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3900XT Linux 5.11

AMD Ryzen 9 3900XT 12-Core testing with a MSI MEG X570 GODLIKE (MS-7C34) v1.0 (1.B3 BIOS) and AMD Radeon RX 56/64 8GB on Ubuntu 20.10 via the Phoronix Test Suite.

Automated Executive Summary

Linux 5.10.3 had the most wins, coming in first place for 51% of the tests.

Based on the geometric mean of all complete results, the fastest (Linux 5.10.3) was 1.025x the speed of the slowest (Linux 5.11-rc1).

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

Kvazaar (Video Input: Bosphorus 1080p - Video Preset: Ultra Fast) at 1.477x

Kvazaar (Video Input: Bosphorus 1080p - Video Preset: Very Fast) at 1.363x

x265 (Video Input: Bosphorus 1080p) at 1.136x

ET: Legacy (Renderer: Renderer2 - Resolution: 3840 x 2160) at 1.095x

OpenVKL (Benchmark: vklBenchmark) at 1.093x

PostgreSQL pgbench (Scaling Factor: 1 - Clients: 250 - Mode: Read Write - Average Latency) at 1.067x

PostgreSQL pgbench (Scaling Factor: 1 - Clients: 250 - Mode: Read Write) at 1.064x

PostgreSQL pgbench (Scaling Factor: 1 - Clients: 250 - Mode: Read Write - Average Latency) at 1.062x

InfluxDB (Concurrent Streams: 4 - Batch Size: 10000 - Tags: 2,5000,1 - Points Per Series: 10000) at 1.061x

WavPack Audio Encoding (WAV To WavPack) at 1.056x.

Test Systems:

Linux 5.10.3

Processor: AMD Ryzen 9 3900XT 12-Core @ 3.80GHz (12 Cores / 24 Threads), Motherboard: MSI MEG X570 GODLIKE (MS-7C34) v1.0 (1.B3 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 500GB Seagate FireCuda 520 SSD ZP500GM30002, Graphics: AMD Radeon RX 56/64 8GB (1630/945MHz), Audio: AMD Vega 10 HDMI Audio, Monitor: ASUS MG28U, Network: Realtek Device 2600 + Realtek Device 3000 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.10, Kernel: 5.10.3-051003-generic (x86_64), Desktop: GNOME Shell 3.38.1, Display Server: X Server 1.20.9, Display Driver: amdgpu 19.1.0, OpenGL: 4.6 Mesa 20.2.1 (LLVM 11.0.0), Vulkan: 1.2.131, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 3840x2160

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,objc++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/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

Disk Notes: NONE / errors=remount-ro,relatime,rw / Block Size: 4096

Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8701021

Graphics Notes: GLAMOR

Python Notes: Python 2.7.18 + Python 3.8.6

Security Notes: `itlb_multihit`: Not affected + `l1tf`: Not affected + `mds`: Not affected + `meltdown`: Not affected + `spec_store_bypass`: Mitigation of SSB disabled via `prctl` and `seccomp` + `spectre_v1`: Mitigation of `usercopy/swapgs` barriers and `_user` pointer sanitization + `spectre_v2`: Mitigation of Full AMD retpoline IPBP: conditional STIBP: conditional RSB filling + `srbs`: Not affected + `tsx_async_abort`: Not affected

Linux 5.11-rc1

Processor: AMD Ryzen 9 3900XT 12-Core @ 3.80GHz (12 Cores / 24 Threads), Motherboard: MSI MEG X570 GODLIKE (MS-7C34) v1.0 (1.B3 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 500GB Seagate FireCuda 520 SSD ZP500GM30002, Graphics: AMD Radeon RX 56/64 8GB (1630/945MHz), Audio: AMD Vega 10 HDMI Audio, Monitor: ASUS MG28U, Network: Realtek Device 2600 + Realtek Device 3000 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.10, Kernel: 5.11.0-rc1-phx (x86_64) 20201228, Desktop: GNOME Shell 3.38.1, Display Server: X Server 1.20.9, Display Driver: amdgpu 19.1.0, OpenGL: 4.6 Mesa 20.2.1 (LLVM 11.0.0), Vulkan: 1.2.131, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 3840x2160

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,objc++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/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

Disk Notes: NONE / errors=remount-ro,relatime,rw / Block Size: 4096

Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8701021

Graphics Notes: GLAMOR

Python Notes: Python 2.7.18 + Python 3.8.6

Security Notes: `itlb_multihit`: Not affected + `l1tf`: Not affected + `mds`: Not affected + `meltdown`: Not affected + `spec_store_bypass`: Mitigation of SSB disabled via `prctl` and `seccomp` + `spectre_v1`: Mitigation of `usercopy/swapgs` barriers and `_user` pointer sanitization + `spectre_v2`: Mitigation of Full AMD retpoline IPBP: conditional STIBP: conditional RSB filling + `srbs`: Not affected + `tsx_async_abort`: Not affected

