

www.phoronix-test-suite.com

Ubuntu 17.10 vs. Clear Linux - Core i9 7960X, 7980XE

gentoo-i5

Automated Executive Summary

Core i9 7900X: Clear Linux had the most wins, coming in first place for 44% of the tests.

Based on the geometric mean of all complete results, the fastest (Core i9 7980XE: Clear Linux) was 6.365x the speed of the slowest (i5-gentoo). Core i9 7960X: Clear Linux was 0.957x the speed of Core i9 7980XE: Clear Linux, Threadripper: Clear Linux was 0.961x the speed of Core i9 7960X: Clear Linux, Core i9 7980XE: Ubuntu 17.10 was 0.867x the speed of Threadripper: Clear Linux, Core i9 7900X: Clear Linux was 0.998x the speed of Core i9 7980XE: Ubuntu 17.10, Core i9 7960X: Ubuntu 17.10 was 0.944x the speed of Core i9 7900X: Clear Linux, Core i9 7900X: Ubuntu 17.10 was 0.867x the speed of Core i9 7960X: Ubuntu 17.10, Threadripper: Ubuntu 17.10 was 0.436x the speed of Core i9 7900X: Ubuntu 17.10, gent was 0.554x the speed of Threadripper: Ubuntu 17.10, i5-gentoo was 0.999x the speed of gent.

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

PostgreSQL pgbench (Scaling: Buffer Test - Test: Single Thread - Mode: Read Write) at 39.639x
Rodinia (Test: OpenMP LavaMD) at 14.939x
Rodinia (Test: OpenMP CFD Solver) at 6.68x
OpenSSL (RSA 4096-bit Performance) at 6.232x

Xsbench at 5.147x
Timed LLVM Compilation (Time To Compile) at 4.409x
FFmpeg (H.264 HD To NTSC DV) at 2.724x
Himeno Benchmark (Poisson Pressure Solver) at 2.47x
Parboil (Test: OpenMP MRI Gridding) at 1.986x
FFTW (Build: Float + SSE - Size: 2D FFT Size 1024) at 1.967x.

Test Systems:

Threadripper: Ubuntu 17.10

Processor: AMD Ryzen Threadripper 1950X 16-Core @ 3.40GHz (32 Cores), Motherboard: Gigabyte X399 AORUS Gaming 7, Chipset: AMD Device 1450, Memory: 32768MB, Disk: 120GB Force MP500, Graphics: XFX AMD Radeon R9 290/390 4096MB, Audio: Realtek ALC1220, Monitor: Acer B286HK, Network: Qualcomm Atheros Device e0b1 + Intel Wireless 8265 / 8275

OS: Ubuntu 17.10, Kernel: 4.12.0-12-generic (x86_64), Desktop: GNOME Shell 3.25.91, Display Driver: modesetting 1.19.3, OpenGL: 4.5 Mesa 17.2.0-rc4 (LLVM 4.0.1), Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq ondemand

Threadripper: Clear Linux

Processor: AMD Ryzen Threadripper 1950X 16-Core @ 3.40GHz (32 Cores), Motherboard: Gigabyte X399 AORUS Gaming 7, Chipset: AMD Device 1450, Memory: 4 x 8192 MB DDR4-3200MT/s, Disk: 120GB Force MP500, Graphics: XFX AMD Radeon R9 290/390, Audio: Realtek ALC1220, Network: Qualcomm Atheros Device e0b1 + Intel Wireless 8265 / 8275

OS: Clear Linux OS 17650, Kernel: 4.13.0-387.native (x86_64), Vulkan: 1.0.39, Compiler: GCC 7.2.0 + Clang 4.0.1 + LLVM 4.0.1, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-generic-linux --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --enable-__cxa_atexit --enable-bootstrap --enable-clocale=gnu --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libmpx --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: acpi-cpufreq performance

Core i9 7900X: Ubuntu 17.10

Processor: Intel Core i7-7900X @ 4.50GHz (20 Cores), Motherboard: MSI X299 SLI PLUS (MS-7A93) v1.0, Chipset: Intel Device 2020, Memory: 16384MB, Disk: 240GB Force MP500, Graphics: NVE4 2048MB, Audio: Realtek ALC1220, Monitor: DELL P2415Q, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.12.0-12-generic (x86_64), Desktop: GNOME Shell 3.25.91, Display Driver: modesetting 1.19.3, OpenGL: 4.3 Mesa 17.2.0-rc4, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave

Core i9 7900X: Clear Linux

Processor: Intel Core i7-7900X @ 4.50GHz (20 Cores), Motherboard: MSI X299 SLI PLUS (MS-7A93) v1.0, Chipset: Intel Device 2020, Memory: 4 x 4096 MB DDR4-2800MT/s, Disk: 240GB Force MP500, Graphics: NVIDIA GeForce GTX 760, Audio: Realtek ALC1220, Network: Intel Connection

OS: Clear Linux OS 17650, Kernel: 4.13.0-387.native (x86_64), Vulkan: 1.0.39, Compiler: GCC 7.2.0 + Clang 4.0.1 + LLVM 4.0.1, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-generic-linux --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --enable-__cxa_atexit --enable-bootstrap --enable-clocale=gnu --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libmpx --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: intel_pstate performance

Core i9 7960X: Ubuntu 17.10

Processor: Intel Core i9-7960X @ 4.40GHz (32 Cores), Motherboard: MSI X299 SLI PLUS (MS-7A93) v1.0, Chipset: Intel Device 2020, Memory: 16384MB, Disk: Samsung SSD 950 PRO 256GB, Graphics: NVIDIA GeForce GTX 1080 8192MB, Audio: Realtek ALC1220, Monitor: DELL P2415Q, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Server: Wayland, OpenGL: 4.3 Mesa 17.2.0, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave

Core i9 7960X: Clear Linux

Processor: Intel Core i9-7960X @ 4.40GHz (32 Cores), Motherboard: MSI X299 SLI PLUS (MS-7A93) v1.0, Chipset: Intel Device 2020, Memory: 4 x 4096 MB DDR4-3000MT/s, Disk: 16GB Voyager 3.0 + Samsung SSD 950 PRO 256GB, Graphics: NVIDIA GeForce GTX 1080, Audio: Realtek ALC1220, Network: Intel Connection

OS: Clear Linux OS 17920, Kernel: 4.13.3-393.native (x86_64), Vulkan: 1.0.39, Compiler: GCC 7.2.1 20170910 + Clang 5.0.0 + LLVM 5.0.0, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --enable-__cxa_atexit --enable-bootstrap --enable-clocale=gnu --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: intel_pstate performance

Core i9 7980XE: Ubuntu 17.10

Processor: Intel Core i9-7980XE @ 4.40GHz (36 Cores), Motherboard: ASUS PRIME X299-A, Chipset: Intel Device 2020, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + 240GB Force MP500, Graphics: Sapphire AMD Radeon 4096MB, Audio: Realtek ALC1220, Monitor: Acer B286HK, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Driver: modesetting 1.19.3, OpenGL: 4.5 Mesa 17.2.1 (LLVM 5.0.0), Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave

Core i9 7980XE: Clear Linux

Processor: Intel Core i9-7980XE @ 4.40GHz (36 Cores), Motherboard: ASUS PRIME X299-A, Chipset: Intel Device 2020, Memory: 4 x 4096 MB DDR4-3200MT/s Corsair CMK16GX4M4C3200C16, Disk: 16GB Voyager 3.0 + 240GB Force MP500, Graphics: Sapphire AMD Radeon R9 FURY / NANO, Audio: Realtek ALC1220, Network: Intel Connection

OS: Clear Linux OS 17960, Kernel: 4.13.3-394.native (x86_64), Vulkan: 1.0.39, Compiler: GCC 7.2.1 20170910 + Clang 5.0.0 + LLVM 5.0.0, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --enable-__cxa_atexit --enable-bootstrap --enable-clocale=gnu --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: intel_pstate performance

i5-gentoo

gent

Processor: Intel Core i5-3570 @ 3.80GHz (4 Cores), Motherboard: ASUS P8Z77-M (2203 BIOS), Chipset: Intel Xeon E3-1200 v2/3rd, Memory: 16384MB, Disk: 240GB INTEL SSDSC2BW24, Graphics: MSI NVIDIA GeForce GT 730 2048MB, Audio: Intel 7 /C216, Monitor: 24EA53, Network: Realtek RTL8111/8168/8411

OS: Gentoo/Linux, Kernel: 4.15.5-gentoo (x86_64), Compiler: GCC 6.4.0, File-System: ext4, Screen Resolution: 1920x1080

Processor Notes: Scaling Governor: intel_pstate powersave
Python Notes: Python 3.5.4
Security Notes: KPTI + __user pointer sanitization + Minimal generic ASM retpoline Protection

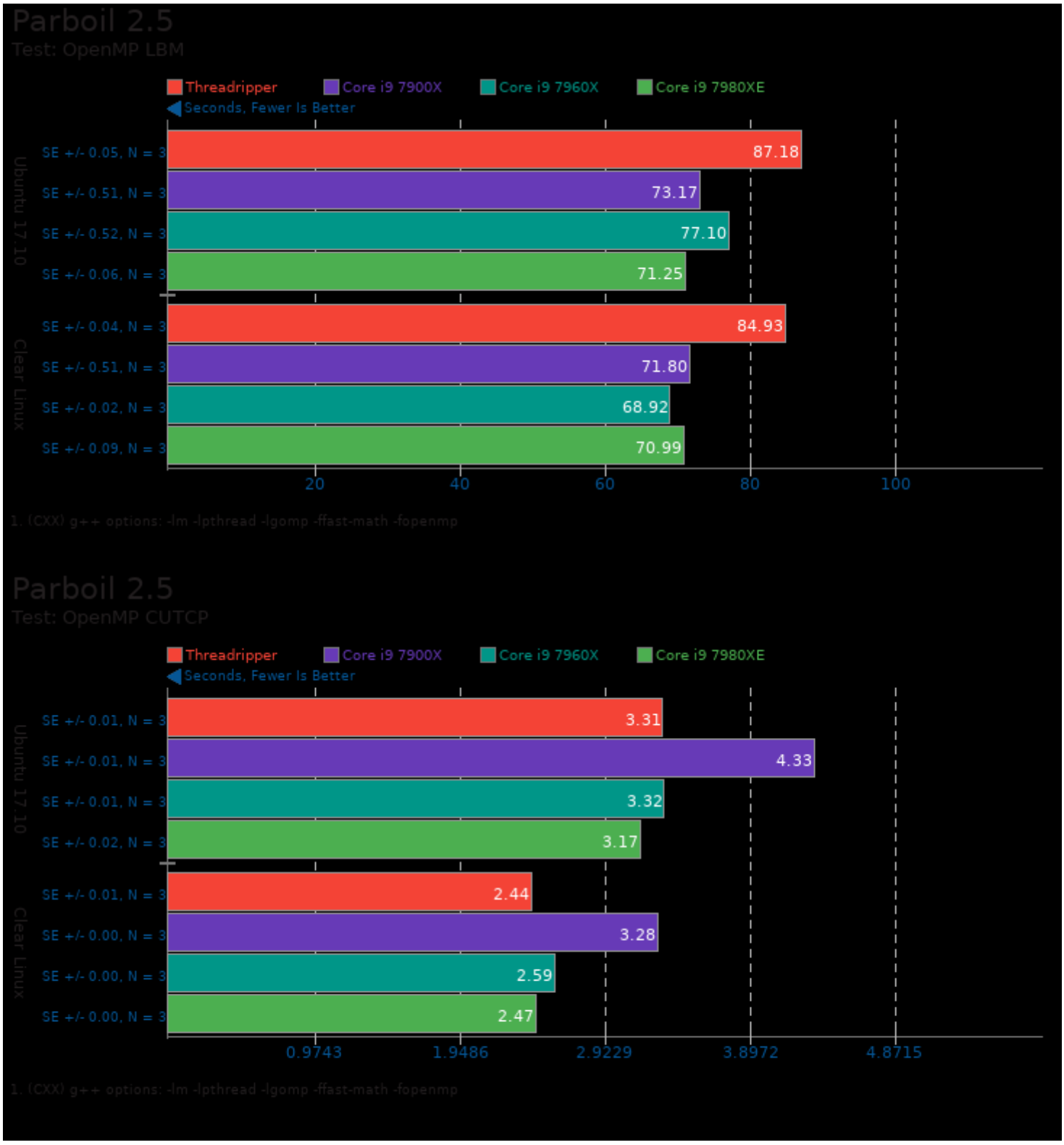
Phoronix Test Suite

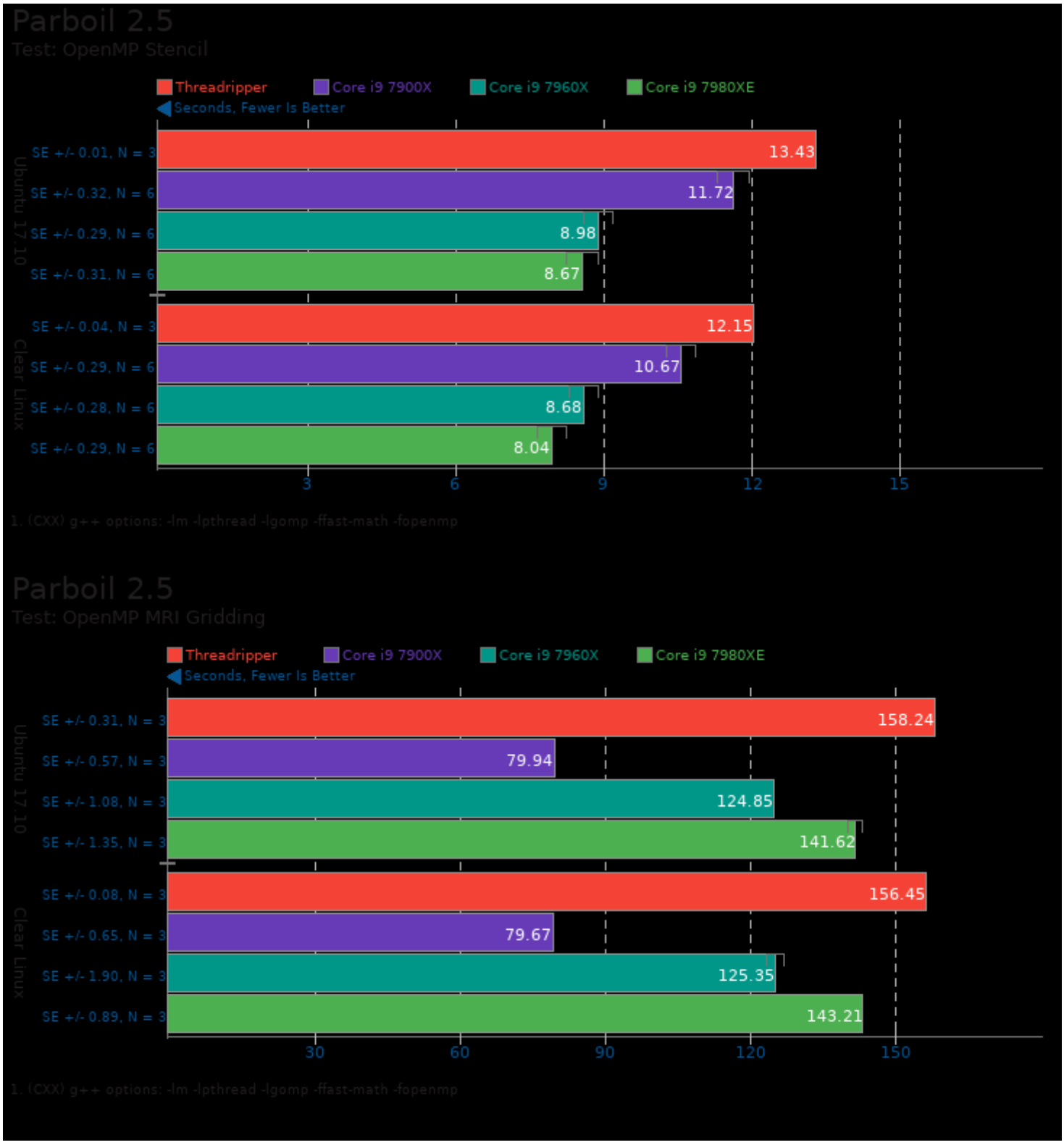
Ubuntu 17.10 vs. Clear Linux - Core i9 7960X, 7980XE

