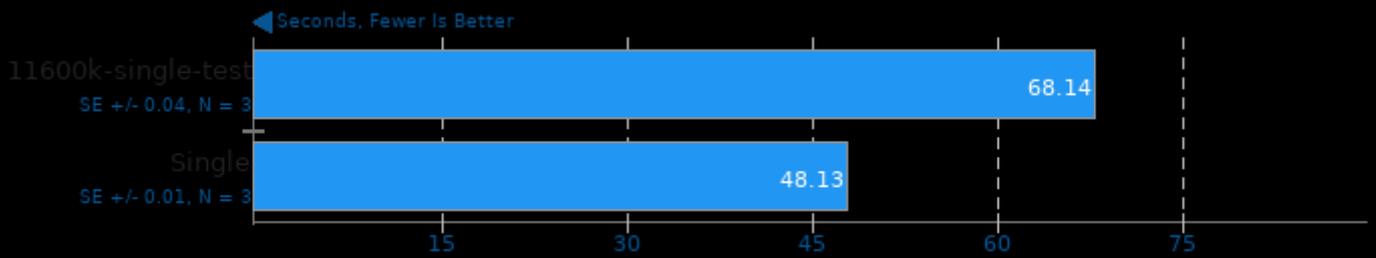
Test: Random Numbers



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

## CppPerformanceBenchmarks 9

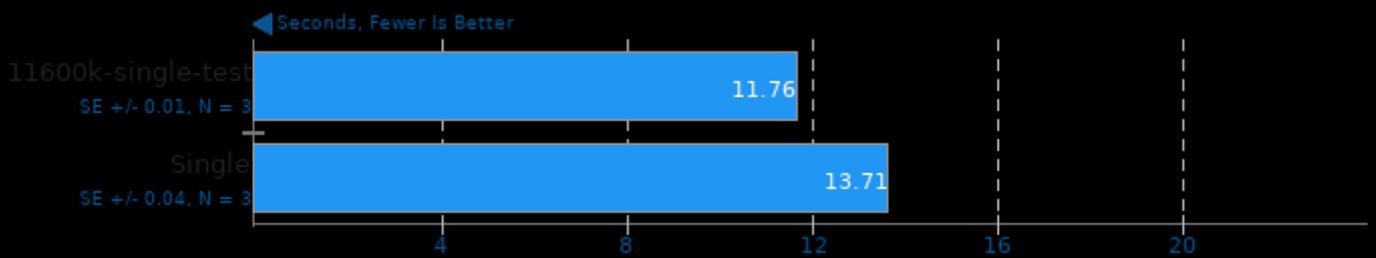
Test: Stepanov Vector



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

## CppPerformanceBenchmarks 9

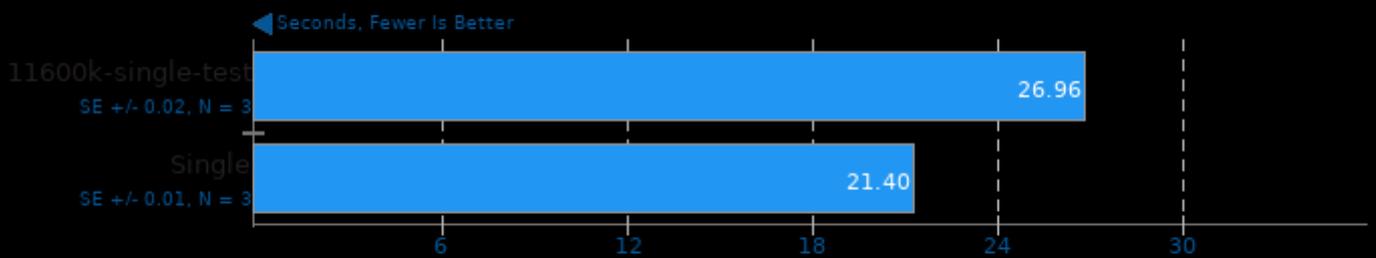
Test: Function Objects



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

## CppPerformanceBenchmarks 9

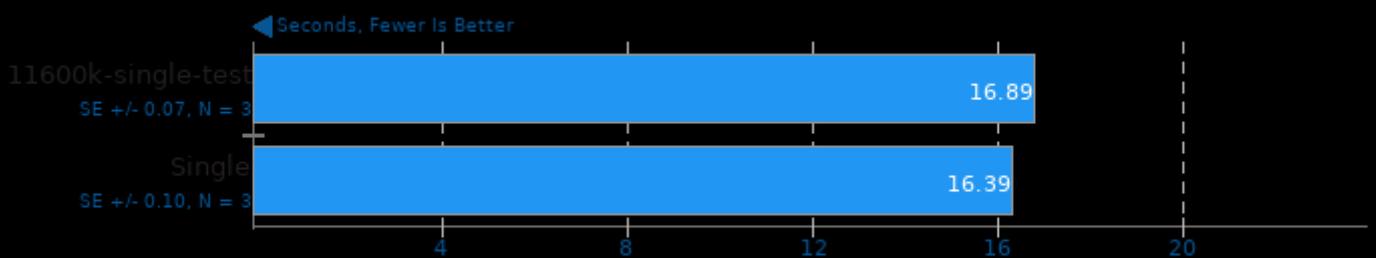
Test: Stepanov Abstraction