	Linux 5.10.3	Linux 5.11-rc1
PostMark - D.T.P (TPS)	7896	8154
Normalized	96.84%	100%
Standard Deviation	1.8%	1.9%
ET: Legacy - Renderer2 - 3840 x 2160 (FPS)	251.3	229.4
Normalized	100%	91.29%
Standard Deviation	0.1%	5.7%
Tesseract - 1920 x 1080 (FPS)	453.8338	356.2457
Normalized	100%	78.5%
Standard Deviation	2.9%	10%
Tesseract - 3840 x 2160 (FPS)	302.1601	293.0886
Normalized	100%	97%
Standard Deviation	2.8%	1.7%
Unigine Valley - 1920 x 1080 - Fullscreen - OpenGL (FPS)	143.844	147.118
Normalized	97.77%	100%
Standard Deviation	1.7%	0.3%
Xonotic - 3840 x 2160 - High (FPS)	434.8056435	394.6868900
Normalized	100%	90.77%
Standard Deviation	3.4%	16.8%
Xonotic - 3840 x 2160 - Ultra (FPS)	383.9040537	305.5419415
Normalized	100%	79.59%
Standard Deviation	1%	21%
Xonotic - 3840 x 2160 - Ultimate (FPS)	297.7400029	254.2275126
Normalized	100%	85.39%
Standard Deviation	0.9%	7.8%
VKMark - 3840 x 2160 (VKMark Score)	2669	2713
Normalized	98.38%	100%
Standard Deviation	1.7%	2.3%
CLOMP - Static OMP Speedup (Speedup)	33.4	33.4
Standard Deviation	2.3%	0.8%
OSpray - San Miguel - SciVis (FPS)	19.61	19.61
Standard Deviation	0%	0%
OSpray - XFrog Forest - SciVis (FPS)	3.65	3.65
Standard Deviation	0.2%	0.2%
OSpray - NASA Streamlines - SciVis (FPS)	27.78	27.78
Standard Deviation	0%	0%
OSpray - M.R - SciVis (FPS)	12.99	12.99
Standard Deviation	0%	0%
Kvazaar - Bosphorus 4K - Very Fast (FPS)	22.16	21.93
Normalized	100%	98.96%
Standard Deviation	0.1%	0.5%
Kvazaar - Bosphorus 4K - Ultra Fast (FPS)	39.22	38.62
Normalized	100%	98.47%
Standard Deviation	0.2%	0.8%
Kvazaar - Bosphorus 1080p - Very Fast (FPS)	57.98	42.54
Normalized	100%	73.37%
Standard Deviation	1%	0.2%
Kvazaar - Bosphorus 1080p - Ultra Fast (FPS)	126.71	85.79
Normalized	100%	67.71%
Standard Deviation	3%	0.6%
x265 - Bosphorus 4K (FPS)	19.28	18.67
Normalized	100%	96.84%
Standard Deviation	0.6%	1%

x265 - Bosphorus 1080p (FPS)	44.11	38.84
Normalized	100%	88.05%
Standard Deviation	0.3%	0.8%
Intel Open Image Denoise - Memorial (Images / Sec)	10.50	10.48
Normalized	100%	99.81%
Standard Deviation	0.4%	0.3%
OpenVKL - vkIBenchmark (Items / Sec)	169.17	184.89
Normalized	91.5%	100%
Standard Deviation	0.4%	0.8%
OpenVKL - vkIBenchmarkStructuredVolume (Items / Sec)	59626848	61143466
Normalized	97.52%	100%
Standard Deviation	1.5%	1.6%
Timed Linux Kernel Compilation - Time To Compile	57.635	57.046
Normalized	98.98%	100%
Standard Deviation	1.6%	1.1%
Timed Eigen Compilation - Time To Compile (sec)	73.508	72.152
Normalized	98.16%	100%
Standard Deviation	1%	0.8%
Opus Codec Encoding - WAV To Opus Encode (sec)	6.936	6.902
Normalized	99.51%	100%
Standard Deviation	2.9%	1.9%
Node.js V8 Web Tooling Benchmark (runs/s)	11.31	11.47
Normalized	98.61%	100%
Standard Deviation	2.7%	0.8%
KeyDB (Ops/sec)	609327	608737
Normalized	100%	99.9%
Standard Deviation	0.3%	0.4%
PostgreSQL pgbench - 1 - 1 - Read Only (TPS)	37589	31033
Normalized	100%	82.56%
Standard Deviation	1.2%	19.8%
PostgreSQL pgbench - 1 - 1 - Read Only - Average	0.028	0.034
Latency (ms)		
Normalized	92.86%	76.47%
Standard Deviation	3.5%	20.3%
PostgreSQL pgbench - 1 - 1 - Read Write (TPS)	1573	1579
Normalized	99.62%	100%
Standard Deviation	0.6%	0.4%
PostgreSQL pgbench - 1 - 1 - Read Write - Average	0.636	0.631
Latency (ms)		
Normalized	99.21%	100%
Standard Deviation	0.6%	1%
PostgreSQL pgbench - 1 - 50 - Read Only (TPS)	462049	465913
Normalized	99.17%	100%
Standard Deviation	1%	0.2%
PostgreSQL pgbench - 1 - 50 - Read Only - Average	0.107	0.107
Latency (ms)		
Normalized	100%	100%
Standard Deviation	0.5%	0.5%
PostgreSQL pgbench - 1 - 100 - Read Only (TPS)	494307	496862
Normalized	99.49%	100%
Standard Deviation	0.5%	0.3%
PostgreSQL pgbench - 1 - 100 - Read Only - Average	0.203	0.201
Latency (ms)		
Normalized	99.01%	100%
Standard Deviation	0.3%	0.3%