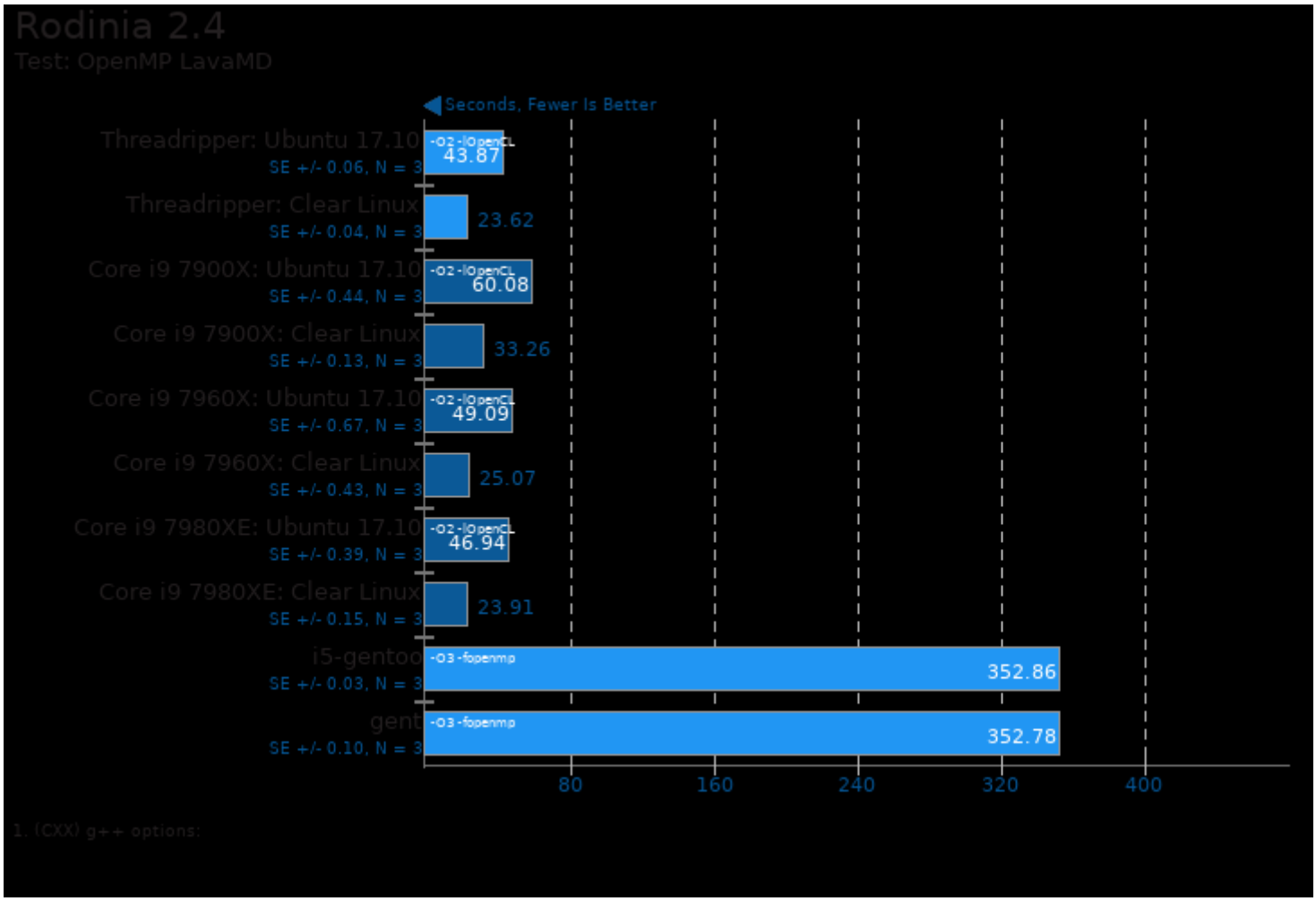
	Threadripper: Ubuntu 17.10	Threadripper: Clear Linux	Core i9 7900X: Ubuntu 17.10	Core i9 7900X: Clear Linux	Core i9 7960X: Ubuntu 17.10	Core i9 7960X: Clear Linux	Core i9 7980XE: Ubuntu 17.10	Core i9 7980XE: Clear Linux	i5-gentoo	gent
Parboil - OpenMP LBM (sec)	87.18	84.93	73.17	71.80	77.10	68.92	71.25	70.99		
Normalized	79.05%	81.15%	94.19%	95.99%	89.39%	100%	96.73%	97.08%		
Standard Deviation	0.1%	0.1%	1.2%	1.2%	1.2%	0%	0.1%	0.2%		
Parboil - OpenMP CUTCP (sec)	3.31	2.44	4.33	3.28	3.32	2.59	3.17	2.47		
Normalized	73.72%	100%	56.35%	74.39%	73.49%	94.21%	76.97%	98.79%		
Standard Deviation	0.4%	0.4%	0.3%	0.2%	0.7%	0.3%	1%	0%		
Parboil - OpenMP Stencil (sec)	13.43	12.15	11.72	10.67	8.98	8.68	8.67	8.04		
Normalized	59.87%	66.17%	68.6%	75.35%	89.53%	92.63%	92.73%	100%		
Standard Deviation	0.1%	0.6%	6.7%	6.7%	7.9%	8%	8.8%	8.8%		
Parboil - O.M.G	158.24	156.45	79.94	79.67	124.85	125.35	141.62	143.21		
Normalized	50.35%	50.92%	99.66%	100%	63.81%	63.56%	56.26%	55.63%		
Standard Deviation	0.3%	0.1%	1.2%	1.4%	1.5%	2.6%	1.6%	1.1%		
Rodinia - OpenMP LavaMD (sec)	43.87	23.62	60.08	33.26	49.09	25.07	46.94	23.91	352.86	352.78
Normalized	53.84%	100%	39.31%	71.02%	48.12%	94.22%	50.32%	98.79%	6.69%	6.7%
Standard Deviation	0.2%	0.3%	1.3%	0.7%	2.4%	3%	1.4%	1.1%	0%	0%
Rodinia - OpenMP CFD Solver (sec)	80.50	12.99	17.90	17.58	13.40	12.97	12.05	12.15	79.97	79.76
Normalized	14.97%	92.76%	67.32%	68.54%	89.93%	92.91%	100%	99.18%	15.07%	15.11%
Standard Deviation	0.5%	0.5%	4.4%	4.4%	5.3%	5.5%	5.6%	6.3%	0.8%	0.8%
Rodinia - O.S (sec)	51.37	17.34	13.97	14.08	14.86	14.53	14.45	14.27	37.89	37.88
Normalized	27.19%	80.57%	100%	99.22%	94.01%	96.15%	96.68%	97.9%	36.87%	36.88%
Standard Deviation	0.5%	0.2%	8.6%	6%	2.2%	5%	1.4%	6.3%	0%	0%
FFTW - Float + SSE - 2D FFT Size 1024 (Mflops)	26347	23766	25341	26982	26055		22463	23681	13717	13900
Normalized	97.65%	88.08%	93.92%	100%	96.56%		83.25%	87.77%	50.84%	51.52%
Standard Deviation	0.3%	0.1%	0.4%	2.4%	1.3%		3.4%	0.7%	0.9%	1%
FFTW - Float + SSE - 2D FFT Size 4096 (Mflops)	16200	16573	18592	17486	19464		17897	16826		11899
Normalized	83.23%	85.15%	95.52%	89.84%	100%		91.95%	86.45%		61.13%
Standard Deviation	1.5%	0.9%	2.6%	0.8%	1.5%		0.2%	0.7%		0.4%
Timed HMMer Search - P.D.S (sec)	7.91		14.52		5.06		10.83			
Normalized	63.97%		34.85%		100%		46.72%			
Standard Deviation	1.5%		5%		0.3%		6.9%			
CacheBench - R.M.W (MB/s)	29374	53552	33776	51791	31284	52131	32052	50544		28420
Normalized	54.85%	100%	63.07%	96.71%	58.42%	97.35%	59.85%	94.38%		53.07%
Standard Deviation	0%	0%	1.1%	0%	0.7%	2.8%	1%	0.1%		0%

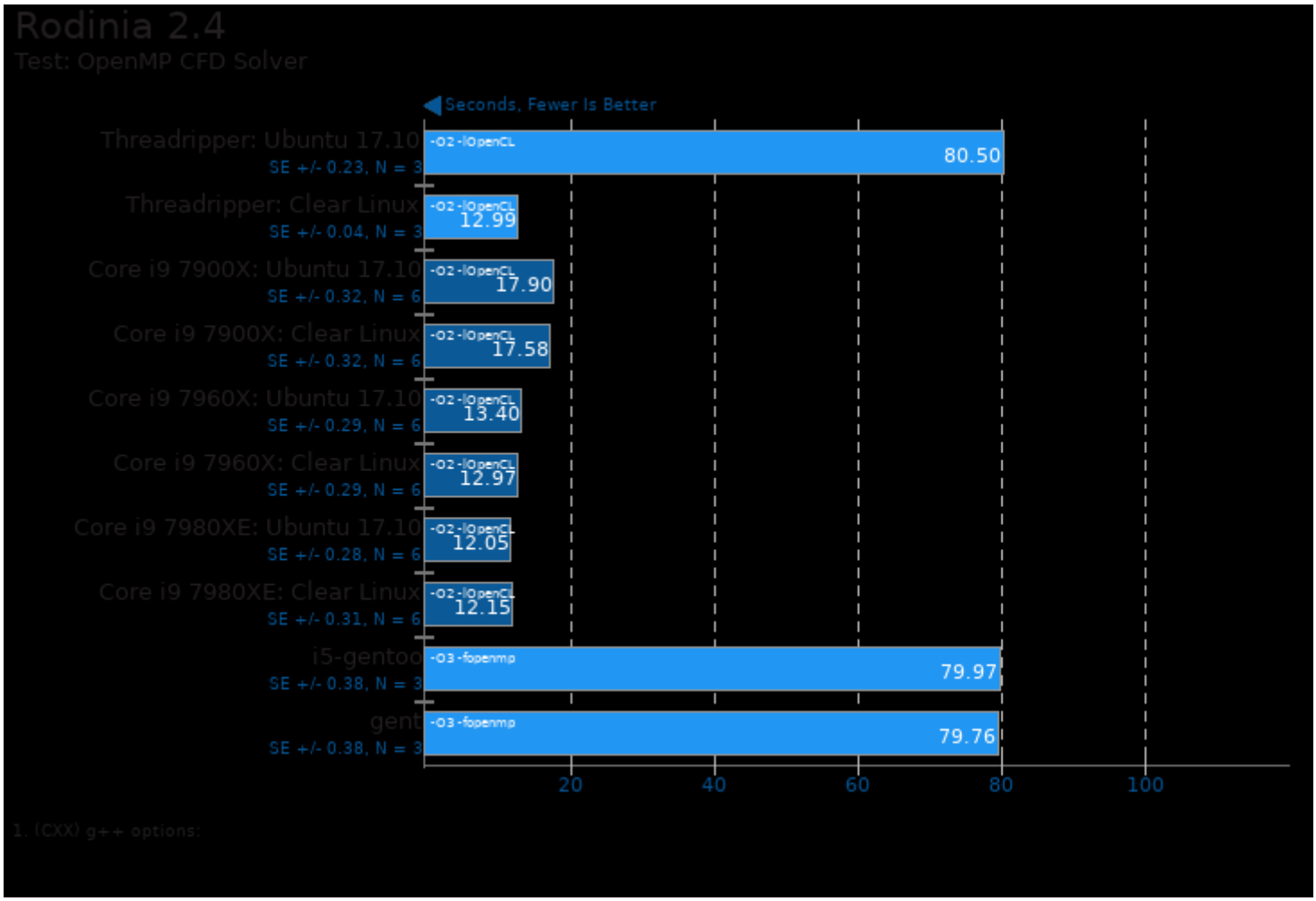
GraphicsMagick - Resizing (Iterations/min)	228	216	250	271	245	259	249	256	
Normalized	84.13%	79.7%	92.25%	100%	90.41%	95.57%	91.88%	94.46%	
Standard Deviation	0.5%								
Himeno Benchmark - P.P.S (MFLOPS)	1304	1315	2942	3013	2869	3001	2957	3221	1647
Normalized	40.48%	40.82%	91.36%	93.55%	89.1%	93.17%	91.81%	100%	51.13%
Standard Deviation	0.2%	0.5%	2%	1.6%	1.4%	0.6%	1.9%	1.1%	0.2%
Timed LLVM Compilation - Time To Compile (sec)	253.39	354.58	261.30						1117
Normalized	100%	71.46%	96.97%						22.68%
Standard Deviation	0%	4%	0.5%						0%
C-Ray - Total Time (sec)	5.17	4.09	7.38	6.29	5.76	4.95	5.25	4.70	31.01
Normalized	79.11%	100%	55.42%	65.02%	71.01%	82.63%	77.9%	87.02%	13.19%
Standard Deviation	0.3%	0.4%	0.1%	0.1%	9.4%	11%	0.3%	11.5%	0.1%
Stockfish - Total Time (ms)	3638	3450	2844	2613	3210	2783	2837	2695	3996
Normalized	71.83%	75.74%	91.88%	100%	81.4%	93.89%	92.1%	96.96%	65.39%
Standard Deviation	1%	0.1%	1.2%	0.1%	18.2%	1.7%	0.4%	4.6%	0.2%
FLAC Audio Encoding - WAV To FLAC (sec)	5.47	5.22	4.92	4.36	5.05	4.66	5.91	5.16	6.64
Normalized	79.71%	83.52%	88.62%	100%	86.34%	93.56%	73.77%	84.5%	65.66%
Standard Deviation	1%	0.3%	11.6%	0.4%	10.3%	12%	12.2%	1.2%	0.3%
LAME MP3 Encoding - WAV To MP3 (sec)	8.93	8.85	8.32	8.11	8.98	8.39	10.14	9.60	
Normalized	90.82%	91.64%	97.48%	100%	90.31%	96.66%	79.98%	84.48%	
Standard Deviation	0.9%	0.1%	7%	7.3%	8.5%	7.7%	10.5%	6.9%	
FFmpeg - H.2.H.T.N.D (sec)	7.81	6.19	13.89	5.10	7.23	5.22	13.58	5.21	8.00
Normalized	65.3%	82.39%	36.72%	100%	70.54%	97.7%	37.56%	97.89%	63.75%
Standard Deviation	2.2%	1.8%	5.5%	10.5%	2.6%	0.4%	5.3%	1.5%	1.8%
OpenSSL - R.4.b.P (Signs/sec)	2183	2184	2112	2113	2826	2832	3005	3006	482.40
Normalized	72.6%	72.65%	70.25%	70.3%	94.01%	94.19%	99.95%	100%	16.05%
Standard Deviation	0.2%	0.2%	0%	0%	0.1%	0%	0%	0%	0.3%
PostgreSQL pgbench - Buffer Test - Normal Load - Read Write (TPS)	9947	12566	14118	22233	6649	7045	12850	23670	626.72
Normalized	42.02%	53.09%	59.64%	93.93%	28.09%	29.76%	54.29%	100%	2.65%
Standard Deviation	43.9%	13.7%	4.5%	4.2%	2.9%	0.4%	13.7%	1.6%	2.2%

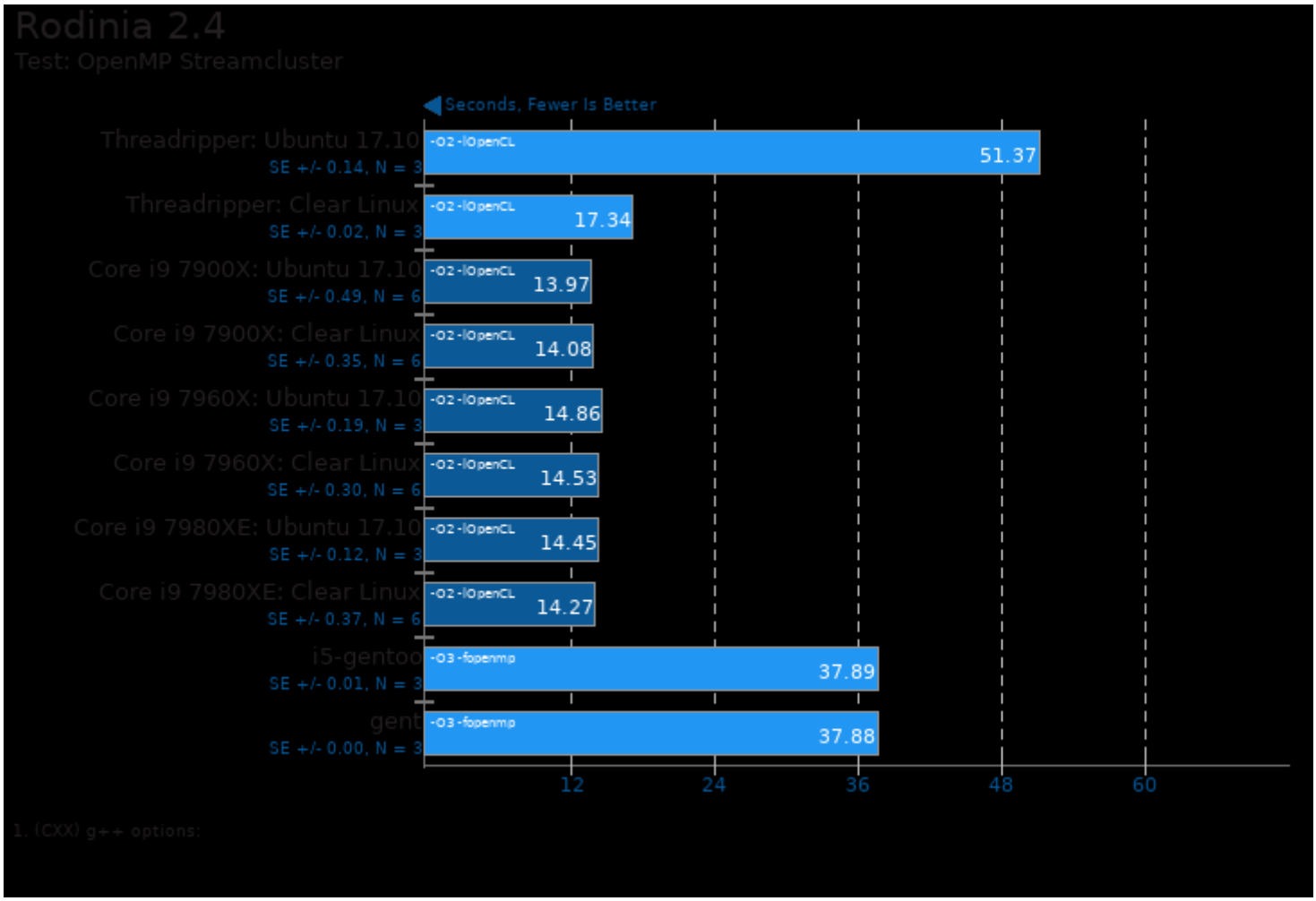
PostgreSQL pgbench - Buffer Test - Single Thread - Read Write	1105	2546	724.21	**3593**	493.74	581.06	745.20	3413	**90.64**
Normalized	30.74%	70.85%	20.16%	100%	13.74%	16.17%	20.74%	94.98%	2.52%
Standard Deviation	0.1%	3.3%	9.7%	1%	0.3%	0.5%	2%	0.3%	0.5%
Redis - GET (Reqs/sec)	2191834	2767869	2650329	3681125	3142794	3581232	2810741	**3783114**	**2108330**
Normalized	57.94%	73.16%	70.06%	97.3%	83.07%	94.66%	74.3%	100%	55.73%
Standard Deviation	3.4%	1.4%	0.9%	0.8%	2.6%	2.3%	5.4%	0.2%	0.9%
Redis - SET (Reqs/sec)	1549736	1932086	1955802	**2654983**	2295929	2567035	2363326	2620258	**1488150**
Normalized	58.37%	72.77%	73.67%	100%	86.48%	96.69%	89.01%	98.69%	56.05%
Standard Deviation	1.2%	1.6%	1%	0.8%	2%	2.1%	2.7%	1%	0.7%
Blender - BMW27 - CPU-Only (sec)	**527.43**	522.30	412.97	**409.58**	436.51	430.26	439.38	427.90	
Normalized	77.66%	78.42%	99.18%	100%	93.83%	95.19%	93.22%	95.72%	
Xsbench	2728244	2851137	3394205	3694296	4725943	5096887	4920010	**5298598**	**1029451**
Normalized	51.49%	53.81%	64.06%	69.72%	89.19%	96.19%	92.85%	100%	19.43%
Standard Deviation	0.2%	0%	0.3%	0.1%	0%	0%	0%	0%	0.2%
Apache Benchmark - S.W.P.S	27533	29662	44342	**48034**	47064	46228	41831	47435	**27290**
Normalized	57.32%	61.75%	92.31%	100%	97.98%	96.24%	87.09%	98.75%	56.81%
Standard Deviation	2.1%	1.1%	4.3%	4%	3.5%	3.3%	3.4%	3.1%	0.2%