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

## Inkscape

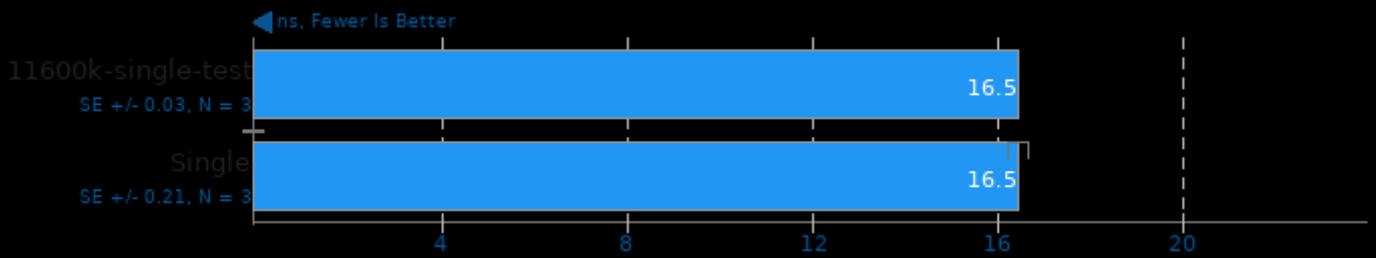
Operation: SVG Files To PNG



1. Inkscape 0.92.5 (2060ec1f9f, 2020-04-08)

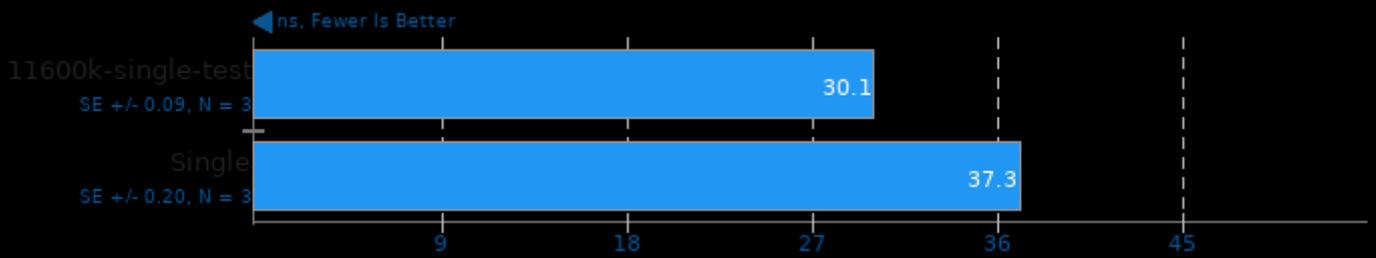
## BenchmarkMutex

Benchmark: Shared Mutex Lock Shared



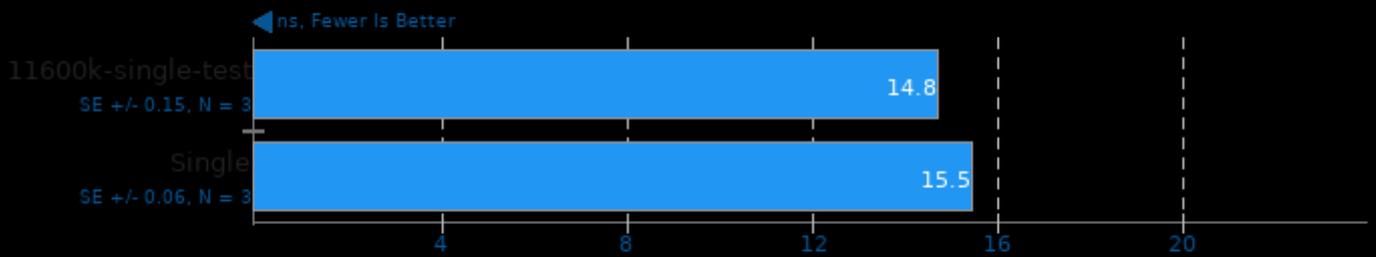
## BenchmarkMutex

Benchmark: Mutex Lock Unlock spinlock



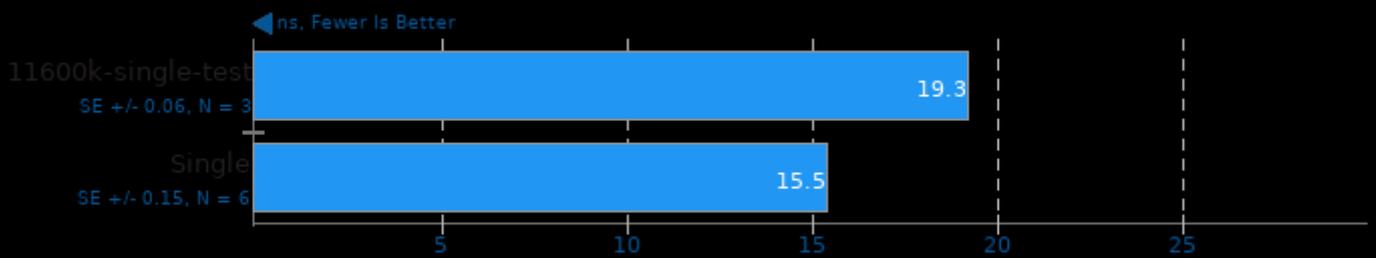
## BenchmarkMutex

Benchmark: Mutex Lock Unlock std::mutex