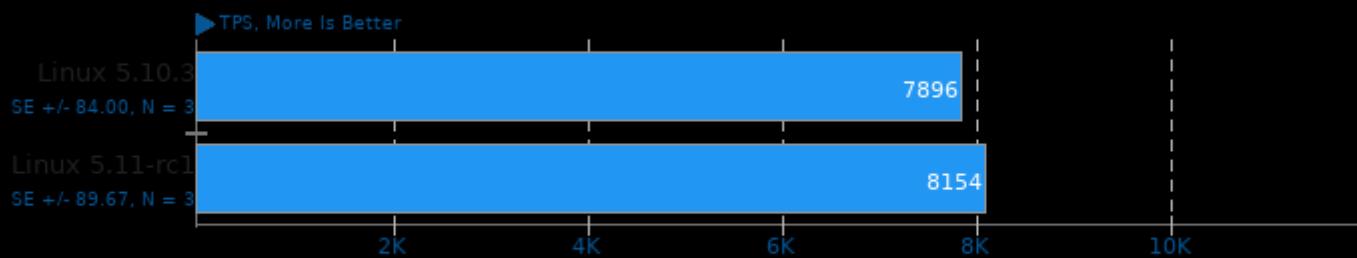
PostgreSQL pgbench - 1 - 250 - Read Only (TPS)	484564	484920
Normalized	99.93%	100%
Standard Deviation	0.6%	0.5%
PostgreSQL pgbench - 1 - 250 - Read Only - Average	0.521	0.514
Latency (ms)		
Normalized	98.66%	100%
Standard Deviation	0.3%	0.6%
PostgreSQL pgbench - 1 - 50 - Read Write (TPS)	1823	1856
Normalized	98.22%	100%
Standard Deviation	0.2%	0.2%
PostgreSQL pgbench - 1 - 50 - Read Write - Average	27.424	26.968
Latency (ms)		
Normalized	98.24%	99.9%
Standard Deviation	0%	0%
PostgreSQL pgbench - 1 - 100 - Read Write (TPS)	1729	1771
Normalized	97.63%	100%
Standard Deviation	0.4%	0.4%
PostgreSQL pgbench - 1 - 100 - Read Write - Average	58.901	56.140
Latency (ms)		
Normalized	95.31%	100%
Standard Deviation	5.2%	0.4%
PostgreSQL pgbench - 1 - 250 - Read Write (TPS)	1533	1631
Normalized	93.99%	100%
Standard Deviation	1.4%	1.5%
PostgreSQL pgbench - 1 - 250 - Read Write - Average	163.632	154.012
Latency (ms)		
Normalized	93.72%	99.58%
Standard Deviation	1.3%	0.1%
PostgreSQL pgbench - 1 - 1 - Read Only - Average	35907	30514
Latency (TPS)		
Normalized	100%	84.98%
Standard Deviation	2.8%	20.4%
PostgreSQL pgbench - 1 - 1 - Read Write - Average	1573	1585
Latency (TPS)		
Normalized	99.24%	100%
Standard Deviation	0.8%	1%
PostgreSQL pgbench - 1 - 50 - Read Only - Average	465355	470023
Latency (TPS)		
Normalized	99.01%	100%
Standard Deviation	0.3%	0.9%
PostgreSQL pgbench - 1 - 100 - Read Only - Average	492208	497761
Latency (TPS)		
Normalized	98.88%	100%
Standard Deviation	0.5%	0.3%
PostgreSQL pgbench - 1 - 250 - Read Only - Average	480290	486331
Latency (TPS)		
Normalized	98.76%	100%
Standard Deviation	0.3%	0.5%
PostgreSQL pgbench - 1 - 50 - Read Write - Average	1824	1854
Latency (TPS)		
Normalized	98.38%	100%
Standard Deviation	0%	0%

PostgreSQL pgbench - 1 - 100 - Read Write - Average Latency (TPS)	1703	1782
Normalized	95.57%	100%
Standard Deviation	4.5%	0.4%
PostgreSQL pgbench - 1 - 250 - Read Write - Average Latency (TPS)	1529	1624
Normalized	94.15%	100%
Standard Deviation	1.3%	0.1%
SQLite Speedtest - Timed Time - Size 1,000 (sec)	57.321	55.020
Normalized	95.99%	100%
Standard Deviation	0.5%	0.1%
Mobile Neural Network - SqueezeNetV1.0 (ms)	7.225	7.277
Normalized	100%	99.29%
Standard Deviation	0%	1.7%
Mobile Neural Network - resnet-v2-50 (ms)	32.805	32.620
Normalized	99.44%	100%
Standard Deviation	1.7%	1.7%
Mobile Neural Network - MobileNetV2_224 (ms)	3.896	3.936
Normalized	100%	98.98%
Standard Deviation	1.2%	1.6%
Mobile Neural Network - mobilenet-v1-1.0 (ms)	6.721	6.811
Normalized	100%	98.68%
Standard Deviation	1%	0.6%
Mobile Neural Network - inception-v3 (ms)	31.711	32.331
Normalized	100%	98.08%
Standard Deviation	1.2%	2%
TNN - CPU - MobileNet v2 (ms)	241.436	240.389
Normalized	99.57%	100%
Standard Deviation	0.4%	0.9%
TNN - CPU - SqueezeNet v1.1 (ms)	229.667	223.422
Normalized	97.28%	100%
Standard Deviation	2.2%	0.2%
Basemark GPU - OpenGL - 3840 x 2160 - High (FPS)	49.70	49.94
Normalized	99.52%	100%
Standard Deviation	1.3%	0.2%
Basemark GPU - Vulkan - 3840 x 2160 - High (FPS)	72.77	73.09
Normalized	99.56%	100%
Standard Deviation	0.3%	0.3%
Basemark GPU - OpenGL - 3840 x 2160 - Medium	180.40	186.24
Normalized	96.86%	100%
Standard Deviation	2.9%	4%
Basemark GPU - Vulkan - 3840 x 2160 - Medium (FPS)	320.10	321.07
Normalized	99.7%	100%
Standard Deviation	0%	0%
AI Benchmark Alpha - D.I.S (Score)	1284	1258
Normalized	100%	97.98%
AI Benchmark Alpha - D.T.S (Score)	1053	1025
Normalized	100%	97.34%
AI Benchmark Alpha - Device AI Score (Score)	2337	2283
Normalized	100%	97.69%
Selenium - Kraken - Firefox (ms)	1007	1026
Normalized	100%	98.16%
Standard Deviation	1.6%	1.8%
Selenium - Jetstream 2 - Firefox (Score)	77.818	76.594
Normalized	100%	98.43%