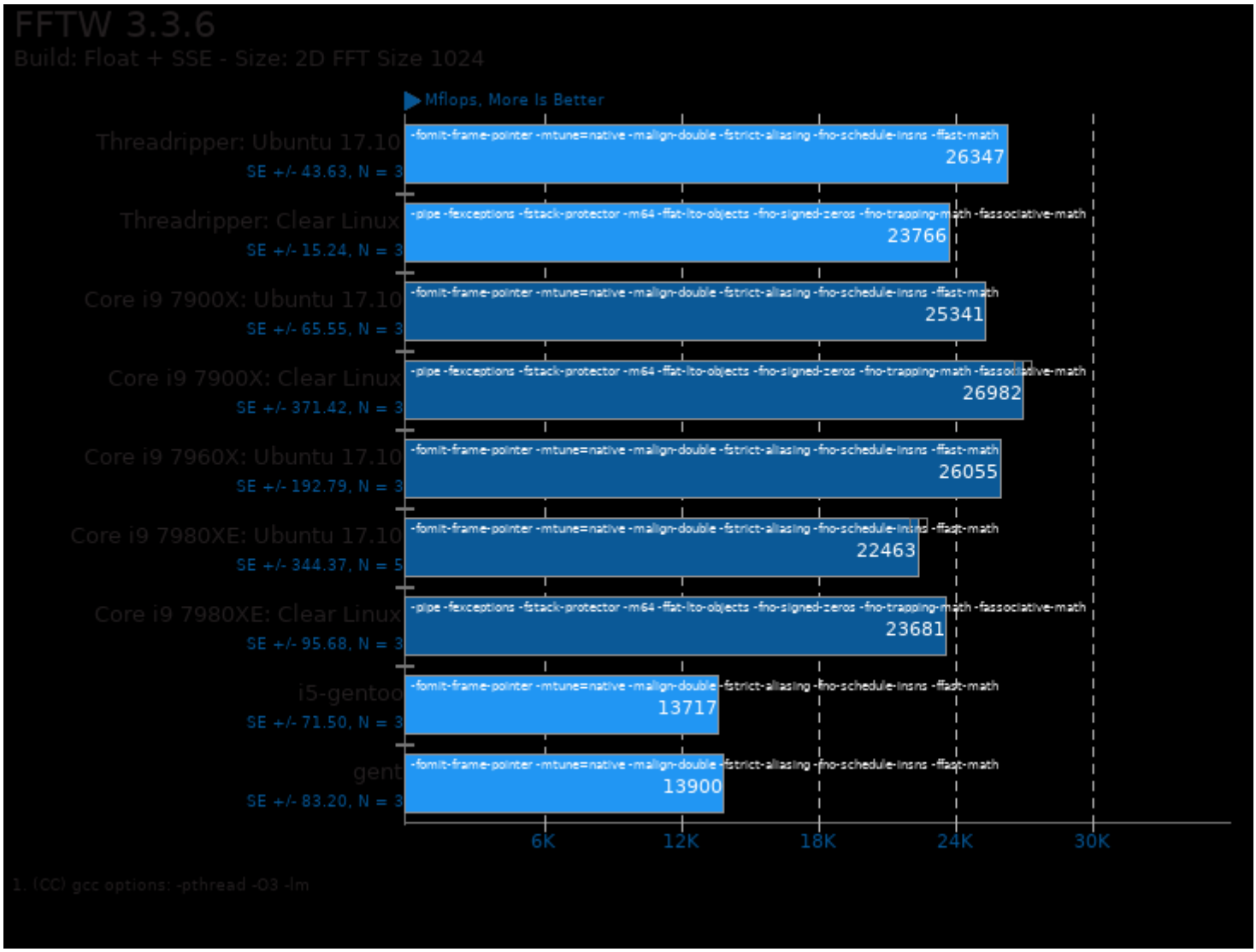

Parboil 2.5
Test: OpenMP LBM
Threadripper
Core i9 7900X
Core i9 7960X
Core i9 7980XE
Seconds, Fewer Is Better
Ubuntu 17.10
SE +/- 0.05, N = 3
87.18
SE +/- 0.51, N = 3
73.17
SE +/- 0.52, N = 3
77.10
SE +/- 0.06, N = 3
71.25
Clear Linux
SE +/- 0.04, N = 3
84.93
SE +/- 0.51, N = 3
71.80
SE +/- 0.02, N = 3
68.92
SE +/- 0.09, N = 3
70.99
20
40
60
80
100
1. (CXX) g++ options: -lm -lpthread -lgomp -ffast-math -fopenmp
Parboil 2.5
Test: OpenMP CUTCP
Threadripper
Core i9 7900X
Core i9 7960X
Core i9 7980XE
Seconds, Fewer Is Better
Ubuntu 17.10
SE +/- 0.01, N = 3
3.31
SE +/- 0.01, N = 3
4.33
SE +/- 0.01, N = 3
3.32
SE +/- 0.02, N = 3
3.17
Clear Linux
SE +/- 0.01, N = 3
2.44
SE +/- 0.00, N = 3
3.28
SE +/- 0.00, N = 3
2.59
SE +/- 0.00, N = 3
2.47
0.9743
1.9486
2.9229
3.8972
4.8715
1. (CXX) g++ options: -lm -lpthread -lgomp -ffast-math -fopenmp

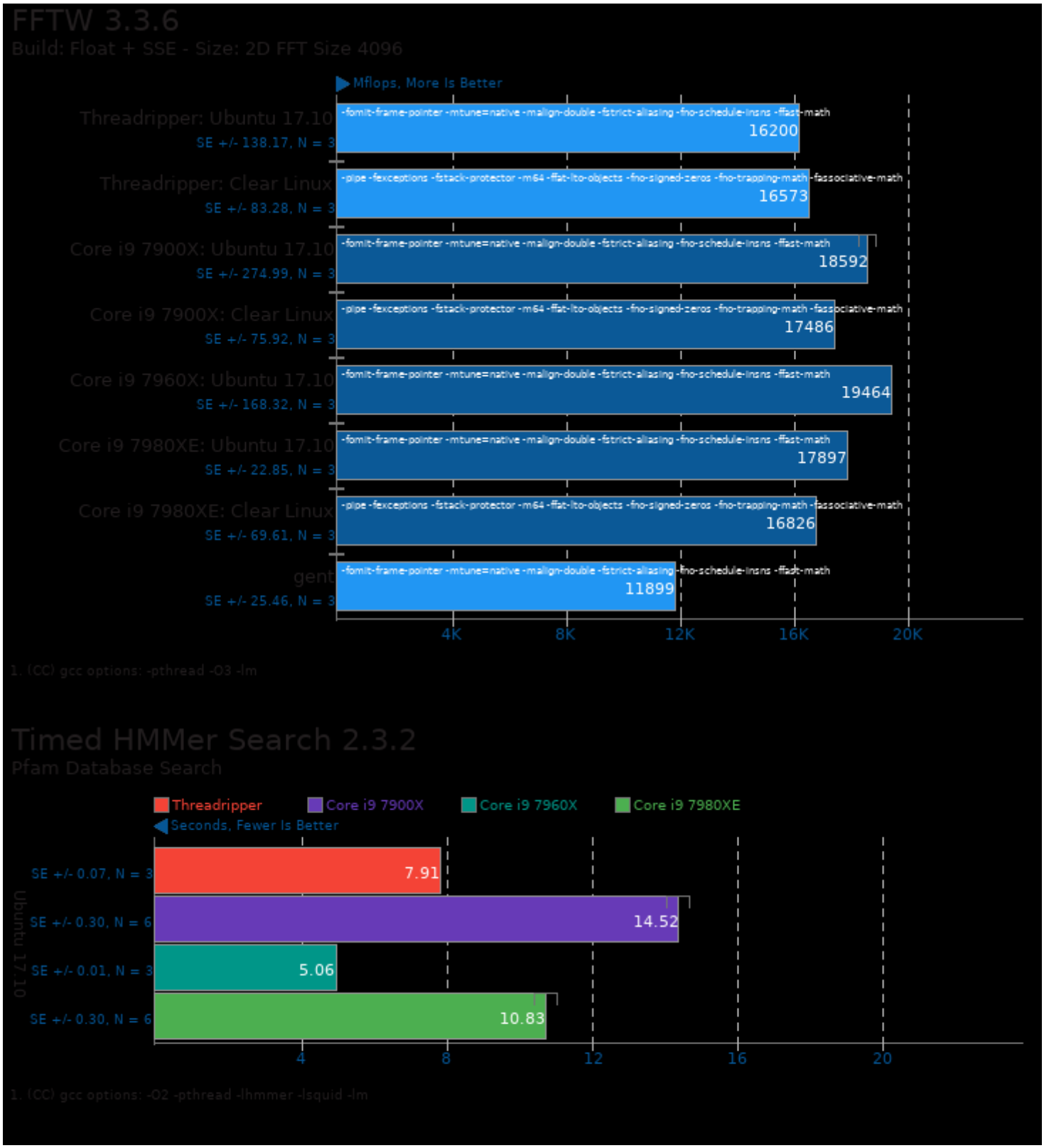

Parboil 2.5
Test: OpenMP Stencil
Threadripper
Core i9 7900X
Core i9 7960X
Core i9 7980XE
Seconds, Fewer Is Better
Ubuntu 17.10
SE +/- 0.01, N = 3
13.43
SE +/- 0.32, N = 6
11.72
SE +/- 0.29, N = 6
8.98
SE +/- 0.31, N = 6
8.67
Clear Linux
SE +/- 0.04, N = 3
12.15
SE +/- 0.29, N = 6
10.67
SE +/- 0.28, N = 6
8.68
SE +/- 0.29, N = 6
8.04
3
6
9
12
15
1. (CXX) g++ options: -lm -lpthread -lgomp -ffast-math -fopenmp
Parboil 2.5
Test: OpenMP MRI Gridding
Threadripper
Core i9 7900X
Core i9 7960X
Core i9 7980XE
Seconds, Fewer Is Better
Ubuntu 17.10
SE +/- 0.31, N = 3
158.24
SE +/- 0.57, N = 3
79.94
SE +/- 1.08, N = 3
124.85
SE +/- 1.35, N = 3
141.62
Clear Linux
SE +/- 0.08, N = 3
156.45
SE +/- 0.65, N = 3
79.67
SE +/- 1.90, N = 3
125.35
SE +/- 0.89, N = 3
143.21
30
60
90
120
150
1. (CXX) g++ options: -lm -lpthread -lgomp -ffast-math -fopenmp

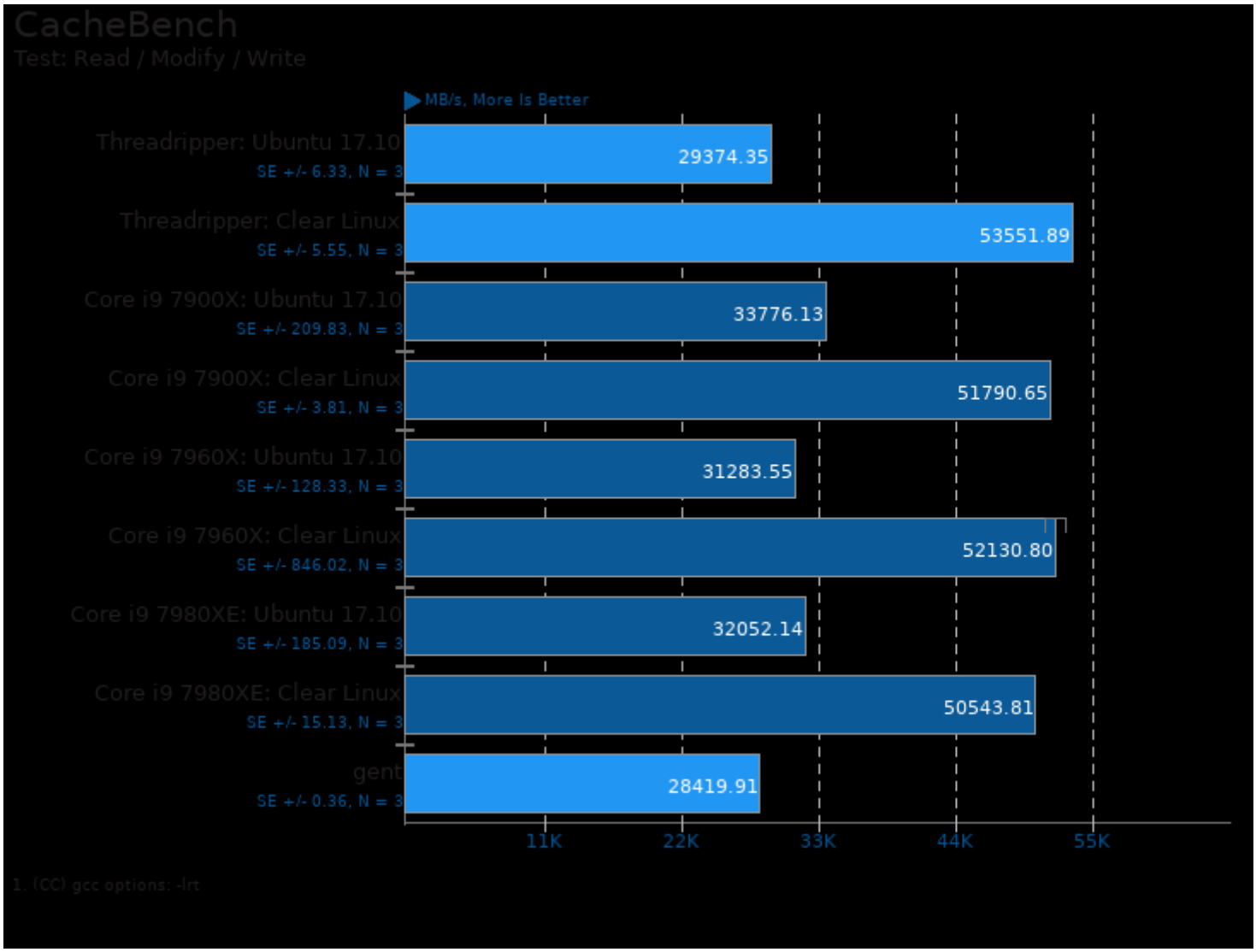

Rodinia 2.4
Test: OpenMP LavaMD
Seconds, Fewer Is Better
Threadripper: Ubuntu 17.10
SE +/- 0.06, N = 3
-O2 -lOpenCL
43.87
Threadripper: Clear Linux
SE +/- 0.04, N = 3
23.62
Core i9 7900X: Ubuntu 17.10
SE +/- 0.44, N = 3
-O2 -lOpenCL
60.08
Core i9 7900X: Clear Linux
SE +/- 0.13, N = 3
33.26
Core i9 7960X: Ubuntu 17.10
SE +/- 0.67, N = 3
-O2 -lOpenCL
49.09
Core i9 7960X: Clear Linux
SE +/- 0.43, N = 3
25.07
Core i9 7980XE: Ubuntu 17.10
SE +/- 0.39, N = 3
-O2 -lOpenCL
46.94
Core i9 7980XE: Clear Linux
SE +/- 0.15, N = 3
23.91
i5-gentoo
SE +/- 0.03, N = 3
-O3 -fopenmp
352.86
gent
SE +/- 0.10, N = 3
-O3 -fopenmp
352.78
80
160
240
320
400
1. (CXX) g++ options:

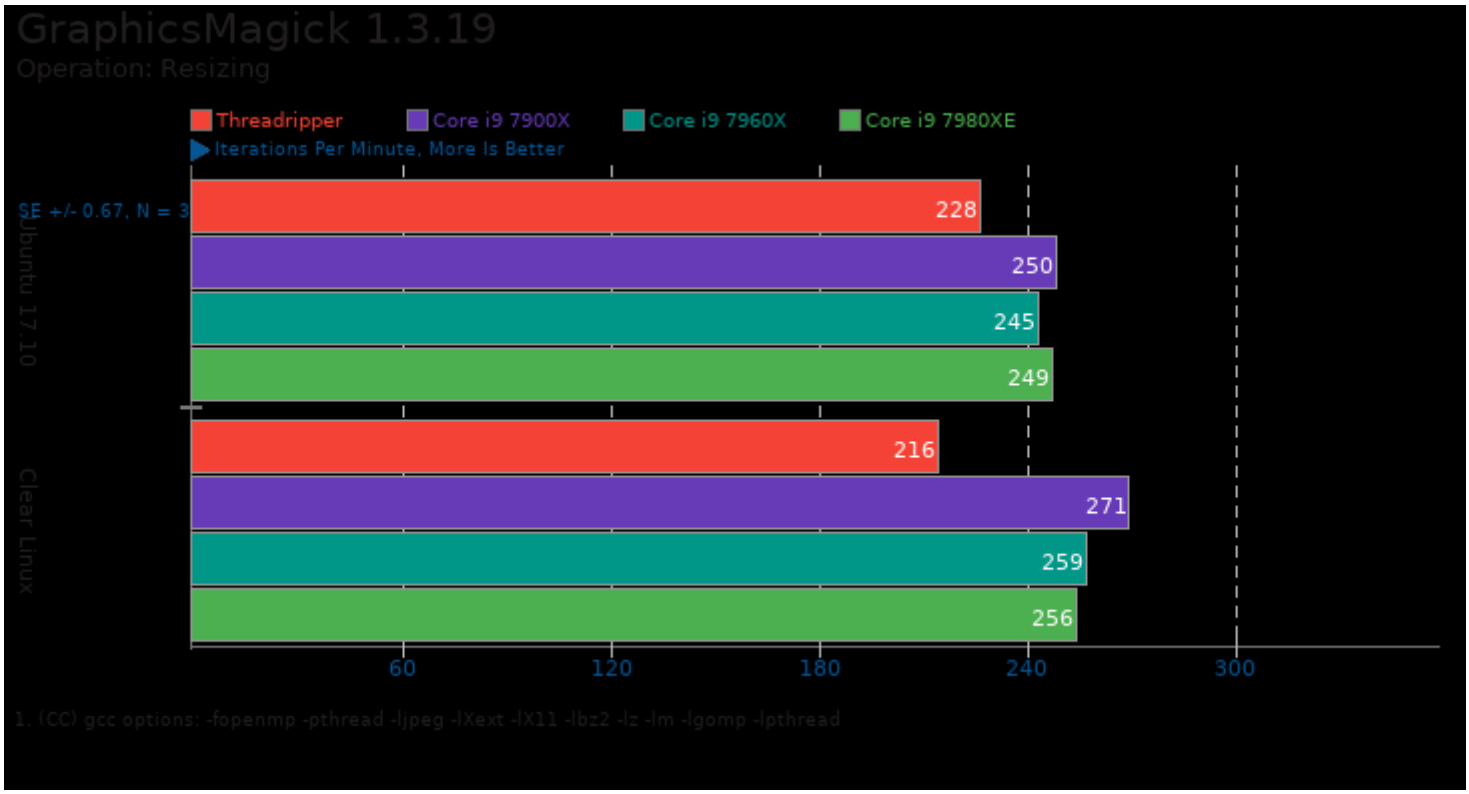

Rodinia 2.4
Test: OpenMP CFD Solver
Seconds, Fewer Is Better
Threadripper: Ubuntu 17.10
SE +/- 0.23, N = 3
-O2 -lOpenCL
80.50
Threadripper: Clear Linux
SE +/- 0.04, N = 3
-O2 -lOpenCL
12.99
Core i9 7900X: Ubuntu 17.10
SE +/- 0.32, N = 6
-O2 -lOpenCL
17.90
Core i9 7900X: Clear Linux
SE +/- 0.32, N = 6
-O2 -lOpenCL
17.58
Core i9 7960X: Ubuntu 17.10
SE +/- 0.29, N = 6
-O2 -lOpenCL
13.40
Core i9 7960X: Clear Linux
SE +/- 0.29, N = 6
-O2 -lOpenCL
12.97
Core i9 7980XE: Ubuntu 17.10
SE +/- 0.28, N = 6
-O2 -lOpenCL
12.05
Core i9 7980XE: Clear Linux
SE +/- 0.31, N = 6
-O2 -lOpenCL
12.15
i5-gentoo
SE +/- 0.38, N = 3
-O3 -fopenmp
79.97
gent
SE +/- 0.38, N = 3
-O3 -fopenmp
79.76
20
40
60
80
100
1. (CXX) g++ options:

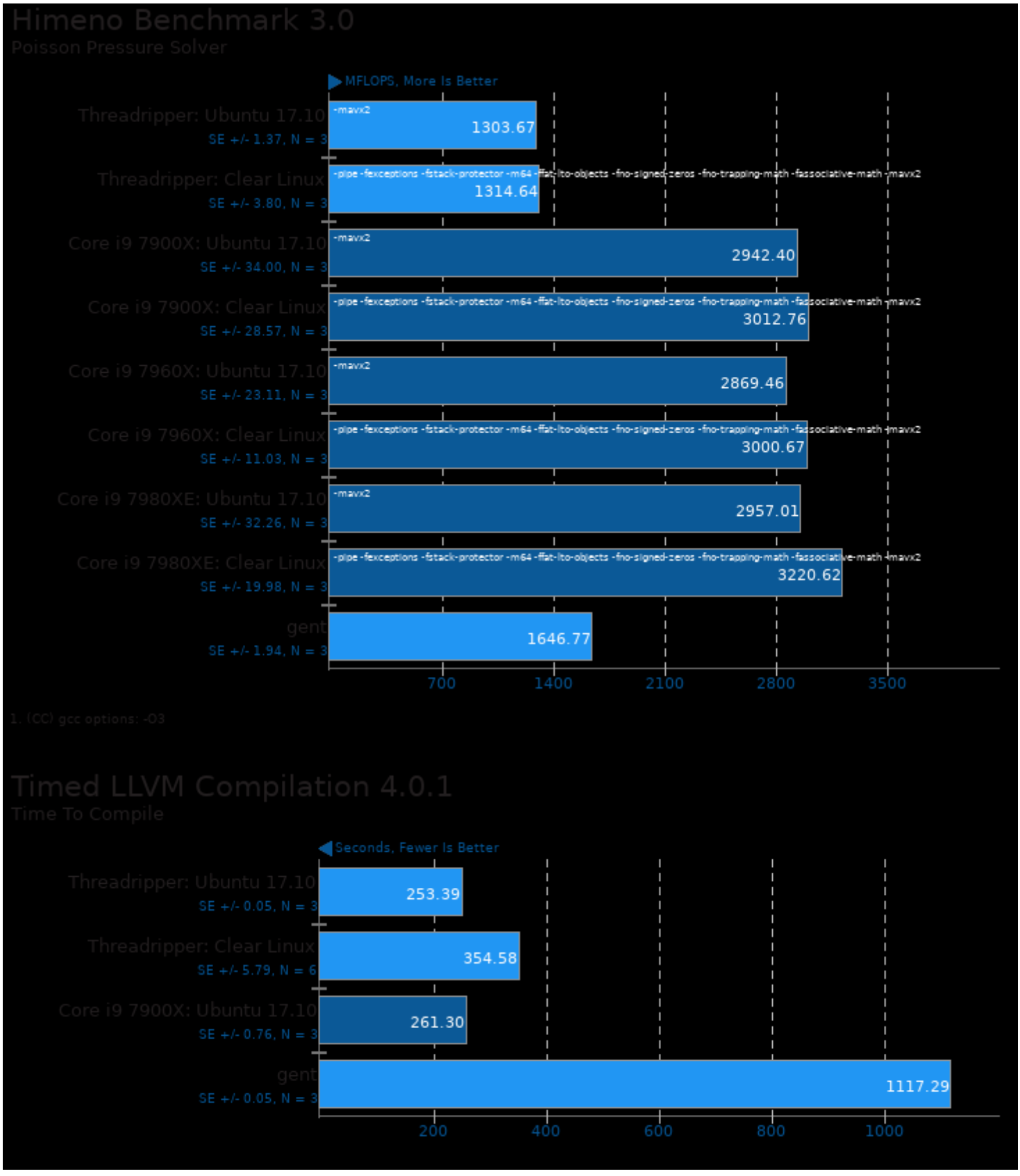

Rodinia 2.4
Test: OpenMP Streamcluster
Seconds, Fewer Is Better
Threadripper: Ubuntu 17.10
SE +/- 0.14, N = 3
-O2 -lOpenCL
51.37
Threadripper: Clear Linux
SE +/- 0.02, N = 3
-O2 -lOpenCL
17.34
Core i9 7900X: Ubuntu 17.10
SE +/- 0.49, N = 6
-O2 -lOpenCL
13.97
Core i9 7900X: Clear Linux
SE +/- 0.35, N = 6
-O2 -lOpenCL
14.08
Core i9 7960X: Ubuntu 17.10
SE +/- 0.19, N = 3
-O2 -lOpenCL
14.86
Core i9 7960X: Clear Linux
SE +/- 0.30, N = 6
-O2 -lOpenCL
14.53
Core i9 7980XE: Ubuntu 17.10
SE +/- 0.12, N = 3
-O2 -lOpenCL
14.45
Core i9 7980XE: Clear Linux
SE +/- 0.37, N = 6
-O2 -lOpenCL
14.27
i5-gentoo
SE +/- 0.01, N = 3
-O3 -fopenmp
37.89
gent
SE +/- 0.00, N = 3
-O3 -fopenmp
37.88
12
24
36
48
60
1. (CXX) g++ options:

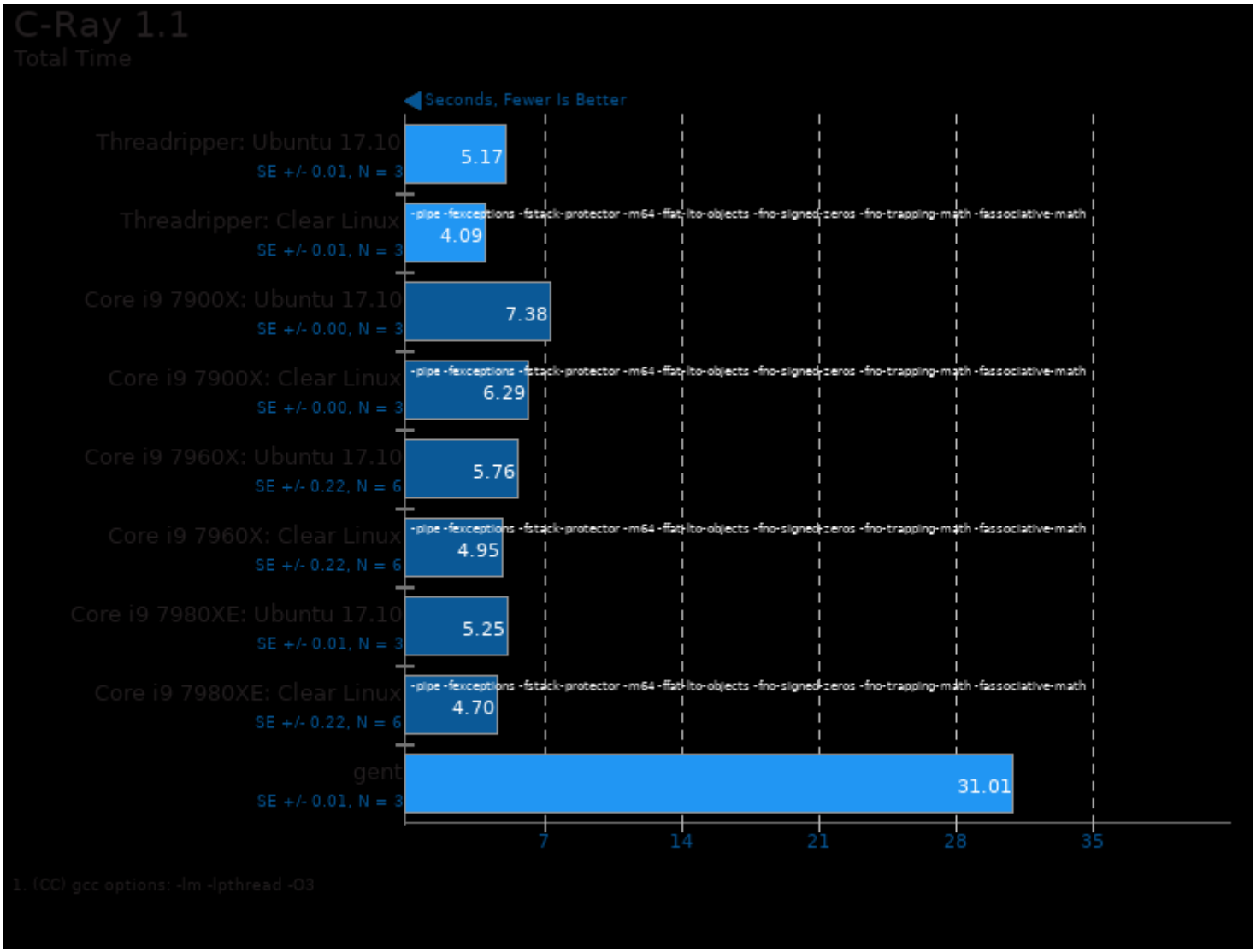

FFTW 3.3.6
Build: Float + SSE - Size: 2D FFT Size 1024
Mflops, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 43.63, N = 3
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
26347
Threadripper: Clear Linux
SE +/- 15.24, N = 3
-pipe -fexceptions -fstack-protector -m64 -flto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
23766
Core i9 7900X: Ubuntu 17.10
SE +/- 65.55, N = 3
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
25341
Core i9 7900X: Clear Linux
SE +/- 371.42, N = 3
-pipe -fexceptions -fstack-protector -m64 -flto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
26982
Core i9 7960X: Ubuntu 17.10
SE +/- 192.79, N = 3
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
26055
Core i9 7980XE: Ubuntu 17.10
SE +/- 344.37, N = 5
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
22463
Core i9 7980XE: Clear Linux
SE +/- 95.68, N = 3
-pipe -fexceptions -fstack-protector -m64 -flto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
23681
i5-gentoo
SE +/- 71.50, N = 3
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
13717
gent
SE +/- 83.20, N = 3
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
13900
6K
12K
18K
24K
30K
1. (CC) gcc options: -pthread -O3 -lm

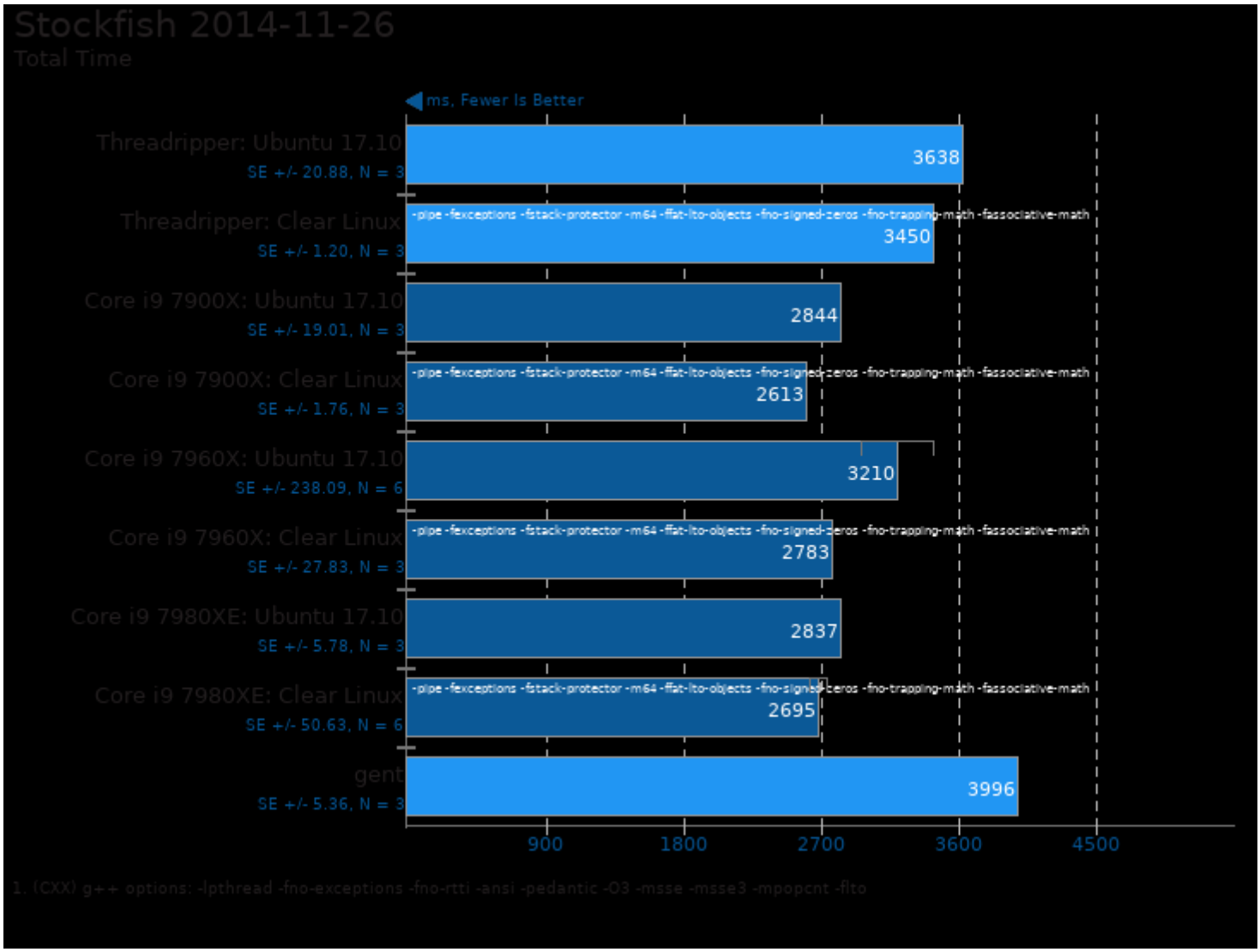

FFTW 3.3.6
Build: Float + SSE - Size: 2D FFT Size 4096
Mflops, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 138.17, N = 3
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
16200
Threadripper: Clear Linux
SE +/- 83.28, N = 3
-pipe -fexceptions -fstack-protector -m64 -flto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
16573
Core i9 7900X: Ubuntu 17.10
SE +/- 274.99, N = 3
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
18592
Core i9 7900X: Clear Linux
SE +/- 75.92, N = 3
-pipe -fexceptions -fstack-protector -m64 -flto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
17486
Core i9 7960X: Ubuntu 17.10
SE +/- 168.32, N = 3
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
19464
Core i9 7980XE: Ubuntu 17.10
SE +/- 22.85, N = 3
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
17897
Core i9 7980XE: Clear Linux
SE +/- 69.61, N = 3
-pipe -fexceptions -fstack-protector -m64 -flto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
16826
gent
SE +/- 25.46, N = 3
-fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math
11899
4K
8K
12K
16K
20K
1. (CC) gcc options: -pthread -O3 -lm
Timed HMMer Search 2.3.2
Pfam Database Search
Threadripper
Core i9 7900X
Core i9 7960X
Core i9 7980XE
Seconds, Fewer Is Better
Ubuntu 17.10
SE +/- 0.07, N = 3
7.91
SE +/- 0.30, N = 6
14.52
SE +/- 0.01, N = 3
5.06
SE +/- 0.30, N = 6
10.83
4
8
12
16
20
1. (CC) gcc options: -O2 -pthread -lhmmer -lsquid -lm

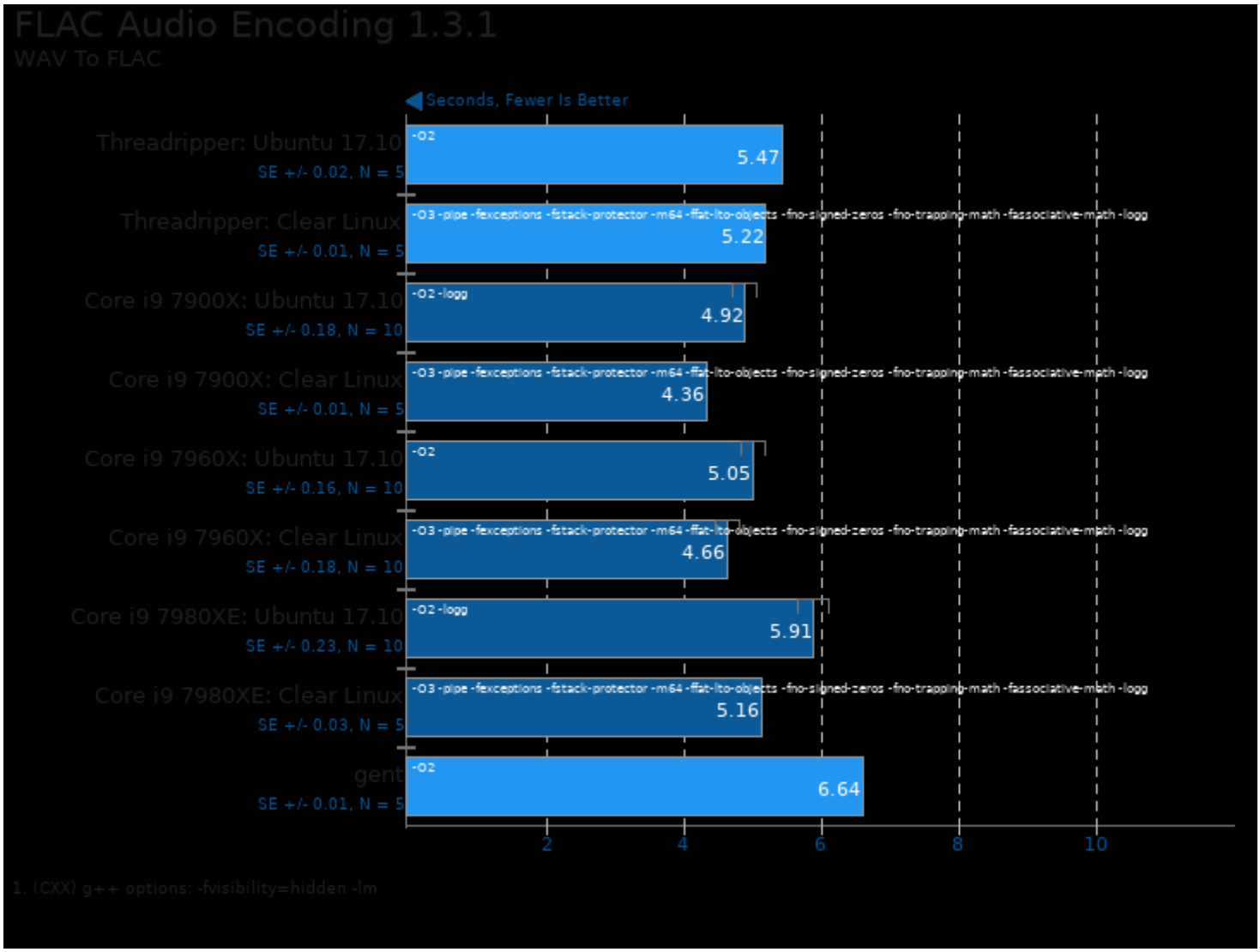

CacheBench
Test: Read / Modify / Write
MB/s, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 6.33, N = 3
29374.35
Threadripper: Clear Linux
SE +/- 5.55, N = 3
53551.89
Core i9 7900X: Ubuntu 17.10
SE +/- 209.83, N = 3
33776.13
Core i9 7900X: Clear Linux
SE +/- 3.81, N = 3
51790.65
Core i9 7960X: Ubuntu 17.10
SE +/- 128.33, N = 3
31283.55
Core i9 7960X: Clear Linux
SE +/- 846.02, N = 3
52130.80
Core i9 7980XE: Ubuntu 17.10
SE +/- 185.09, N = 3
32052.14
Core i9 7980XE: Clear Linux
SE +/- 15.13, N = 3
50543.81
gent
SE +/- 0.36, N = 3
28419.91
11K
22K
33K
44K
55K
1. (CC) gcc options: -lrt