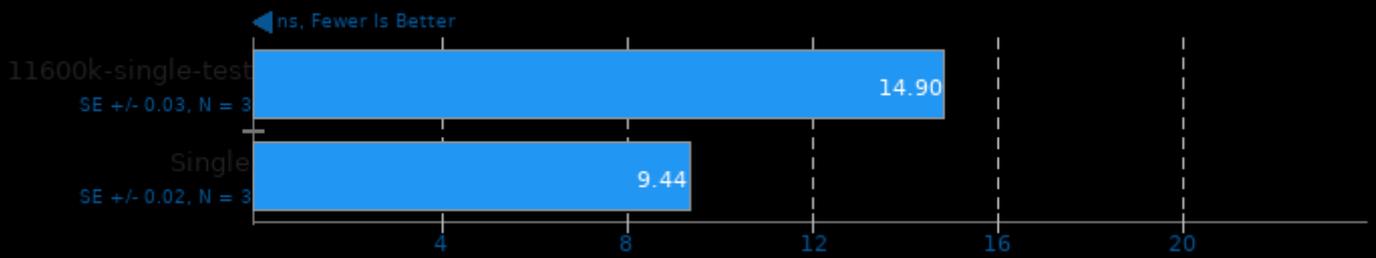
## BenchmarkMutex

Benchmark: Mutex Lock Unlock std::mutex



## BenchmarkMutex

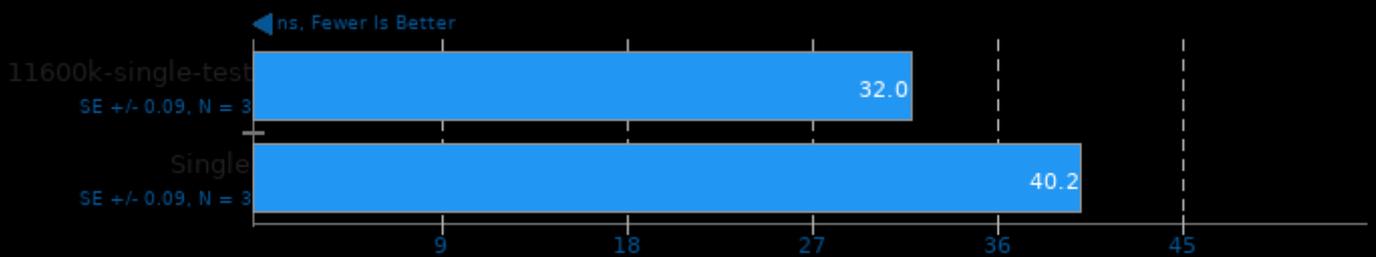
Benchmark: Semaphore Release And Acquire



1. (CXX) g++ options: -std=c++17 -benchmark -pthread

## BenchmarkMutex

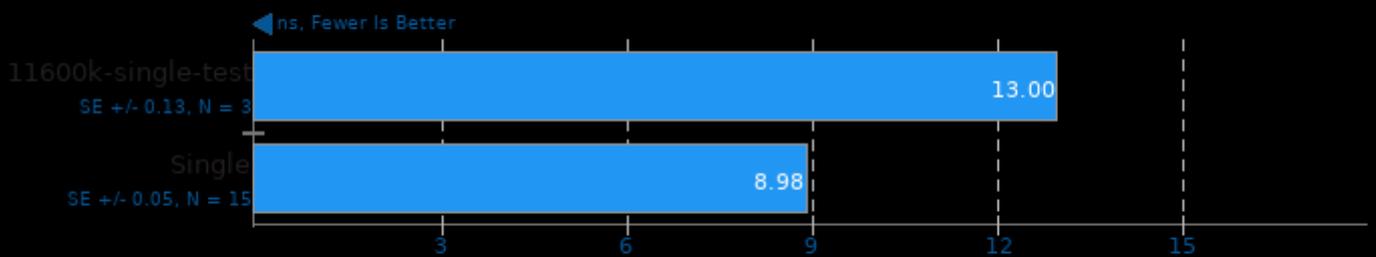
Benchmark: Mutex Lock Unlock spinlock\_amd



1. (CXX) g++ options: -std=c++17 -benchmark -pthread

## BenchmarkMutex

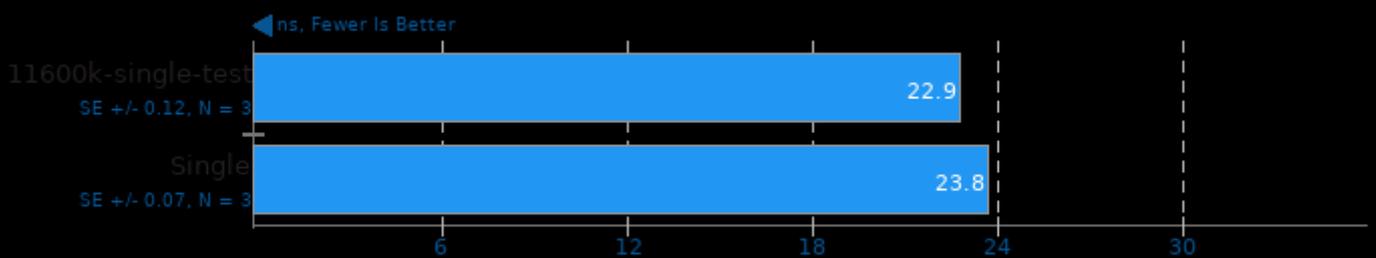
Benchmark: Mutex Lock Unlock pthread\_mutex