	Standard Deviation	0.5%	1.1%
Selenium - PSPDFKit WASM - Firefox (Score)	3403	3580	
	Normalized	100%	95.06%
	Standard Deviation		2.2%
Selenium - W.i - Firefox (ms)	25.2	26.5	
	Normalized	100%	95.09%
	Standard Deviation	0.5%	2%
Selenium - W.c - Firefox (ms)	342.3	350.2	
	Normalized	100%	97.74%
	Standard Deviation	0.8%	2.6%
WavPack Audio Encoding - WAV To WavPack (sec)	11.600	12.247	
	Normalized	100%	94.72%
	Standard Deviation	1.4%	0.7%
Git - T.T.C.C.G.C (sec)	44.802	44.817	
	Normalized	100%	99.97%
	Standard Deviation	3%	2.7%
Unpacking Firefox - firefox-84.0.source.tar.xz (sec)	17.091	17.397	
	Normalized	100%	98.24%
	Standard Deviation	0.9%	0.4%
InfluxDB - 4 - 10000 - 2,5000,1 - 10000 (val/sec)	851986	802907	
	Normalized	100%	94.24%
	Standard Deviation	0.1%	0.3%
InfluxDB - 64 - 10000 - 2,5000,1 - 10000 (val/sec)	1323898	1312642	
	Normalized	100%	99.15%
	Standard Deviation	0.6%	0.7%