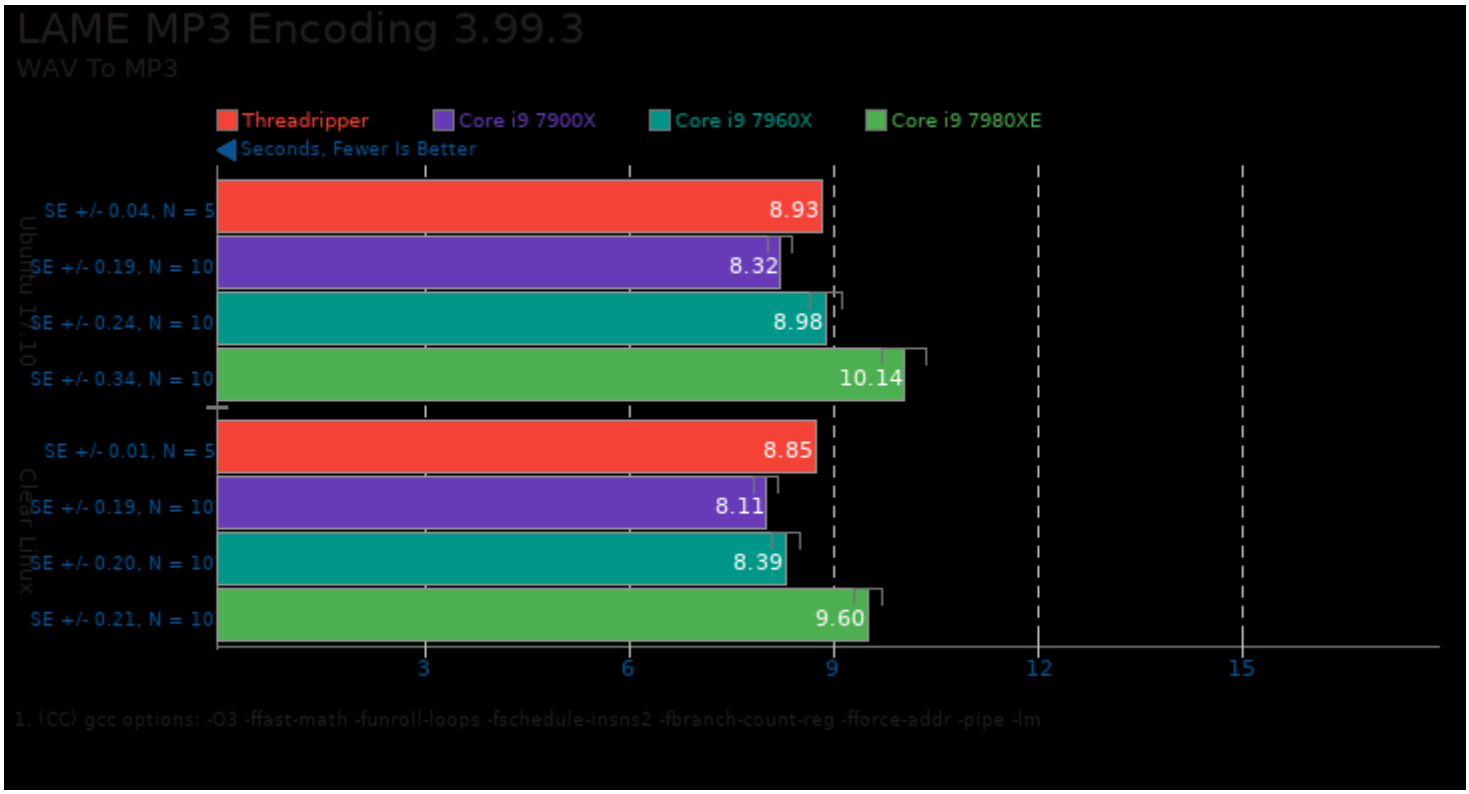

GraphicsMagick 1.3.19
Operation: Resizing
Threadripper
Core i9 7900X
Core i9 7960X
Core i9 7980XE
Iterations Per Minute, More Is Better
SE +/- 0.67, N = 3
Ubuntu 17.10
Clear Linux
228
250
245
249
216
271
259
256
60
120
180
240
300
1. (CC) gcc options: -fopenmp -pthread -ljpeg -lXext -lX11 -lbz2 -lz -lm -lgomp -lpthread

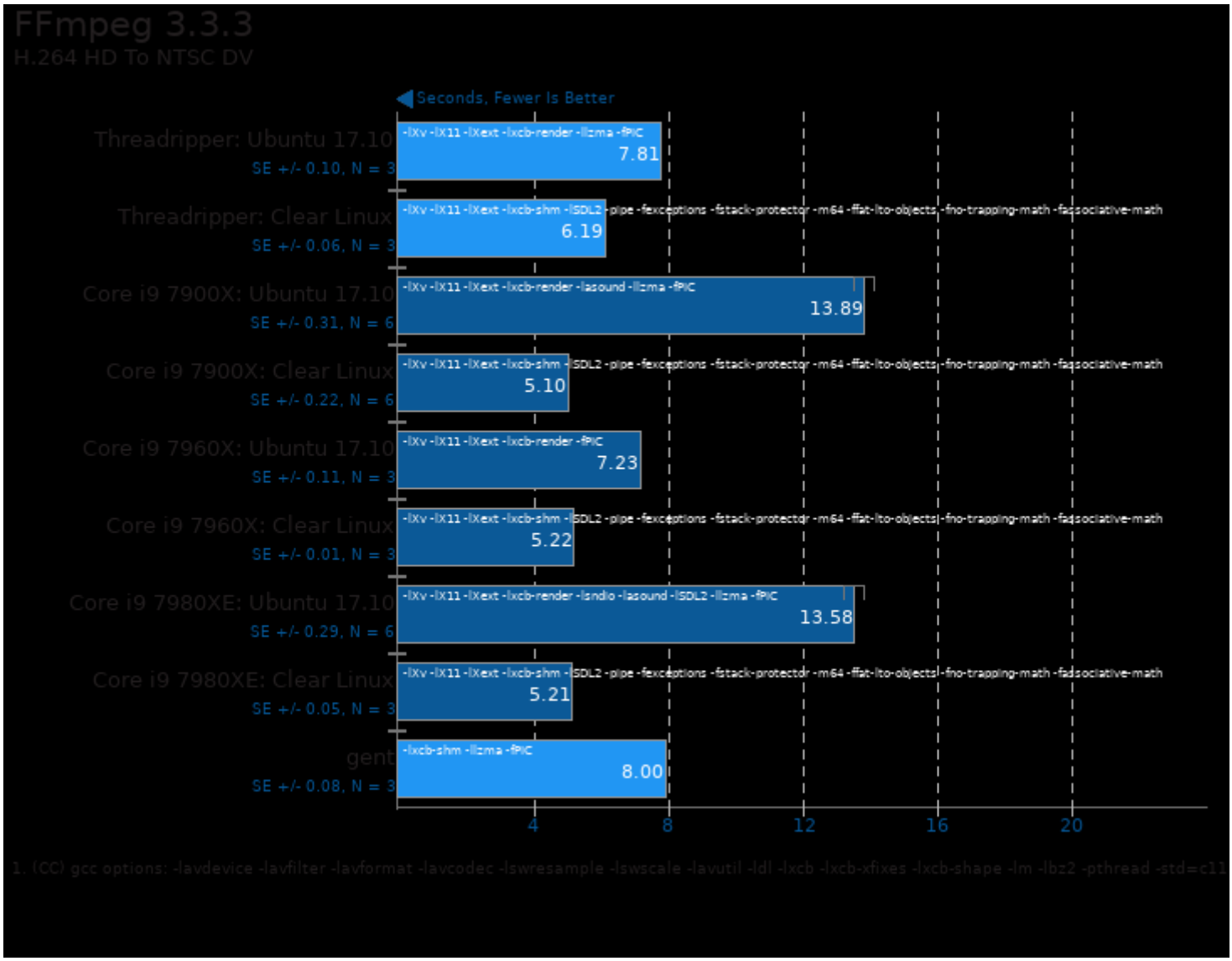

Himeno Benchmark 3.0
Poisson Pressure Solver
MFLOPS, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 1.37, N = 3
-mavx2
1303.67
Threadripper: Clear Linux
SE +/- 3.80, N = 3
-pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math -mavx2
1314.64
Core i9 7900X: Ubuntu 17.10
SE +/- 34.00, N = 3
-mavx2
2942.40
Core i9 7900X: Clear Linux
SE +/- 28.57, N = 3
-pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math -mavx2
3012.76
Core i9 7960X: Ubuntu 17.10
SE +/- 23.11, N = 3
-mavx2
2869.46
Core i9 7960X: Clear Linux
SE +/- 11.03, N = 3
-pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math -mavx2
3000.67
Core i9 7980XE: Ubuntu 17.10
SE +/- 32.26, N = 3
-mavx2
2957.01
Core i9 7980XE: Clear Linux
SE +/- 19.98, N = 3
-pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math -mavx2
3220.62
gent
SE +/- 1.94, N = 3
1646.77
700
1400
2100
2800
3500
1. (CC) gcc options: -O3
Timed LLVM Compilation 4.0.1
Time To Compile
Seconds, Fewer Is Better
Threadripper: Ubuntu 17.10
SE +/- 0.05, N = 3
253.39
Threadripper: Clear Linux
SE +/- 5.79, N = 6
354.58
Core i9 7900X: Ubuntu 17.10
SE +/- 0.76, N = 3
261.30
gent
SE +/- 0.05, N = 3
1117.29
200
400
600
800
1000

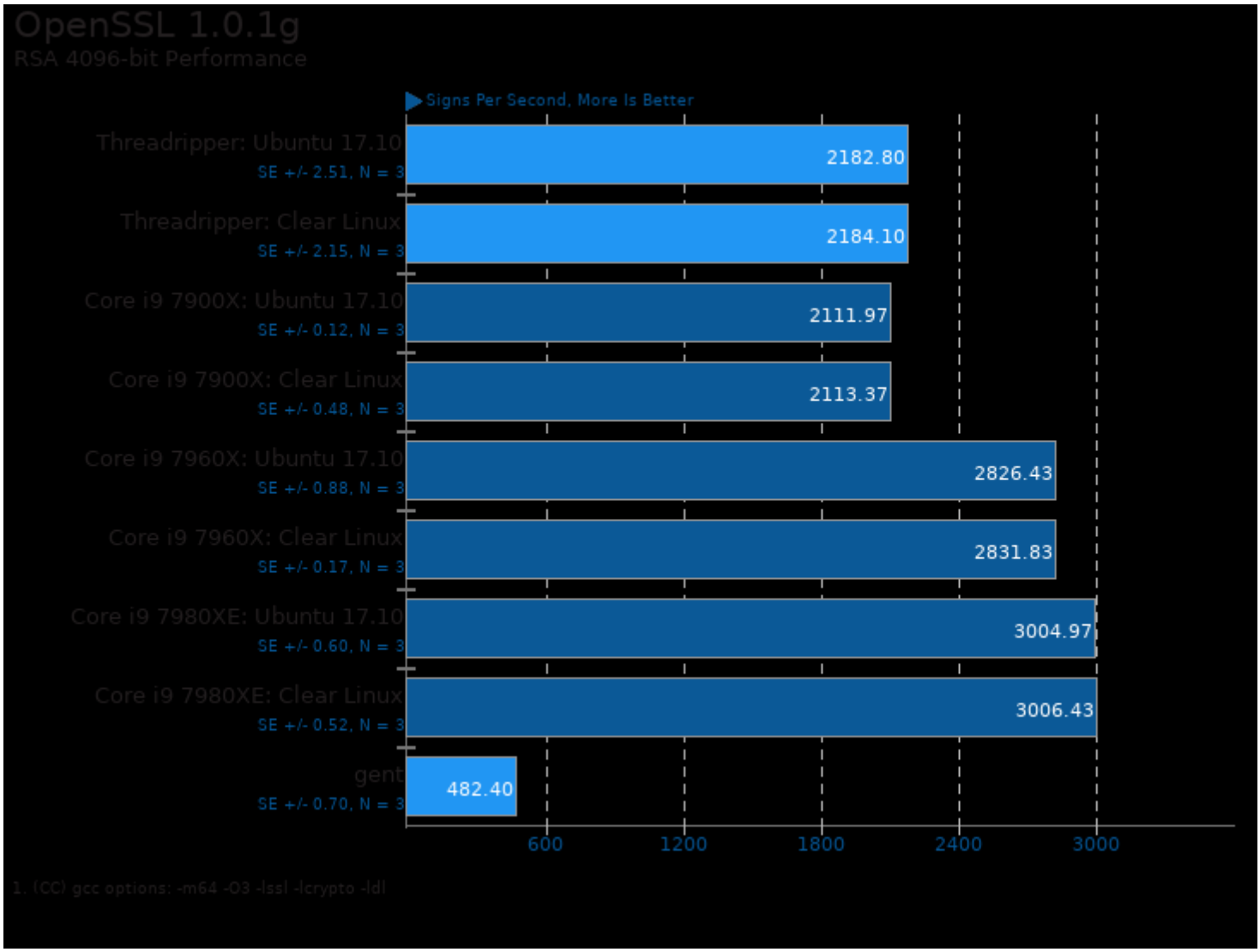

C-Ray 1.1
Total Time
Seconds, Fewer Is Better
Threadripper: Ubuntu 17.10
SE +/- 0.01, N = 3
5.17
Threadripper: Clear Linux
SE +/- 0.01, N = 3
4.09
Core i9 7900X: Ubuntu 17.10
SE +/- 0.00, N = 3
7.38
Core i9 7900X: Clear Linux
SE +/- 0.00, N = 3
6.29
Core i9 7960X: Ubuntu 17.10
SE +/- 0.22, N = 6
5.76
Core i9 7960X: Clear Linux
SE +/- 0.22, N = 6
4.95
Core i9 7980XE: Ubuntu 17.10
SE +/- 0.01, N = 3
5.25
Core i9 7980XE: Clear Linux
SE +/- 0.22, N = 6
4.70
SE +/- 0.01, N = 3
31.01
7
14
21
28
35
1. (CC) gcc options: -lm -lpthread -O3

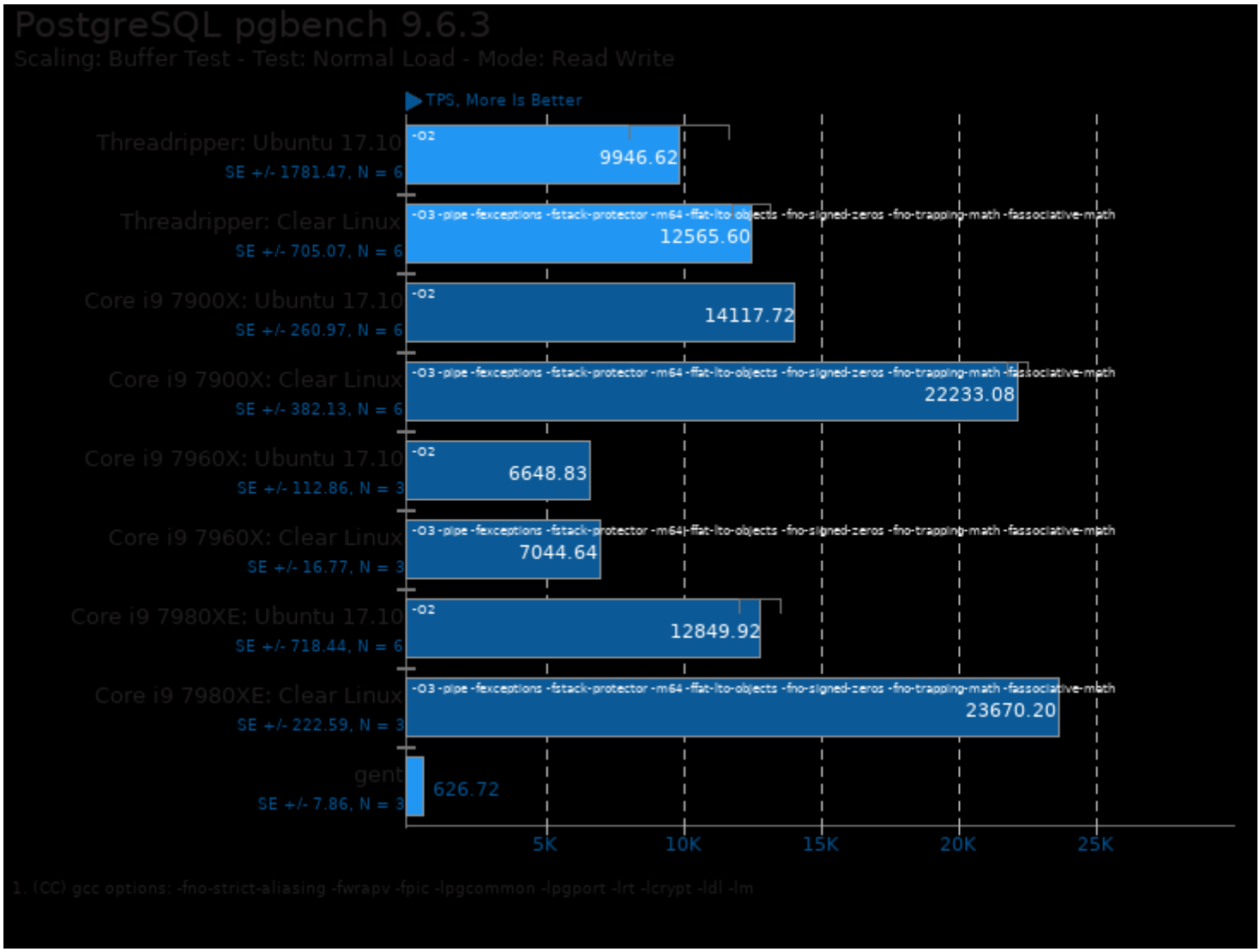

Stockfish 2014-11-26
Total Time
ms, Fewer Is Better
Threadripper: Ubuntu 17.10
SE +/- 20.88, N = 3
3638
Threadripper: Clear Linux
SE +/- 1.20, N = 3
-pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
3450
Core i9 7900X: Ubuntu 17.10
SE +/- 19.01, N = 3
2844
Core i9 7900X: Clear Linux
SE +/- 1.76, N = 3
-pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
2613
Core i9 7960X: Ubuntu 17.10
SE +/- 238.09, N = 6
3210
Core i9 7960X: Clear Linux
SE +/- 27.83, N = 3
-pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
2783
Core i9 7980XE: Ubuntu 17.10
SE +/- 5.78, N = 3
2837
Core i9 7980XE: Clear Linux
SE +/- 50.63, N = 6
-pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
2695
gent
SE +/- 5.36, N = 3
3996
900
1800
2700
3600
4500
1. (CXX) g++ options: -lpthread -fno-exceptions -fno-rtti -ansi -pedantic -O3 -msse -msse3 -mpopcnt -flto