1. (CXX) g++ options: -std=c++17 -benchmark -pthread

## BenchmarkMutex

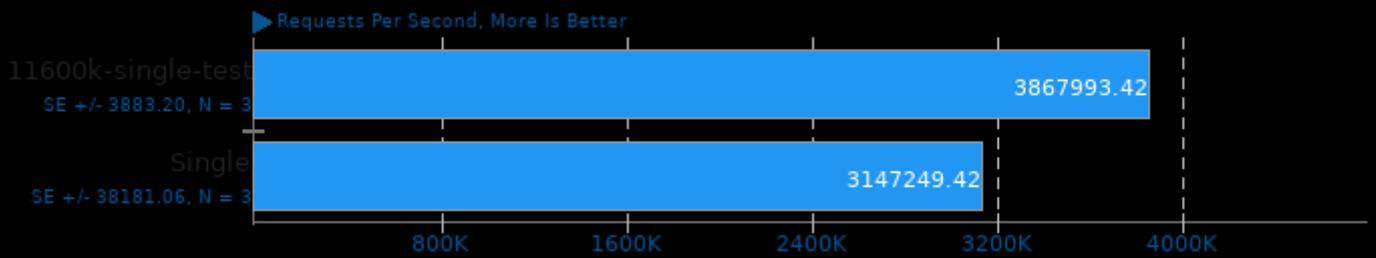
Benchmark: Mutex Lock Unlock ticket\_spinlock