PostMark 1.51

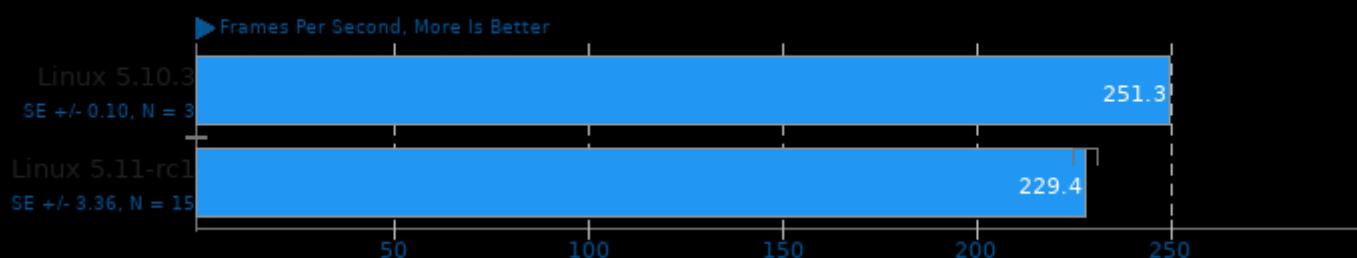
Disk Transaction Performance



1. (CC) gcc options: -O3

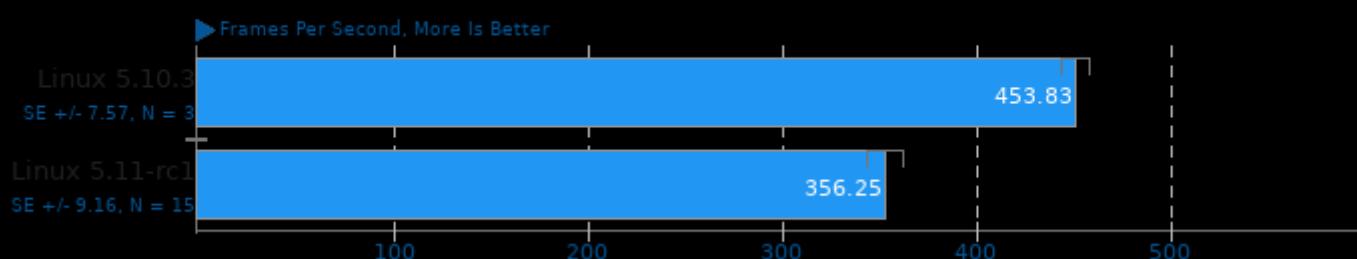
ET: Legacy 2.75

Renderer: Renderer2 - Resolution: 3840 x 2160



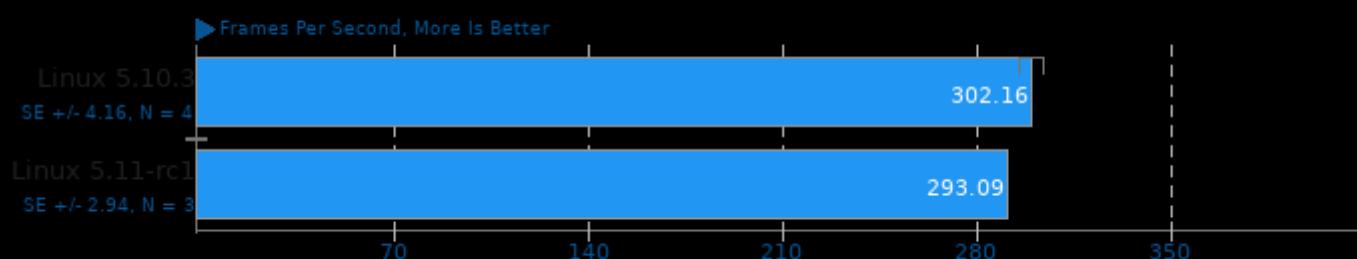
Tesseract 2014-05-12

Resolution: 1920 x 1080



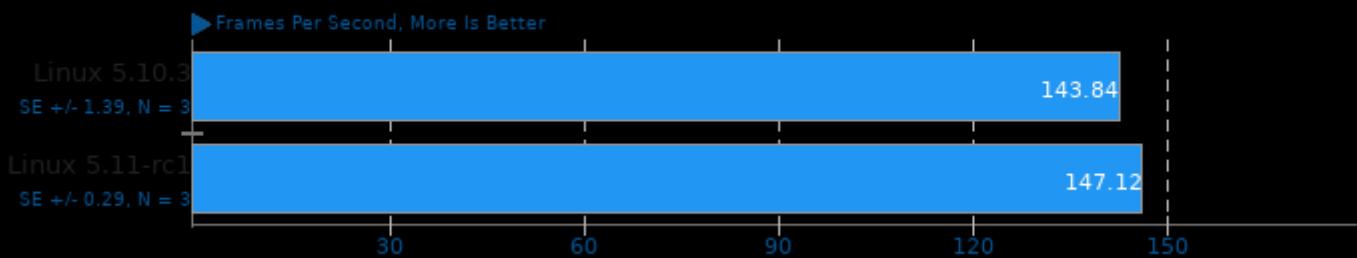
Tesseract 2014-05-12

Resolution: 3840 x 2160



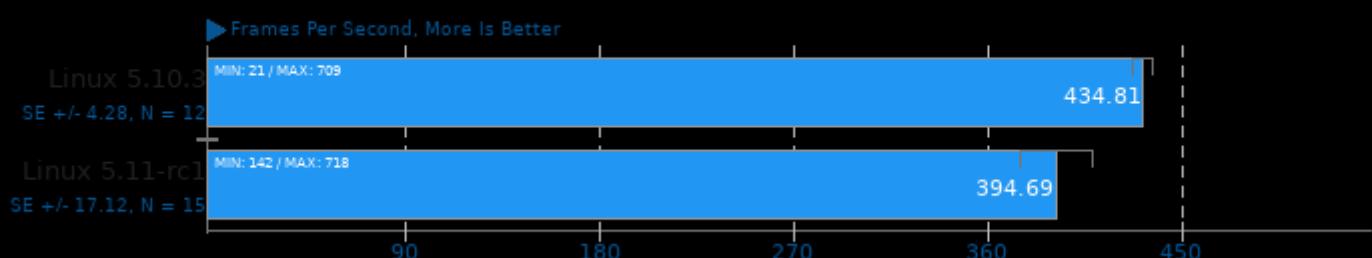
Unigine Valley 1.0

Resolution: 1920 x 1080 - Mode: Fullscreen - Renderer: OpenGL



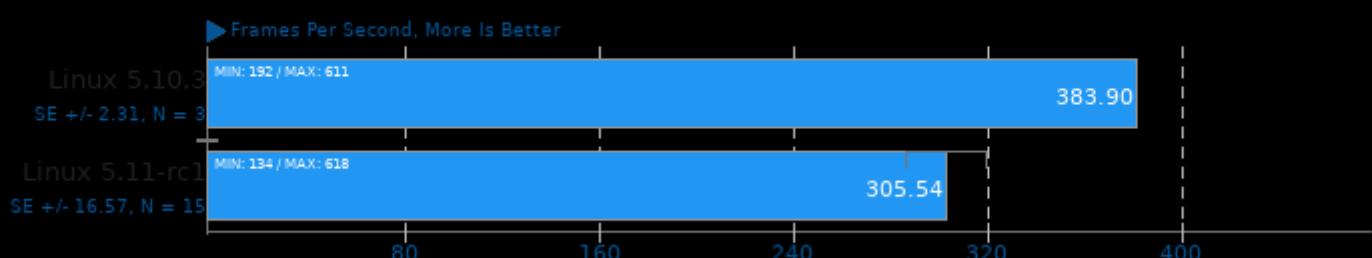