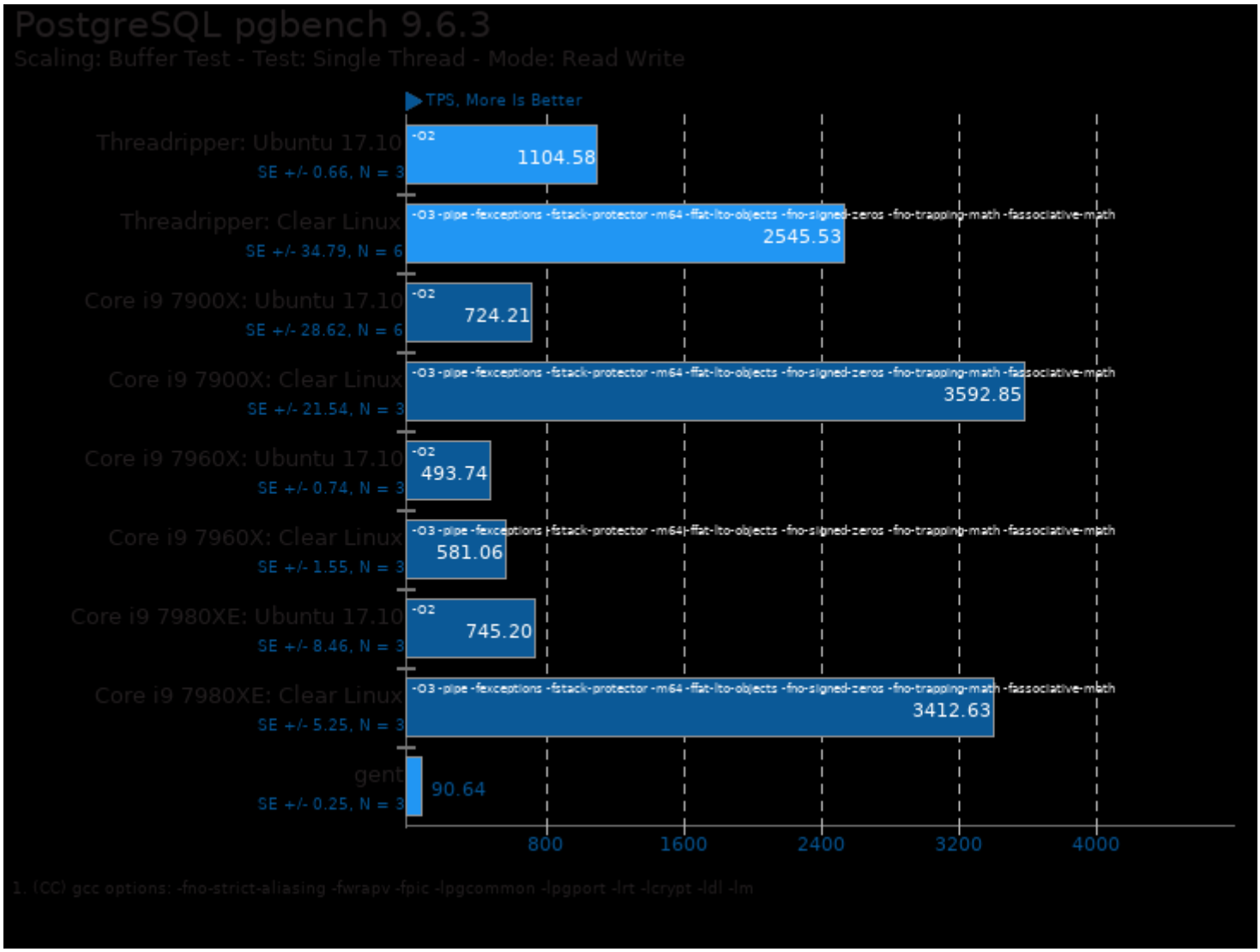

FLAC Audio Encoding 1.3.1
WAV To FLAC
Seconds, Fewer Is Better
Threadripper: Ubuntu 17.10
SE +/- 0.02, N = 5
-O2
5.47
Threadripper: Clear Linux
SE +/- 0.01, N = 5
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math -logg
5.22
Core i9 7900X: Ubuntu 17.10
SE +/- 0.18, N = 10
-O2 -logg
4.92
Core i9 7900X: Clear Linux
SE +/- 0.01, N = 5
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math -logg
4.36
Core i9 7960X: Ubuntu 17.10
SE +/- 0.16, N = 10
-O2
5.05
Core i9 7960X: Clear Linux
SE +/- 0.18, N = 10
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math -logg
4.66
Core i9 7980XE: Ubuntu 17.10
SE +/- 0.23, N = 10
-O2 -logg
5.91
Core i9 7980XE: Clear Linux
SE +/- 0.03, N = 5
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math -logg
5.16
gent
SE +/- 0.01, N = 5
-O2
6.64
2
4
6
8
10
1. (CXX) g++ options: -fvisibility=hidden -lm

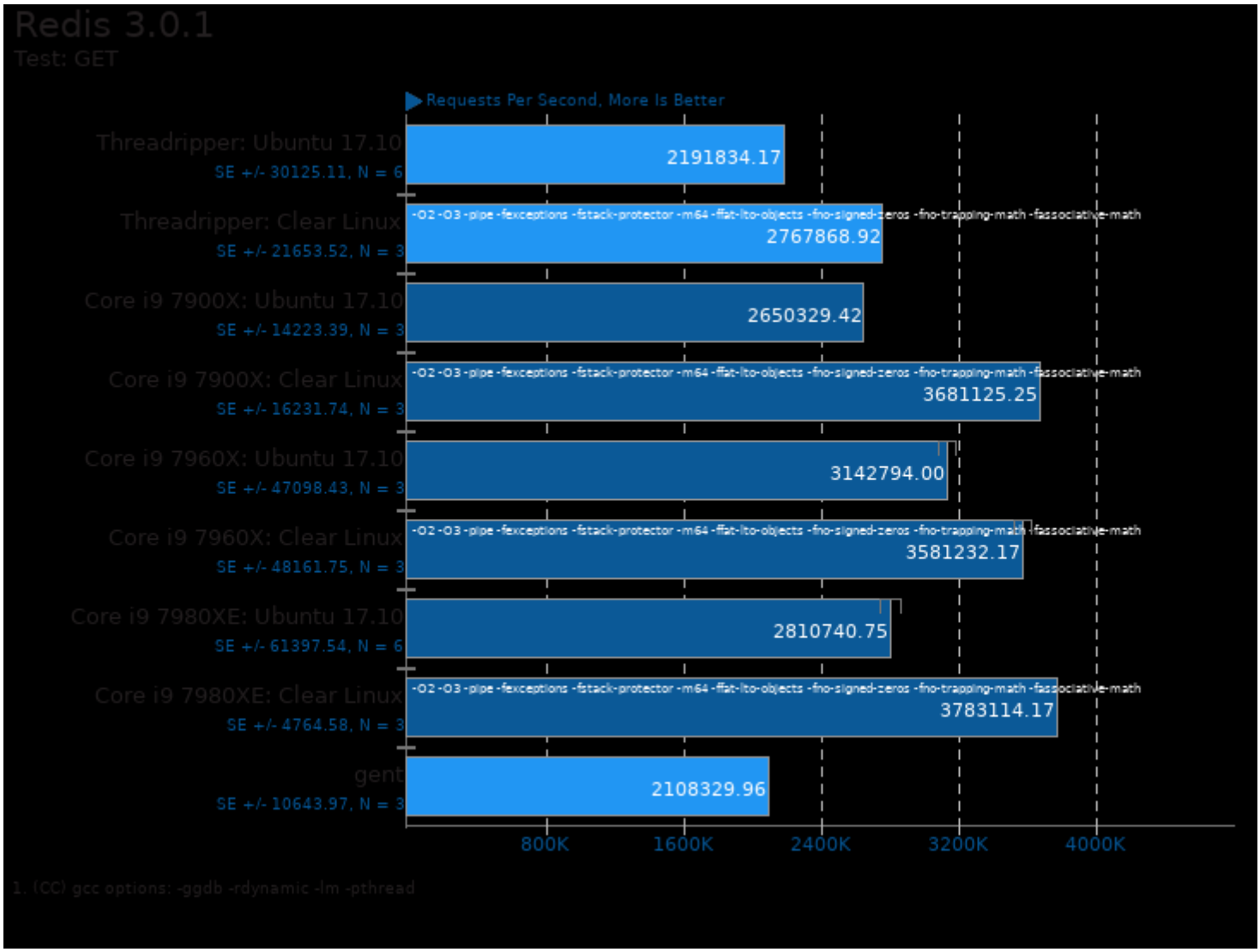

LAME MP3 Encoding 3.99.3
WAV To MP3
Threadripper
Core i9 7900X
Core i9 7960X
Core i9 7980XE
Seconds, Fewer Is Better
Ubuntu 17.10
Clear Linux
SE +/- 0.04, N = 5
8.93
SE +/- 0.19, N = 10
8.32
SE +/- 0.24, N = 10
8.98
SE +/- 0.34, N = 10
10.14
SE +/- 0.01, N = 5
8.85
SE +/- 0.19, N = 10
8.11
SE +/- 0.20, N = 10
8.39
SE +/- 0.21, N = 10
9.60
3
6
9
12
15
1. (CC) gcc options: -O3 -ffast-math -funroll-loops -fschedule-insns2 -fbranch-count-reg -fforce-addr -pipe -lm

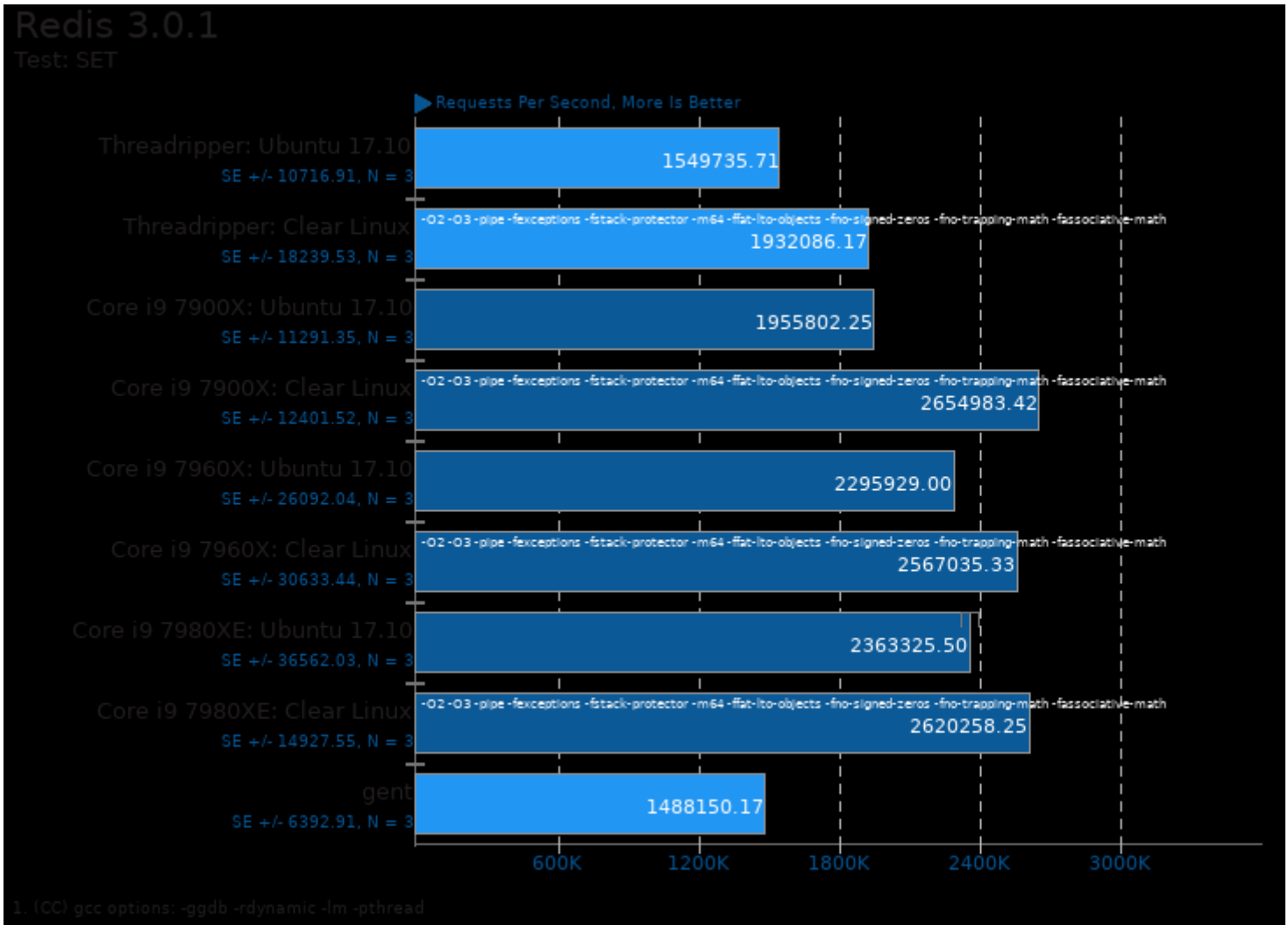

FFmpeg 3.3.3
H.264 HD To NTSC DV
Seconds, Fewer Is Better
Threadripper: Ubuntu 17.10
SE +/- 0.10, N = 3
-lXv -lX11 -lXext -lxcb-render -llzma -fPIC
7.81
Threadripper: Clear Linux
SE +/- 0.06, N = 3
-lXv -lX11 -lXext -lxcb-shm -lSDL2 -pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-trapping-math -fassociative-math
6.19
Core i9 7900X: Ubuntu 17.10
SE +/- 0.31, N = 6
-lXv -lX11 -lXext -lxcb-render -lasound -llzma -fPIC
13.89
Core i9 7900X: Clear Linux
SE +/- 0.22, N = 6
-lXv -lX11 -lXext -lxcb-shm -lSDL2 -pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-trapping-math -fassociative-math
5.10
Core i9 7960X: Ubuntu 17.10
SE +/- 0.11, N = 3
-lXv -lX11 -lXext -lxcb-render -fPIC
7.23
Core i9 7960X: Clear Linux
SE +/- 0.01, N = 3
-lXv -lX11 -lXext -lxcb-shm -lSDL2 -pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-trapping-math -fassociative-math
5.22
Core i9 7980XE: Ubuntu 17.10
SE +/- 0.29, N = 6
-lXv -lX11 -lXext -lxcb-render -lsndio -lasound -lSDL2 -llzma -fPIC
13.58
Core i9 7980XE: Clear Linux
SE +/- 0.05, N = 3
-lXv -lX11 -lXext -lxcb-shm -lSDL2 -pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-trapping-math -fassociative-math
5.21
gent
SE +/- 0.08, N = 3
-lxcb-shm -llzma -fPIC
8.00
4
8
12
16
20
1. (CC) gcc options: -lavdevice -lavfilter -lavformat -lavcodec -lswresample -lswscale -lavutil -ldl -lxcb -lxcb-xfixes -lxcb-shape -lm -lbz2 -pthread -std=c11

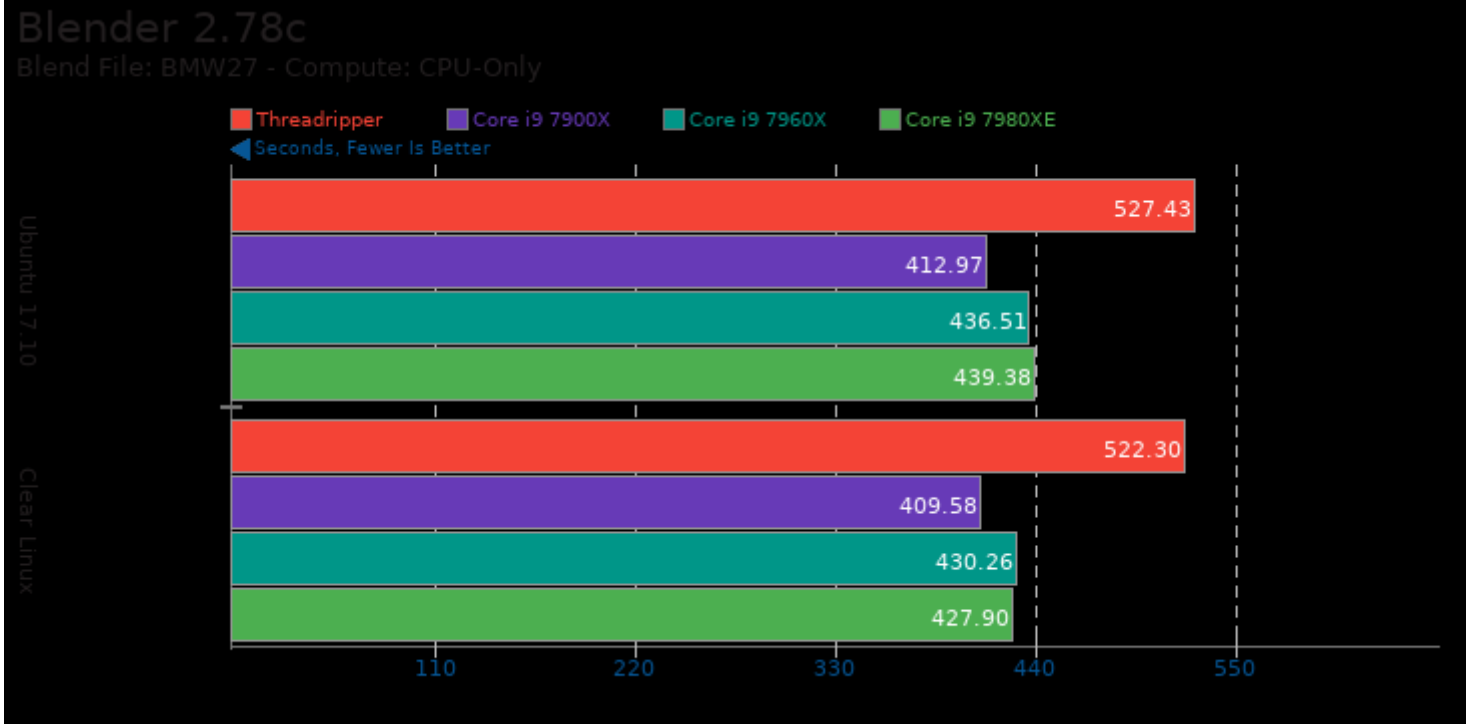

OpenSSL 1.0.1g
RSA 4096-bit Performance
Signs Per Second, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 2.51, N = 3
2182.80
Threadripper: Clear Linux
SE +/- 2.15, N = 3
2184.10
Core i9 7900X: Ubuntu 17.10
SE +/- 0.12, N = 3
2111.97
Core i9 7900X: Clear Linux
SE +/- 0.48, N = 3
2113.37
Core i9 7960X: Ubuntu 17.10
SE +/- 0.88, N = 3
2826.43
Core i9 7960X: Clear Linux
SE +/- 0.17, N = 3
2831.83
Core i9 7980XE: Ubuntu 17.10
SE +/- 0.60, N = 3
3004.97
Core i9 7980XE: Clear Linux
SE +/- 0.52, N = 3
3006.43
gent
SE +/- 0.70, N = 3
482.40
600
1200
1800
2400
3000
1. (CC) gcc options: -m64 -O3 -lssl -lcrypto -ldl

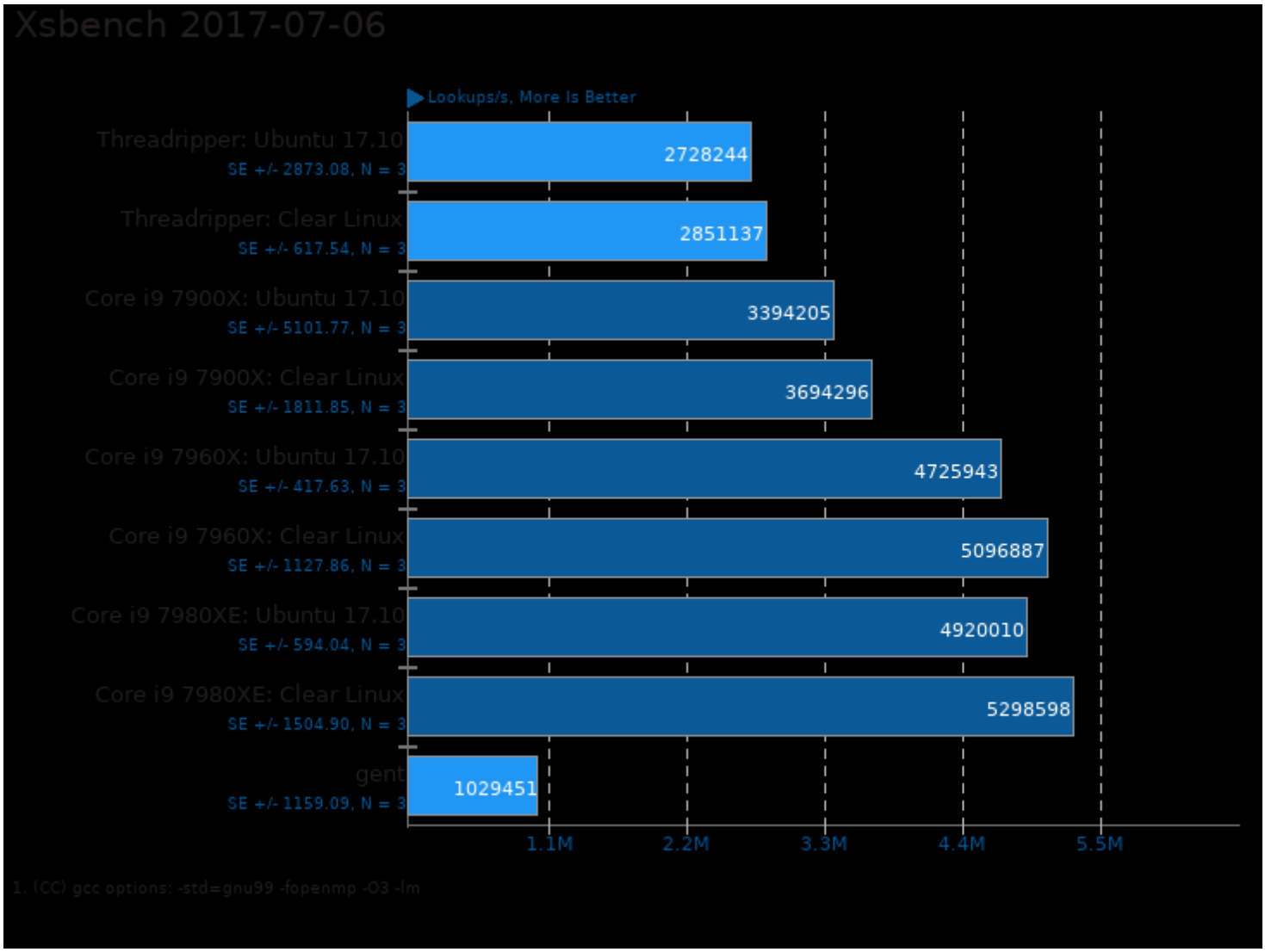

PostgreSQL pgbench 9.6.3
Scaling: Buffer Test - Test: Normal Load - Mode: Read Write
TPS, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 1781.47, N = 6
-O2
9946.62
Threadripper: Clear Linux
SE +/- 705.07, N = 6
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
12565.60
Core i9 7900X: Ubuntu 17.10
SE +/- 260.97, N = 6
-O2
14117.72
Core i9 7900X: Clear Linux
SE +/- 382.13, N = 6
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
22233.08
Core i9 7960X: Ubuntu 17.10
SE +/- 112.86, N = 3
-O2
6648.83
Core i9 7960X: Clear Linux
SE +/- 16.77, N = 3
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
7044.64
Core i9 7980XE: Ubuntu 17.10
SE +/- 718.44, N = 6
-O2
12849.92
Core i9 7980XE: Clear Linux
SE +/- 222.59, N = 3
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
23670.20
gent
SE +/- 7.86, N = 3
626.72
5K
10K
15K
20K
25K
1. (CC) gcc options: -fno-strict-aliasing -fwrapv -fpic -lpgcommon -lpgport -lrt -lcrypt -ldl -lm