1. (CXX) g++ options: -std=c++17 -benchmark -pthread

## Redis 6.0.9

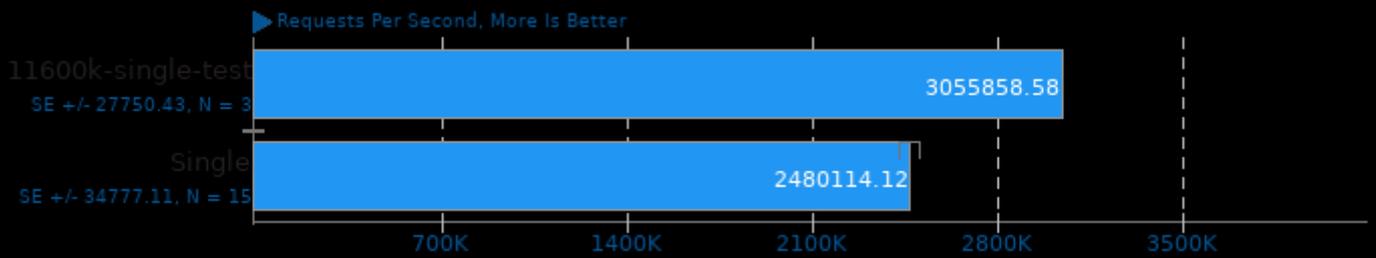
Test: LPOP



1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

## Redis 6.0.9

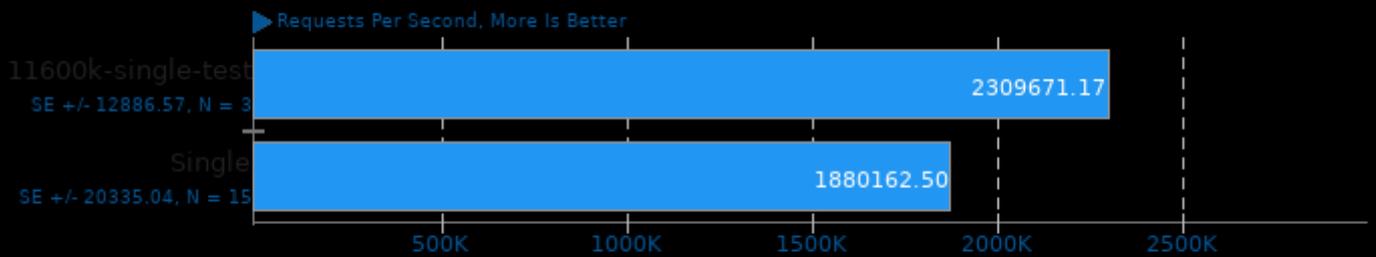
Test: SADD



1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

## Redis 6.0.9

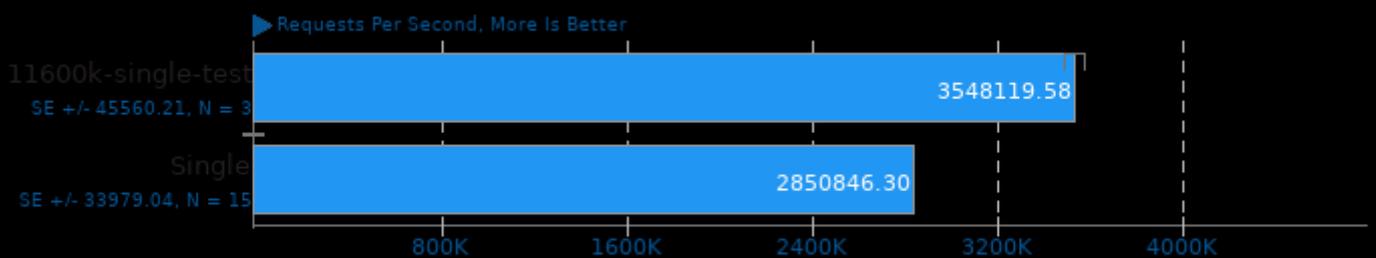
Test: LPUSH



1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

## Redis 6.0.9

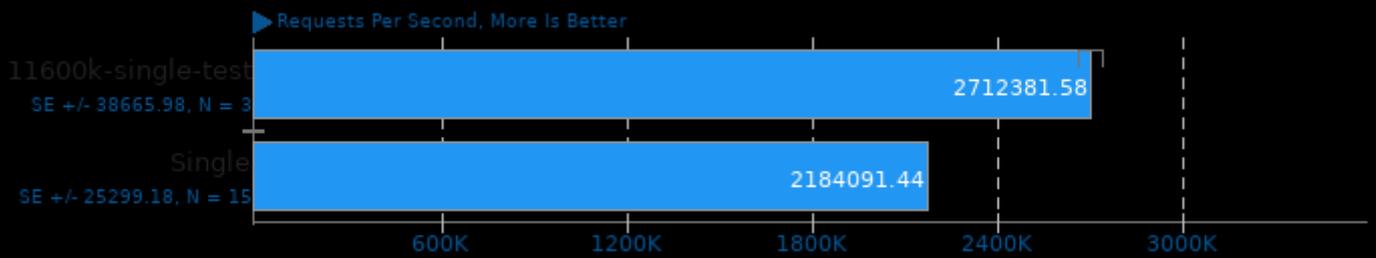