Xonotic 0.8.2

Resolution: 3840 x 2160 - Effects Quality: High



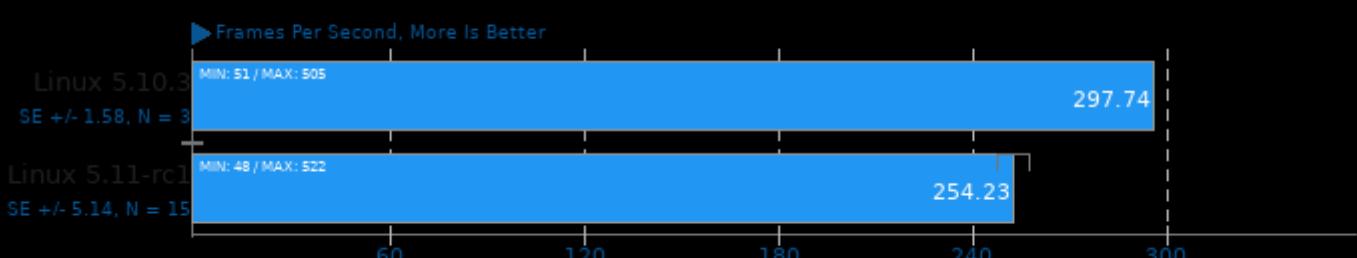
Xonotic 0.8.2

Resolution: 3840 x 2160 - Effects Quality: Ultra



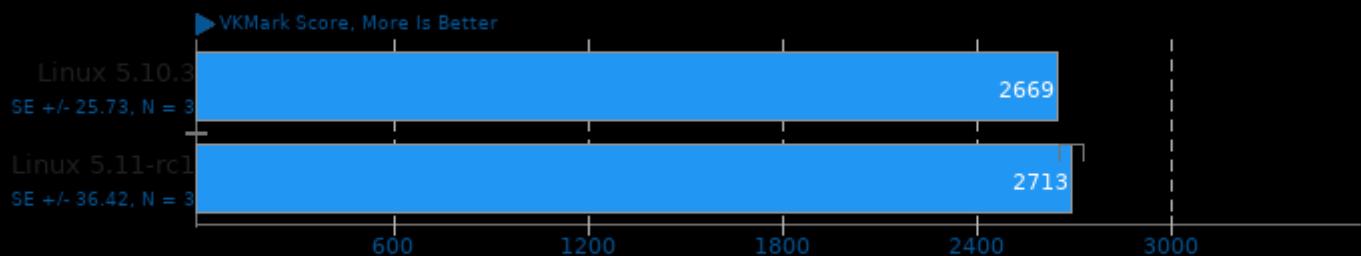
Xonotic 0.8.2

Resolution: 3840 x 2160 - Effects Quality: Ultimate



VKMark 2020-05-21

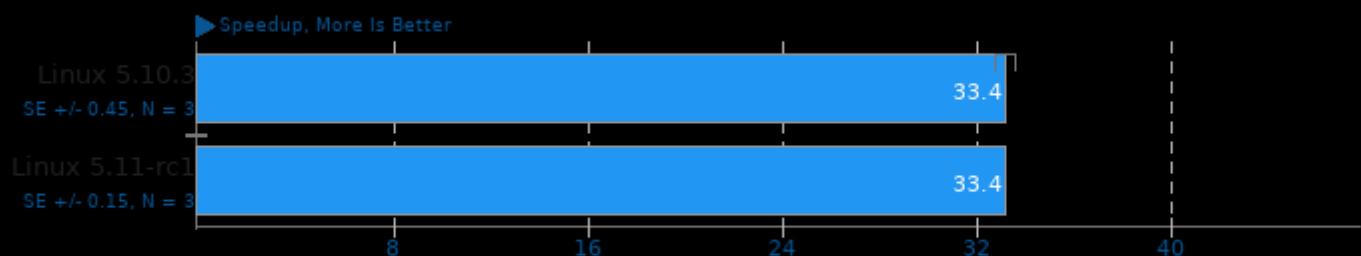
Resolution: 3840 x 2160



1. (CXX) g++ options: -pthread -ldl -pipe -std=c++14 -MD -MQ -MF

CLOMP 1.2

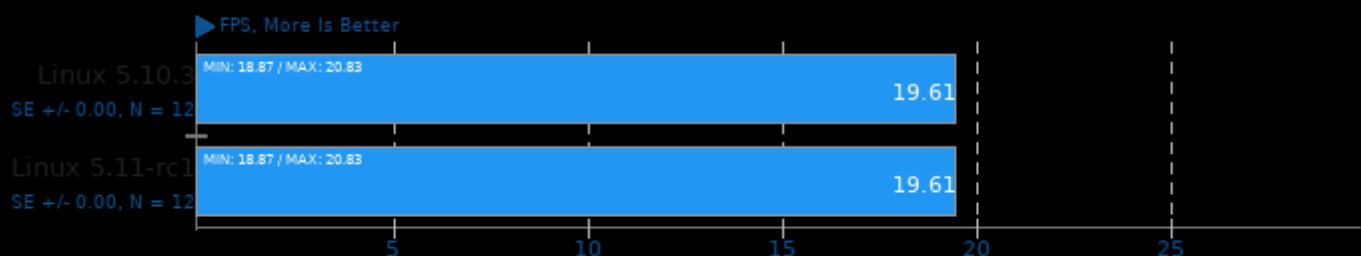
Static OMP Speedup



1. (CC) gcc options: -fopenmp -O3 -lm

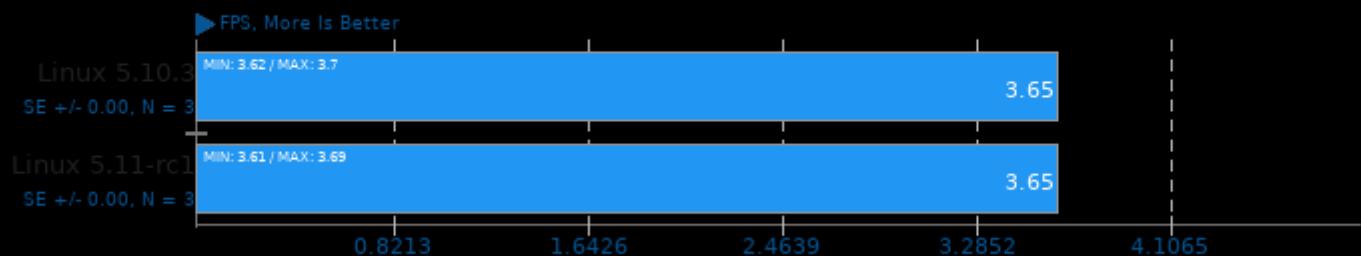