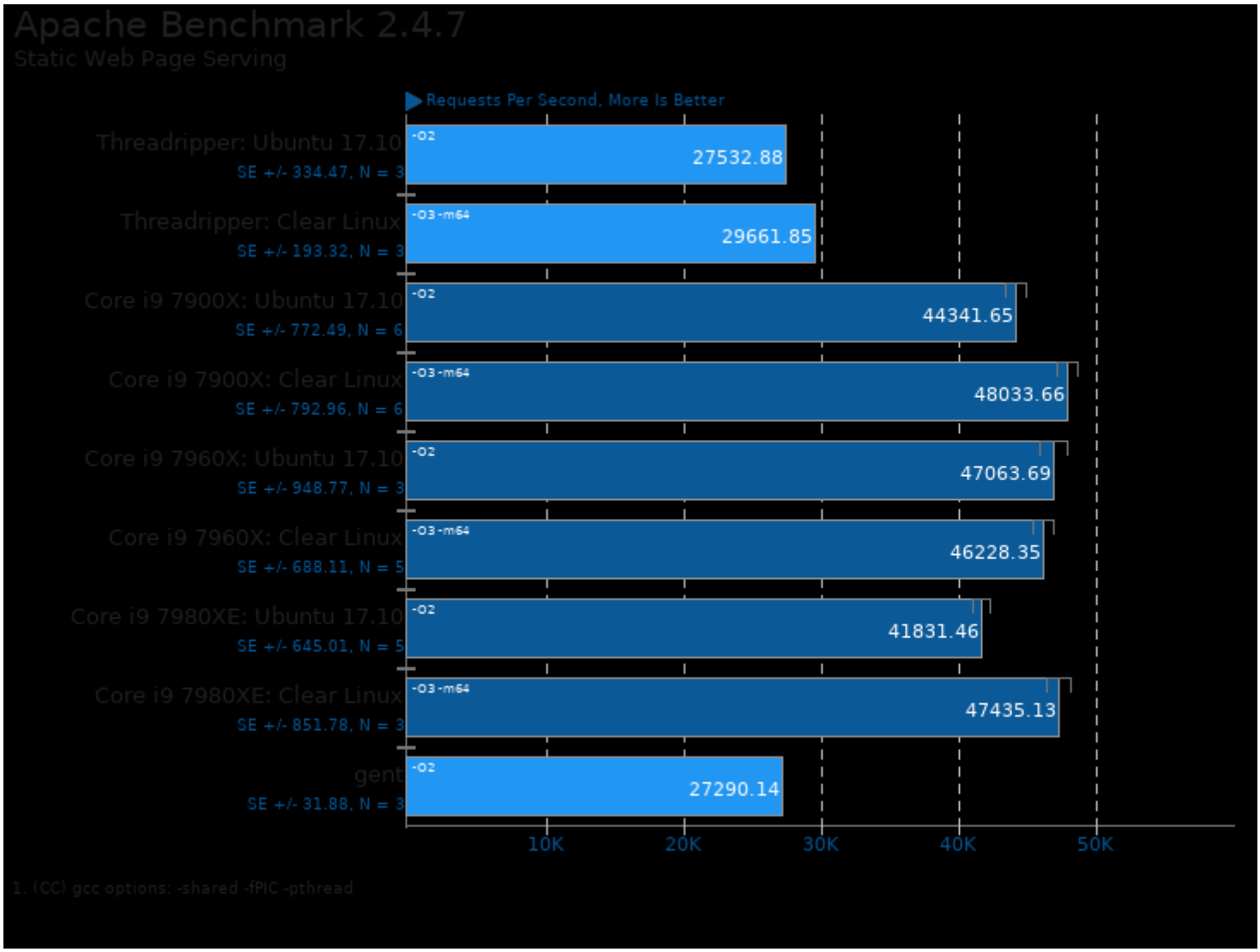

PostgreSQL pgbench 9.6.3
Scaling: Buffer Test - Test: Single Thread - Mode: Read Write
TPS, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 0.66, N = 3
-O2
1104.58
Threadripper: Clear Linux
SE +/- 34.79, N = 6
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
2545.53
Core i9 7900X: Ubuntu 17.10
SE +/- 28.62, N = 6
-O2
724.21
Core i9 7900X: Clear Linux
SE +/- 21.54, N = 3
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
3592.85
Core i9 7960X: Ubuntu 17.10
SE +/- 0.74, N = 3
-O2
493.74
Core i9 7960X: Clear Linux
SE +/- 1.55, N = 3
581.06
Core i9 7980XE: Ubuntu 17.10
SE +/- 8.46, N = 3
-O2
745.20
Core i9 7980XE: Clear Linux
SE +/- 5.25, N = 3
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
3412.63
gent
SE +/- 0.25, N = 3
90.64
800
1600
2400
3200
4000
1. (CC) gcc options: -fno-strict-aliasing -fwrapv -fpic -lpgcommon -lpgport -lrt -lcrypt -ldl -lm


Redis 3.0.1
Test: GET
Requests Per Second, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 30125.11, N = 6
2191834.17
Threadripper: Clear Linux
SE +/- 21653.52, N = 3
-O2 -O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
2767868.92
Core i9 7900X: Ubuntu 17.10
SE +/- 14223.39, N = 3
2650329.42
Core i9 7900X: Clear Linux
SE +/- 16231.74, N = 3
-O2 -O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
3681125.25
Core i9 7960X: Ubuntu 17.10
SE +/- 47098.43, N = 3
3142794.00
Core i9 7960X: Clear Linux
SE +/- 48161.75, N = 3
-O2 -O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
3581232.17
Core i9 7980XE: Ubuntu 17.10
SE +/- 61397.54, N = 6
2810740.75
Core i9 7980XE: Clear Linux
SE +/- 4764.58, N = 3
-O2 -O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
3783114.17
gent
SE +/- 10643.97, N = 3
2108329.96
800K
1600K
2400K
3200K
4000K
1. (CC) gcc options: -ggdb -rdynamic -lm -pthread

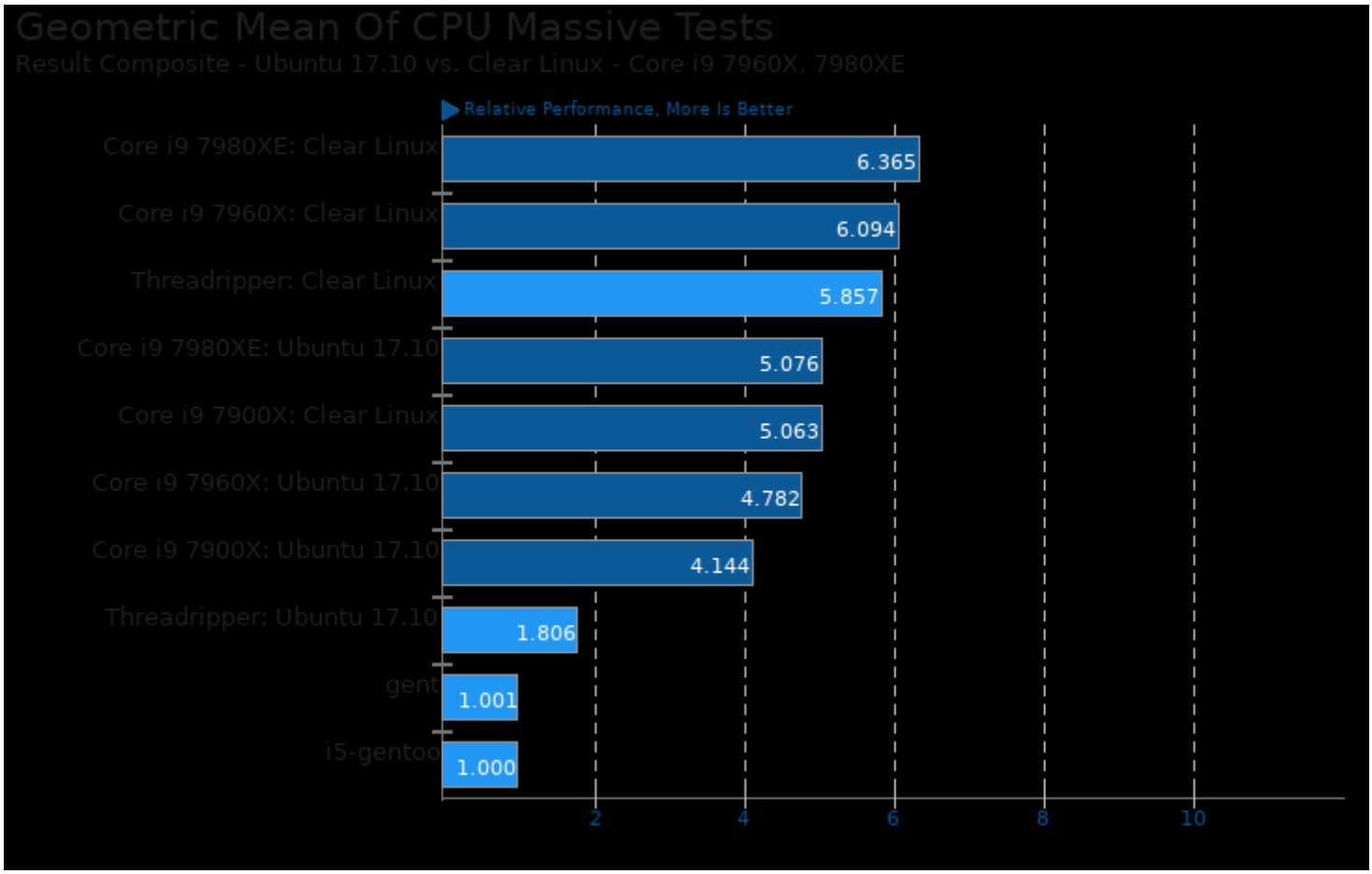

Redis 3.0.1
Test: SET
Requests Per Second, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 10716.91, N = 3
1549735.71
Threadripper: Clear Linux
SE +/- 18239.53, N = 3
-O2 -O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
1932086.17
Core i9 7900X: Ubuntu 17.10
SE +/- 11291.35, N = 3
1955802.25
Core i9 7900X: Clear Linux
SE +/- 12401.52, N = 3
-O2 -O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
2654983.42
Core i9 7960X: Ubuntu 17.10
SE +/- 26092.04, N = 3
2295929.00
Core i9 7960X: Clear Linux
SE +/- 30633.44, N = 3
-O2 -O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
2567035.33
Core i9 7980XE: Ubuntu 17.10
SE +/- 36562.03, N = 3
2363325.50
Core i9 7980XE: Clear Linux
SE +/- 14927.55, N = 3
-O2 -O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
2620258.25
gent
SE +/- 6392.91, N = 3
1488150.17
600K
1200K
1800K
2400K
3000K
1. (CC) gcc options: -ggdb -rdynamic -lm -pthread


Blender 2.78c
Blend File: BMW27 - Compute: CPU-Only
Threadripper
Core i9 7900X
Core i9 7960X
Core i9 7980XE
Seconds, Fewer Is Better
Ubuntu 17.10
527.43
412.97
436.51
439.38
Clear Linux
522.30
409.58
430.26
427.90
110
220
330
440
550

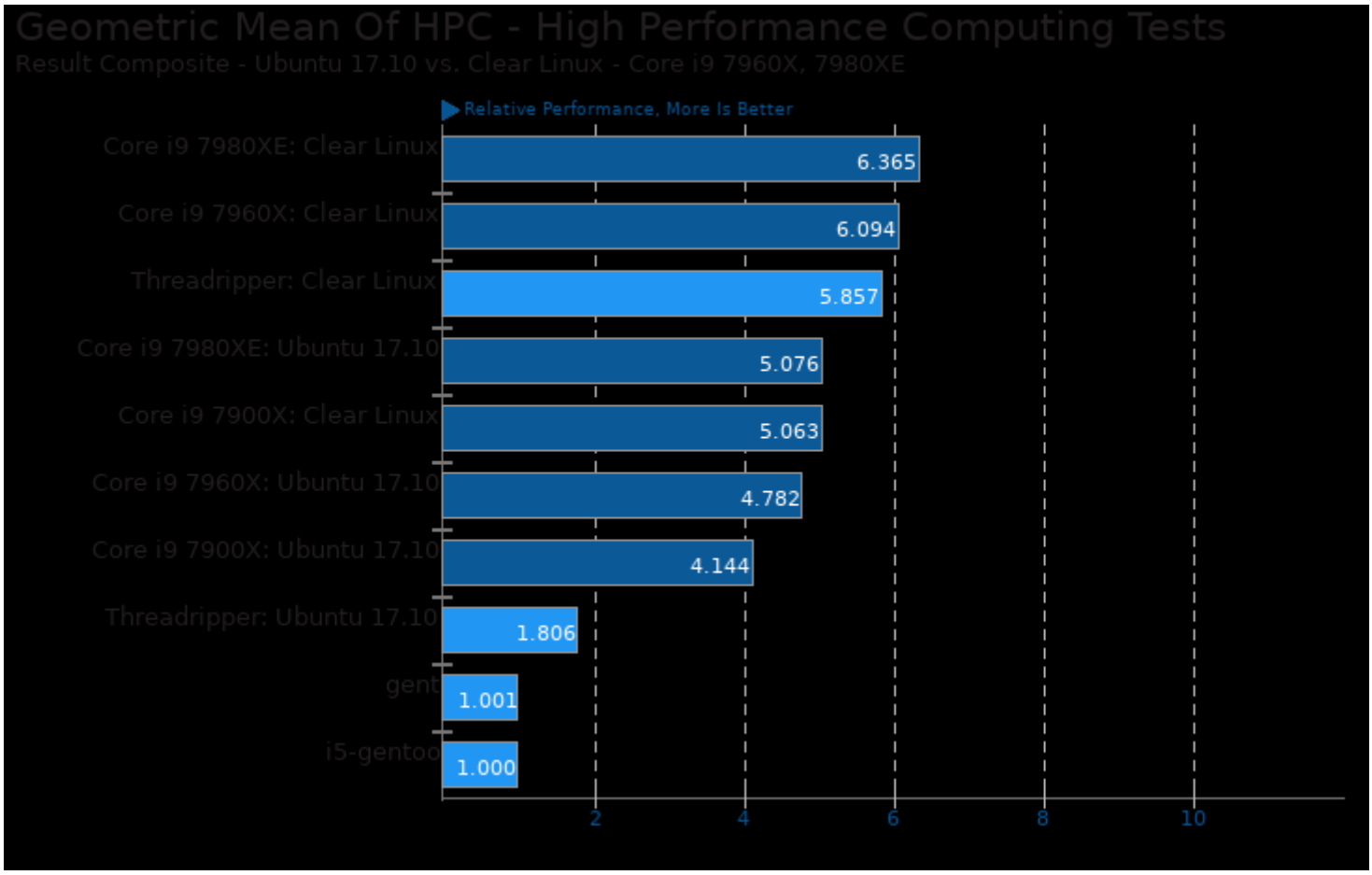

Xsbench 2017-07-06
Lookups/s, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 2873.08, N = 3
2728244
Threadripper: Clear Linux
SE +/- 617.54, N = 3
2851137
Core i9 7900X: Ubuntu 17.10
SE +/- 5101.77, N = 3
3394205
Core i9 7900X: Clear Linux
SE +/- 1811.85, N = 3
3694296
Core i9 7960X: Ubuntu 17.10
SE +/- 417.63, N = 3
4725943
Core i9 7960X: Clear Linux
SE +/- 1127.86, N = 3
5096887
Core i9 7980XE: Ubuntu 17.10
SE +/- 594.04, N = 3
4920010
Core i9 7980XE: Clear Linux
SE +/- 1504.90, N = 3
5298598
gent
SE +/- 1159.09, N = 3
1029451
1.1M
2.2M
3.3M
4.4M
5.5M
1. (CC) gcc options: -std=gnu99 -fopenmp -O3 -lm


Apache Benchmark 2.4.7
Static Web Page Serving
Requests Per Second, More Is Better
Threadripper: Ubuntu 17.10
SE +/- 334.47, N = 3
-O2
27532.88
Threadripper: Clear Linux
SE +/- 193.32, N = 3
-O3 -m64
29661.85
Core i9 7900X: Ubuntu 17.10
SE +/- 772.49, N = 6
-O2
44341.65
Core i9 7900X: Clear Linux
SE +/- 792.96, N = 6
-O3 -m64
48033.66
Core i9 7960X: Ubuntu 17.10
SE +/- 948.77, N = 3
-O2
47063.69
Core i9 7960X: Clear Linux
SE +/- 688.11, N = 5
-O3 -m64
46228.35
Core i9 7980XE: Ubuntu 17.10
SE +/- 645.01, N = 5
-O2
41831.46
Core i9 7980XE: Clear Linux
SE +/- 851.78, N = 3
-O3 -m64
47435.13
gent
SE +/- 31.88, N = 3
-O2
27290.14
10K
20K
30K
40K
50K
1. (CC) gcc options: -shared -fPIC -pthread