Test: GET



1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

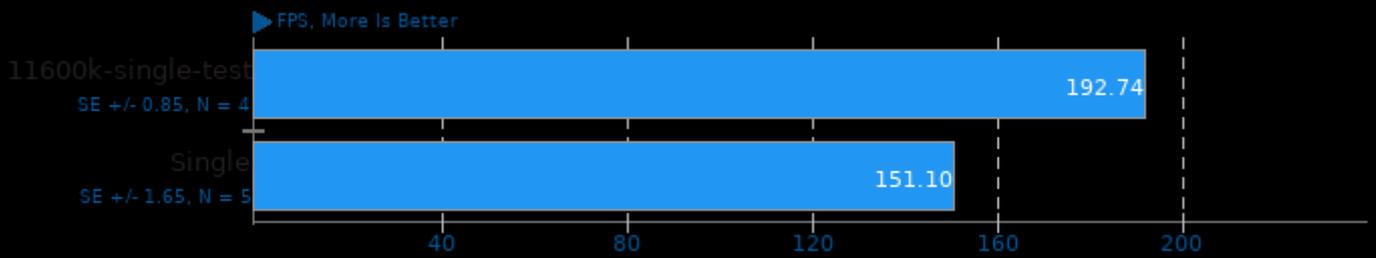
## Redis 6.0.9

Test: SET



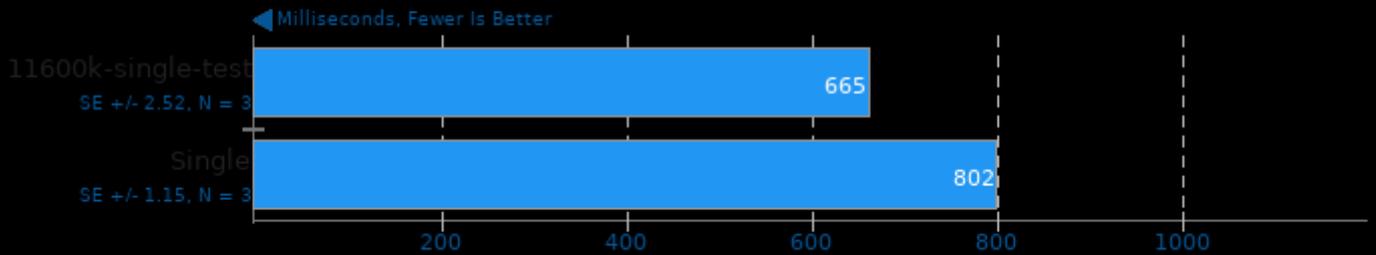
## Optcarrot

Optimized Benchmark



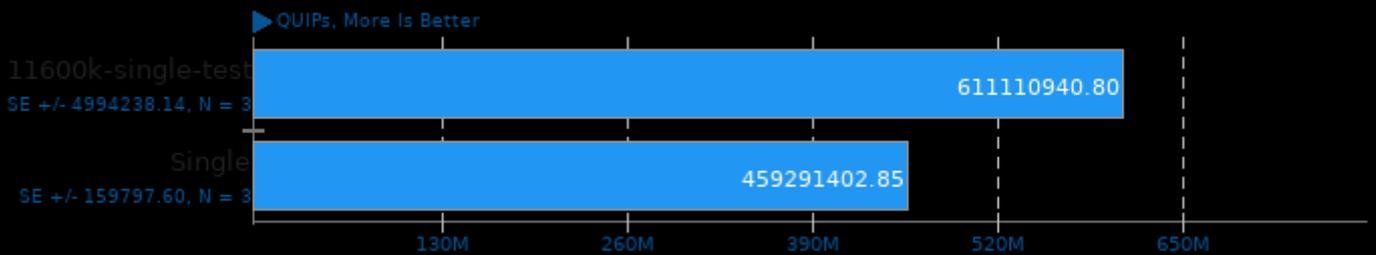
## PyBench 2018-02-16

Total For Average Test Times



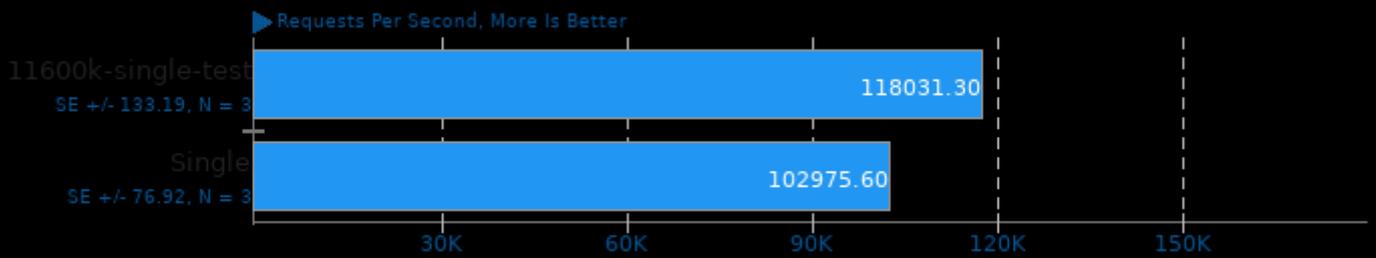
## Hierarchical INTegration 1.0

Test: FLOAT



## nginx 1.21.1

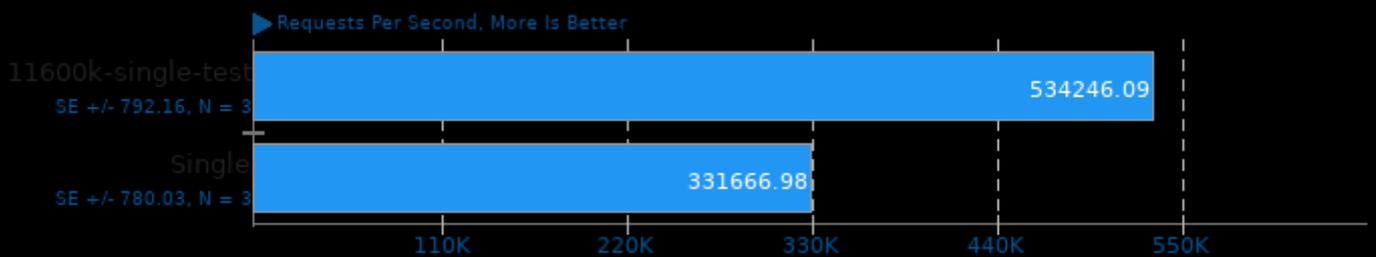
Concurrent Requests: 1