OSPray 1.8.5

Demo: San Miguel - Renderer: SciVis



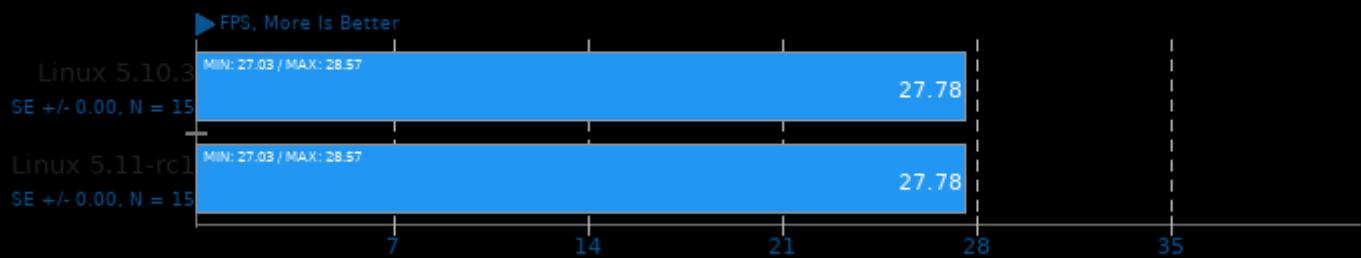
OSPray 1.8.5

Demo: XFrog Forest - Renderer: SciVis



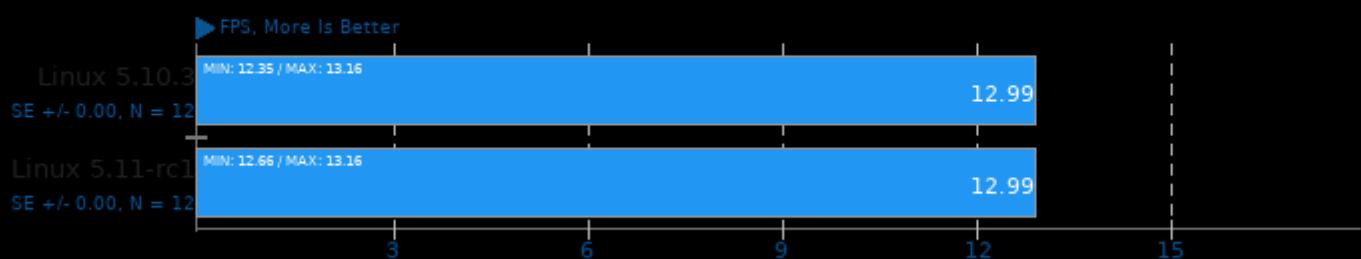
OSPray 1.8.5

Demo: NASA Streamlines - Renderer: SciVis



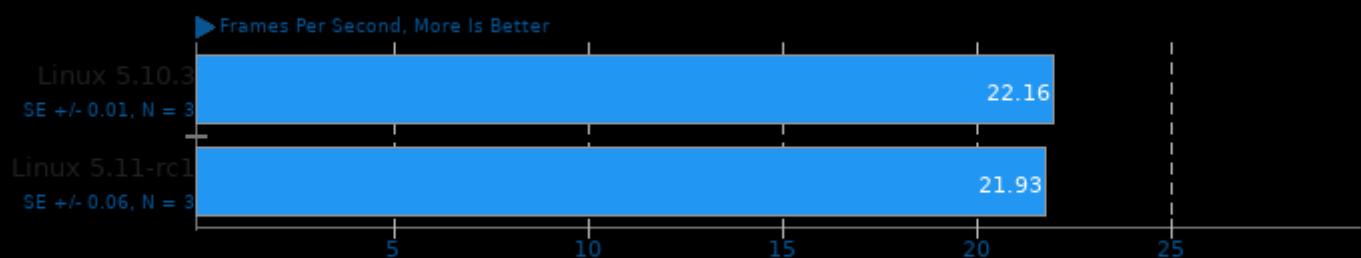
OSPray 1.8.5

Demo: Magnetic Reconnection - Renderer: SciVis



Kvazaar 2.0

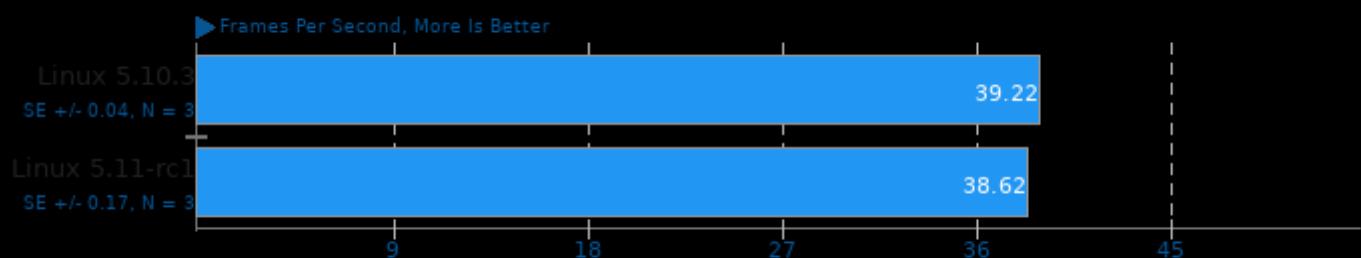
Video Input: Bosphorus 4K - Video Preset: Very Fast



1. (CC) gcc options: -pthread -fno-tree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.0