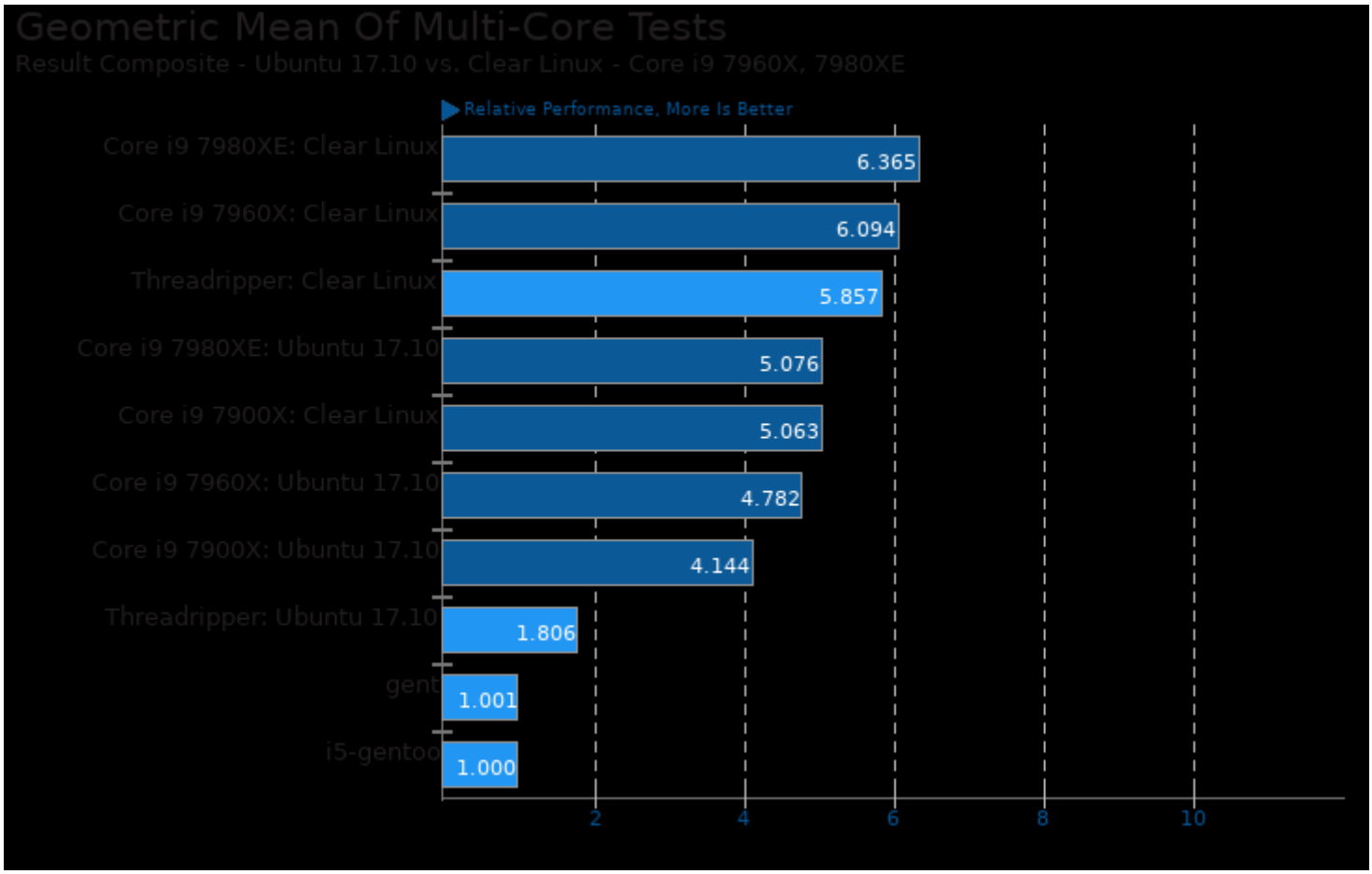
These geometric means are based upon test groupings / test suites for this result file.



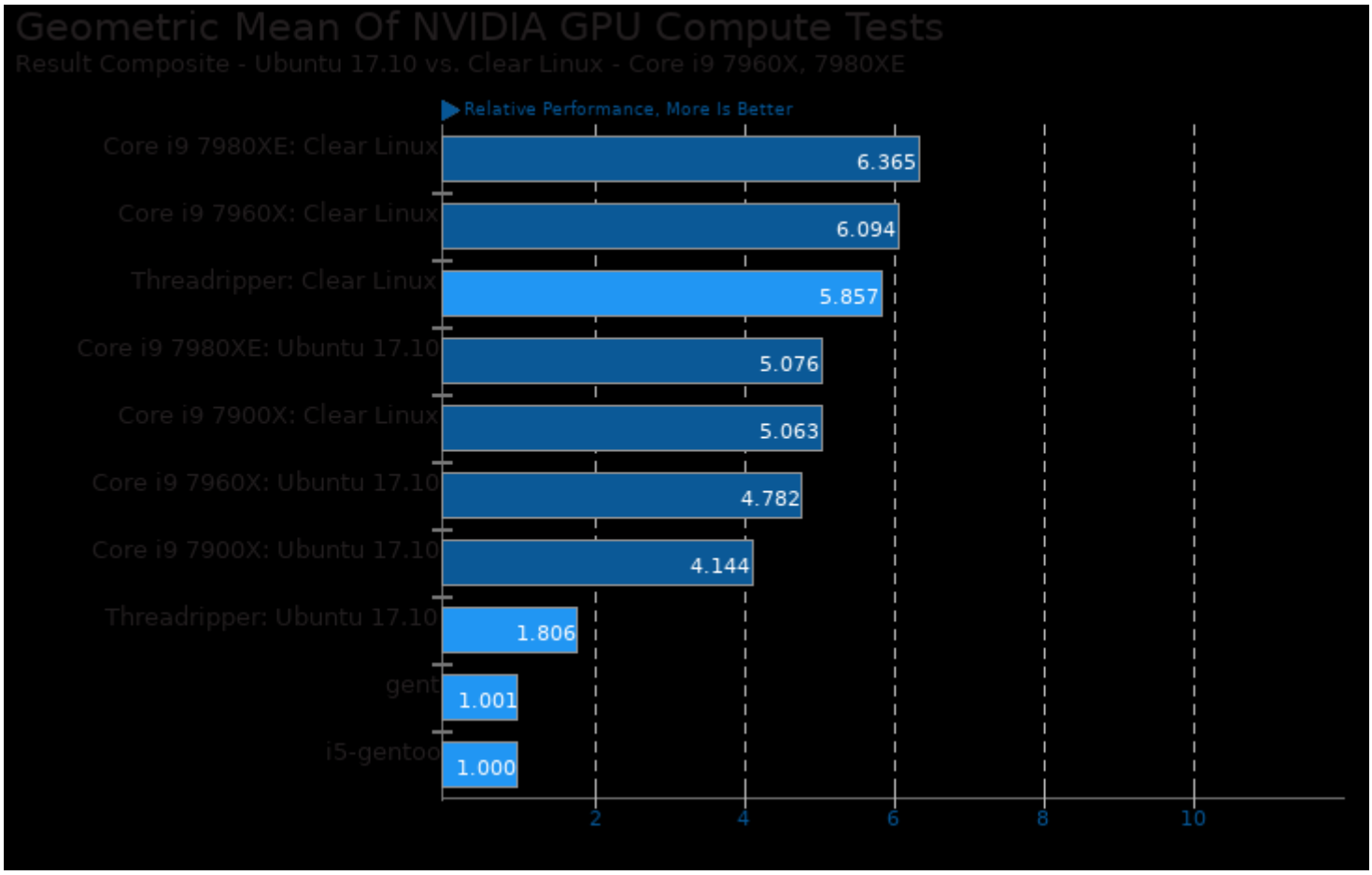
Geometric mean based upon tests: pts/apache, pts/build-llvm, pts/c-ray, pts/cachebench, pts/encode-flac, pts/encode-mp3, pts/fftw, pts/graphics-magick, pts/himeno, pts/hmmer, pts/openssl, pts/parboil, pts/pgbench, pts/redis, pts/rodinia, pts/stockfish, pts/blender and pts/xsbench



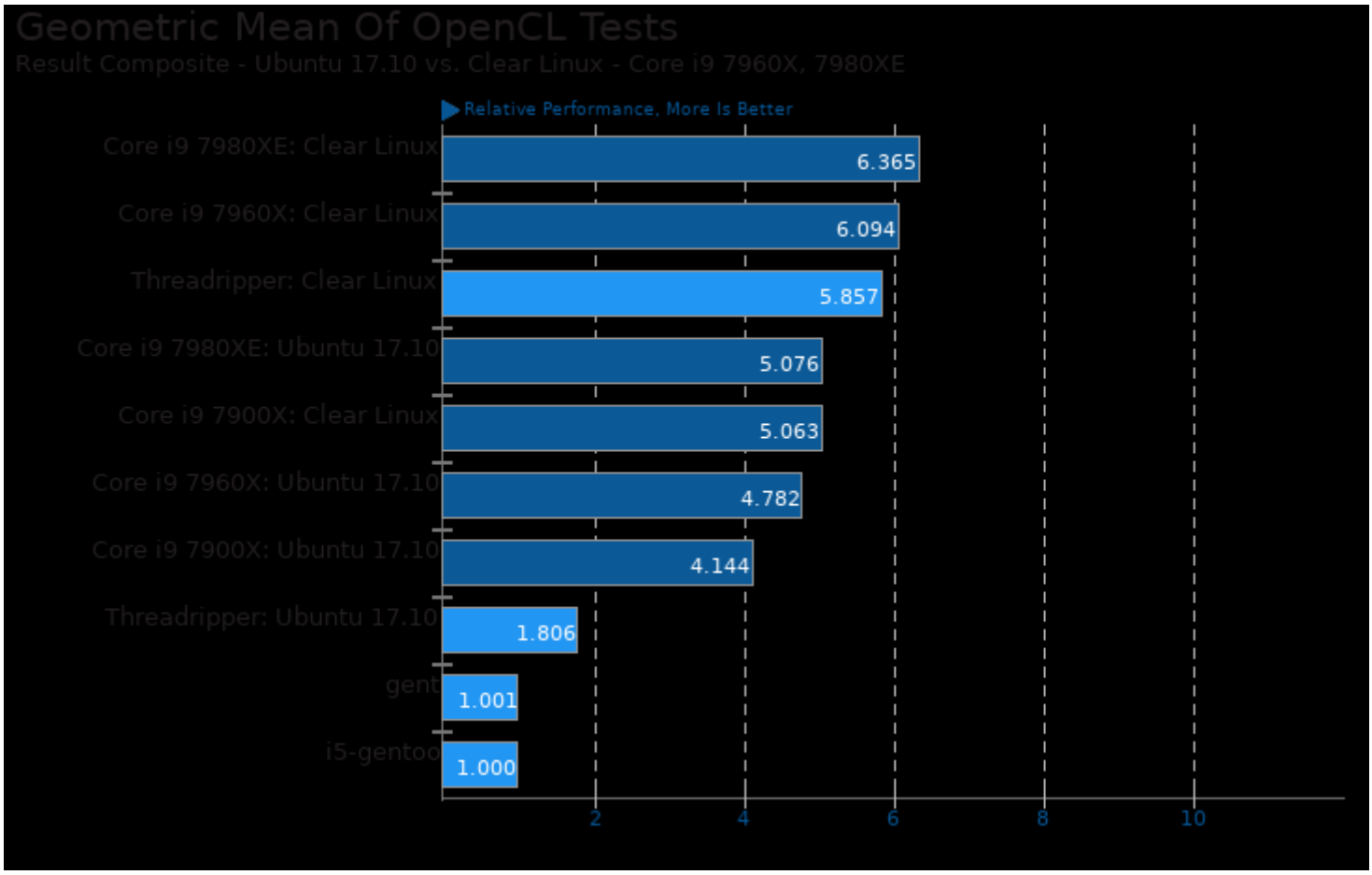
Geometric mean based upon tests: pts/rodinia, pts/parboil, pts/fftw, pts/himeno and pts/hmmer



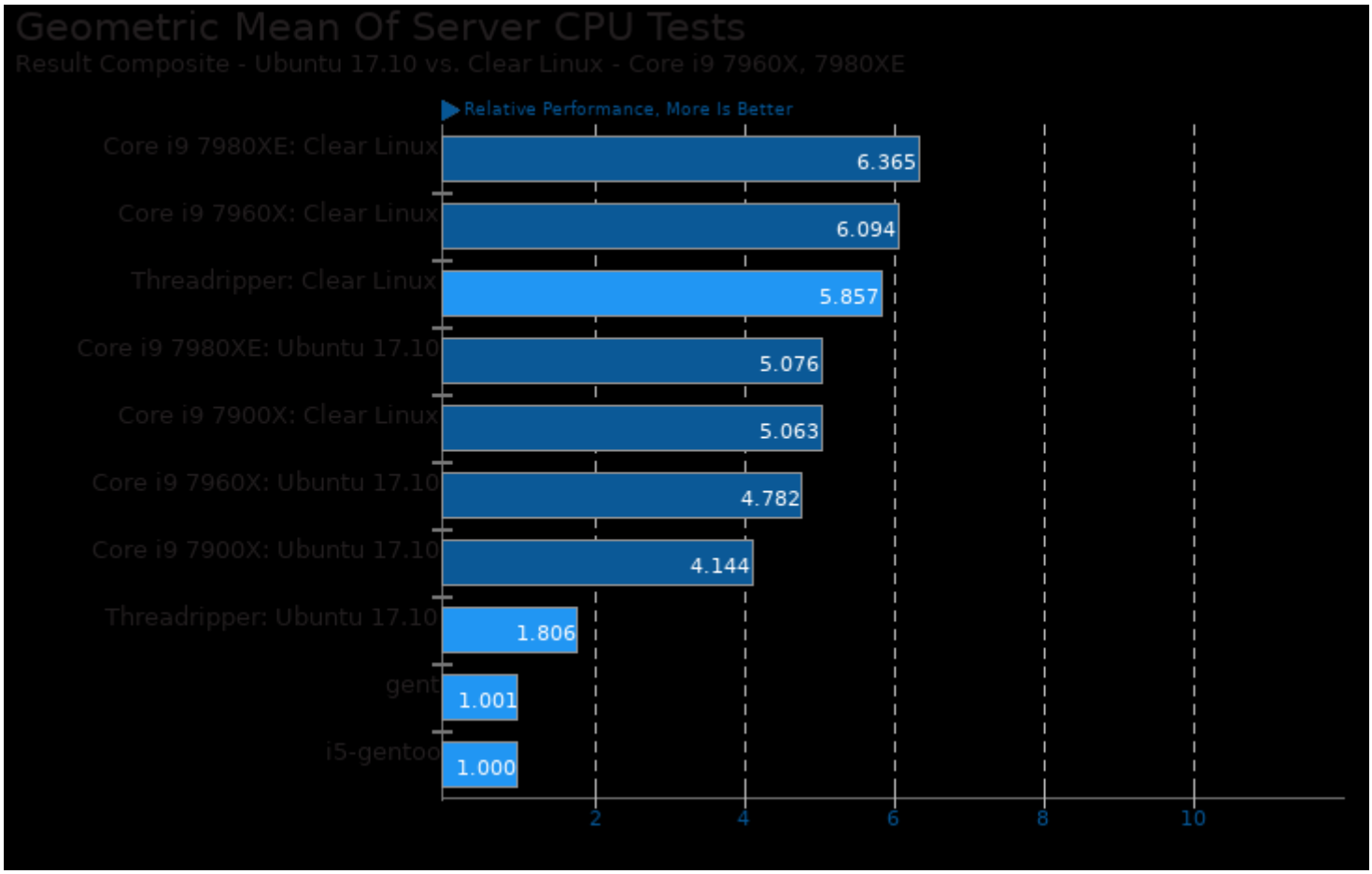
Geometric mean based upon tests: pts/blender, pts/c-ray, pts/stockfish, pts/ffmpeg, pts/rodinia, pts/parboil, pts/graphics-magick, pts/build-llvm, pts/xsbench and pts/pgbench



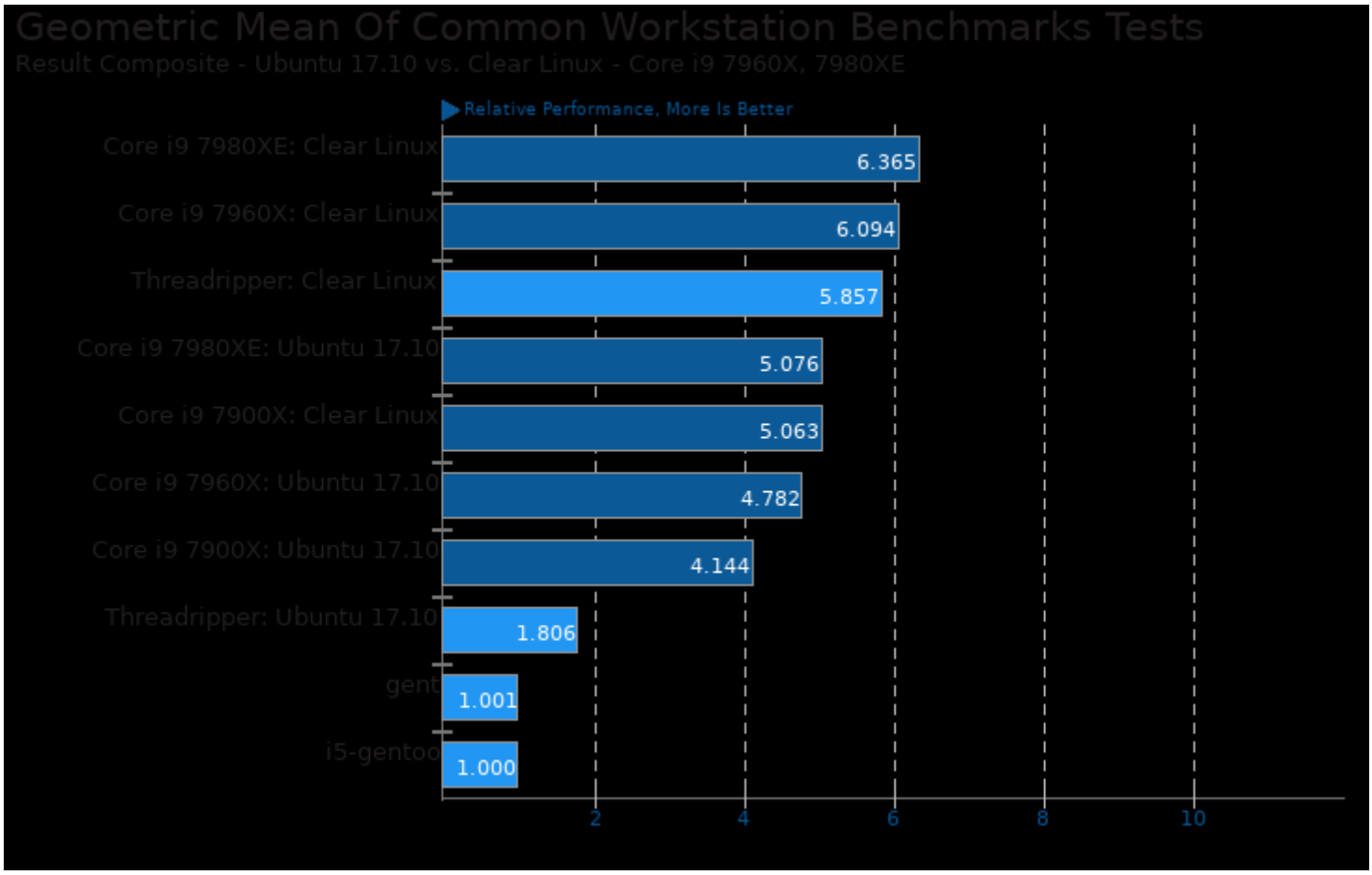
Geometric mean based upon tests: pts/rodinia and pts/blender



Geometric mean based upon tests: pts/rodinia and pts/parboil



Geometric mean based upon tests: pts/rodinia, pts/himeno, pts/stockfish, pts/build-llvm, pts/c-ray, pts/openssl, pts/redis and pts/blender



Geometric mean based upon tests: pts/blender, pts/rodinia, pts/parboil and pts/himeno

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 11:01.