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

## nginx 1.21.1

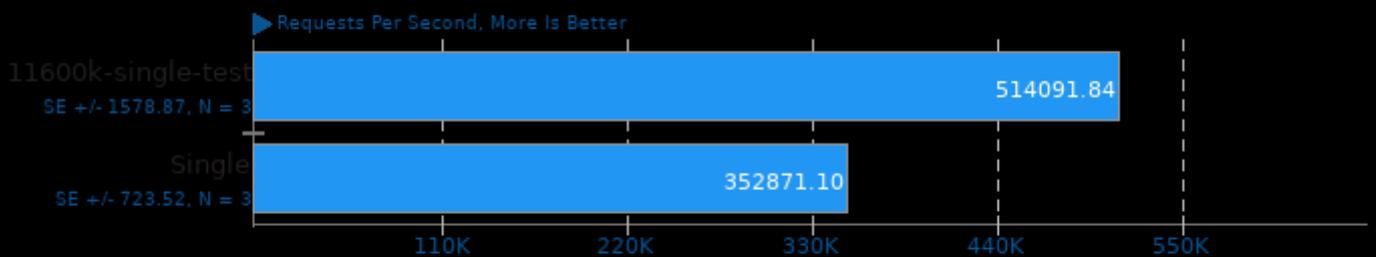
Concurrent Requests: 20



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

## nginx 1.21.1

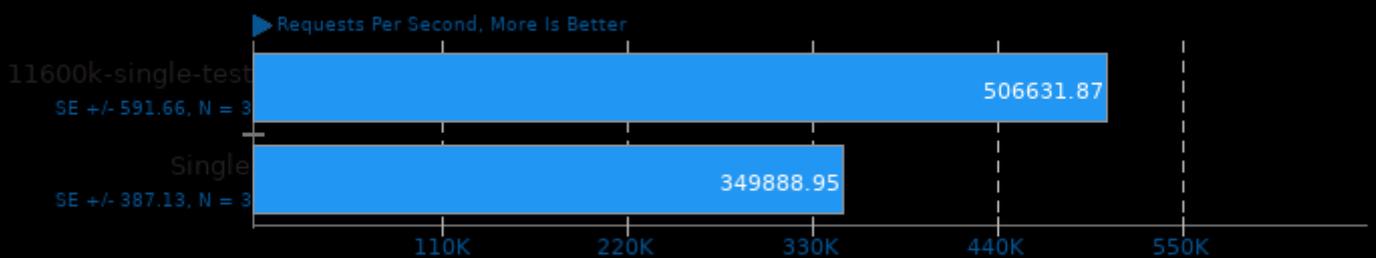
Concurrent Requests: 100



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

## nginx 1.21.1

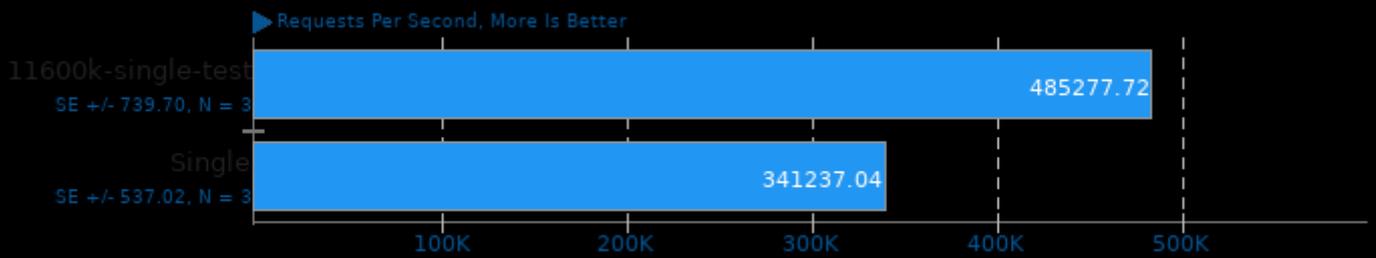
Concurrent Requests: 200



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

## nginx 1.21.1

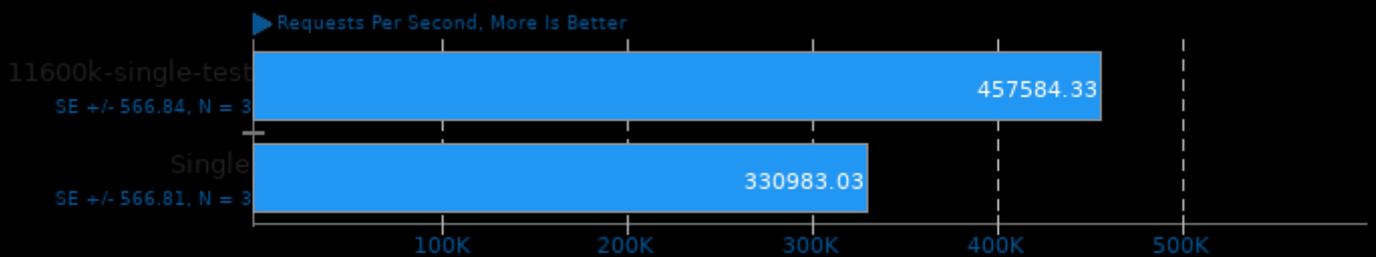
Concurrent Requests: 500



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

## nginx 1.21.1

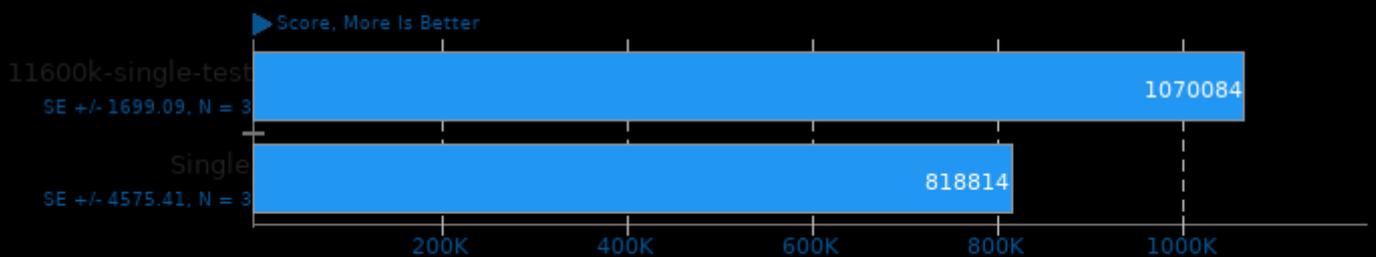
Concurrent Requests: 1000



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

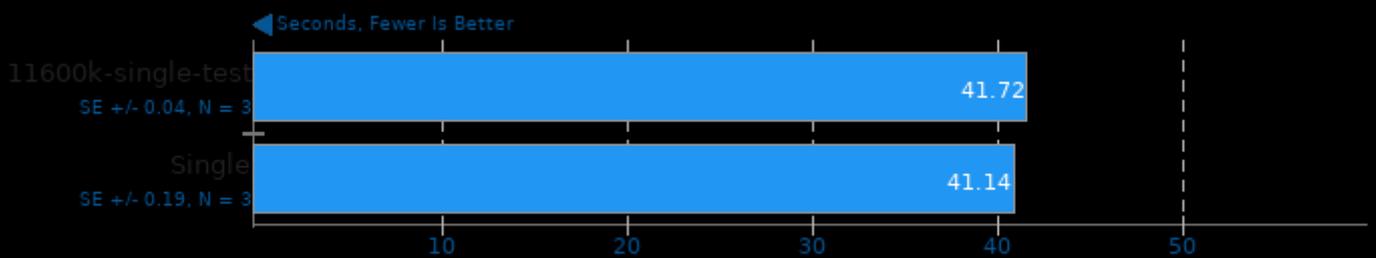
## PHPBench 0.8.1

PHP Benchmark Suite

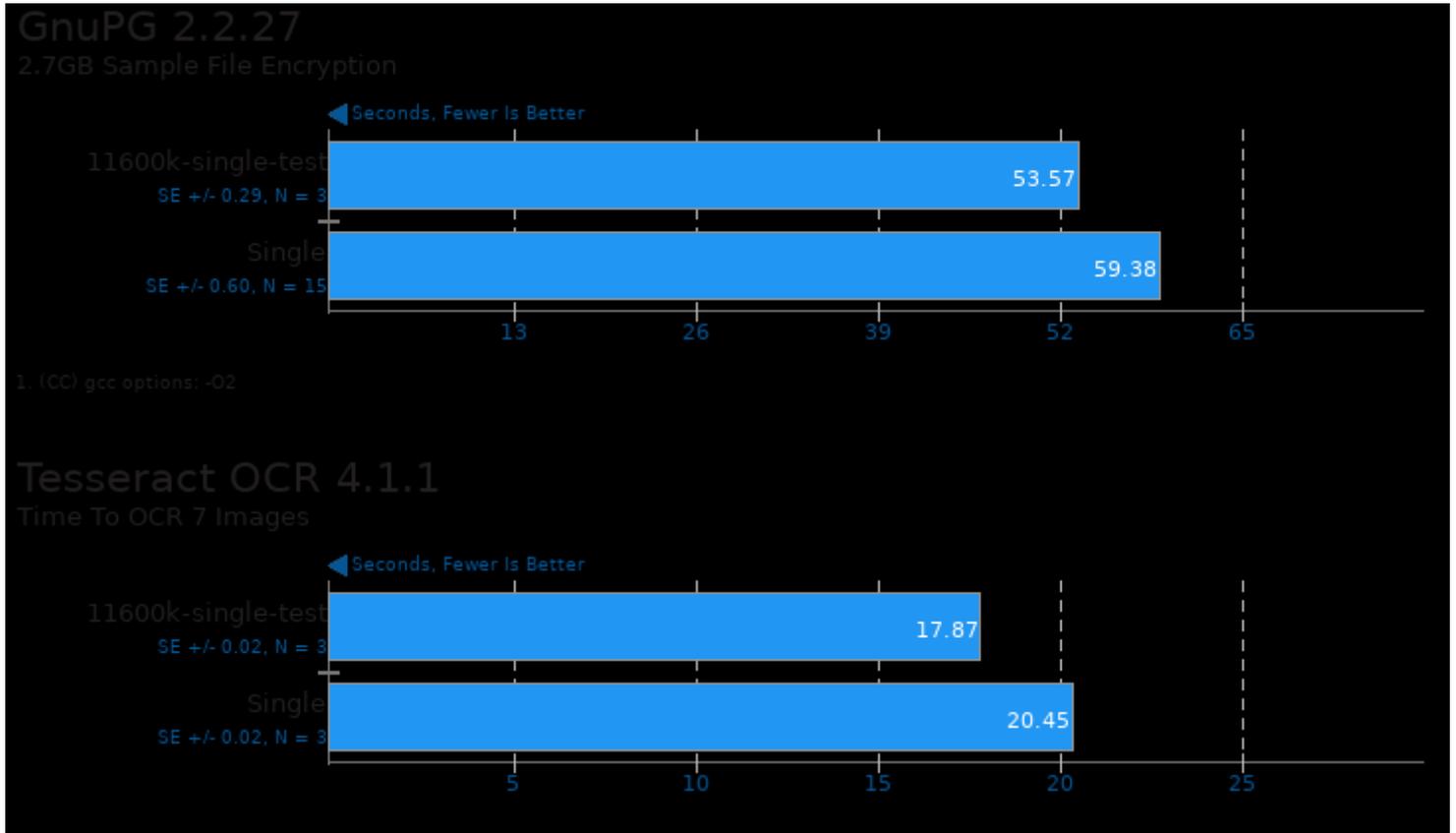


## Git

Time To Complete Common Git Commands



1. git version 2.25.1



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 05:49.