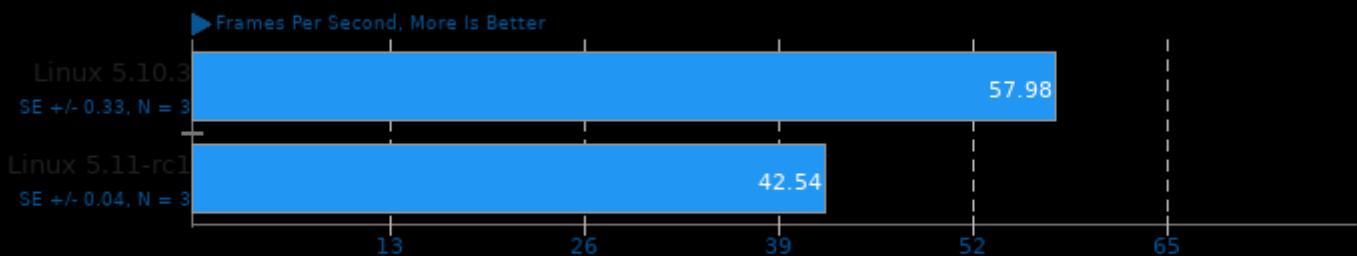
Video Input: Bosphorus 4K - Video Preset: Ultra Fast



1. (CC) gcc options: -pthread -fno-tree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.0

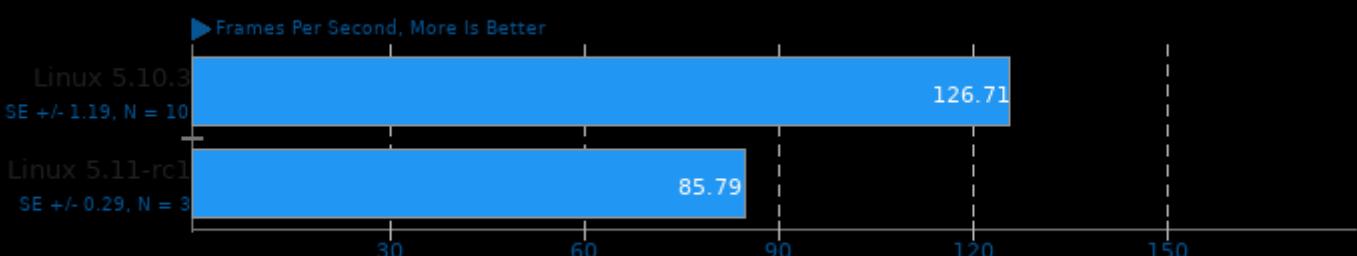
Video Input: Bosphorus 1080p - Video Preset: Very Fast



1. (CC) gcc options: -pthread -fthread-vectorize -visibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.0

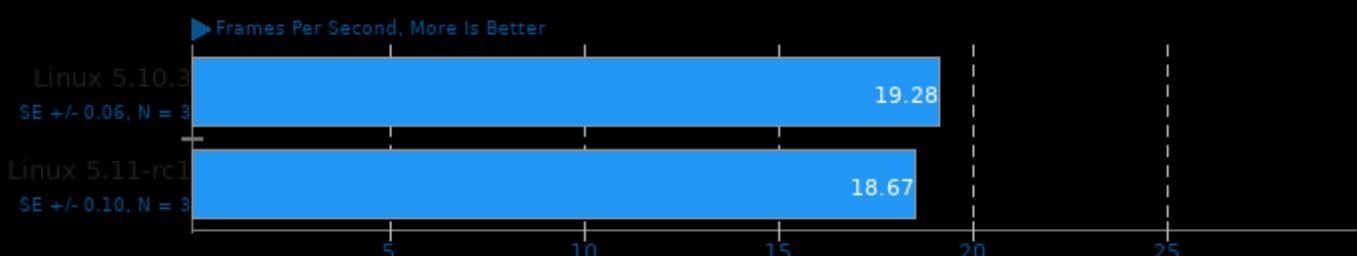
Video Input: Bosphorus 1080p - Video Preset: Ultra Fast



1. (CC) gcc options: -pthread -fthread-vectorize -visibility=hidden -O2 -lpthread -lm -lrt

x265 3.4

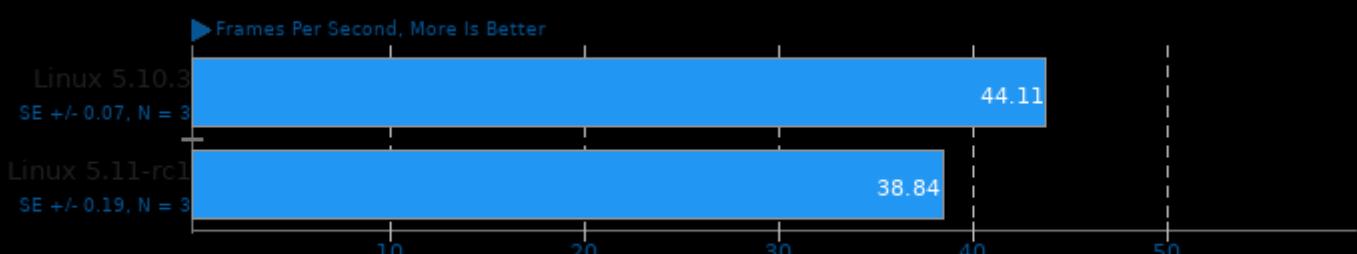
Video Input: Bosphorus 4K



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

x265 3.4

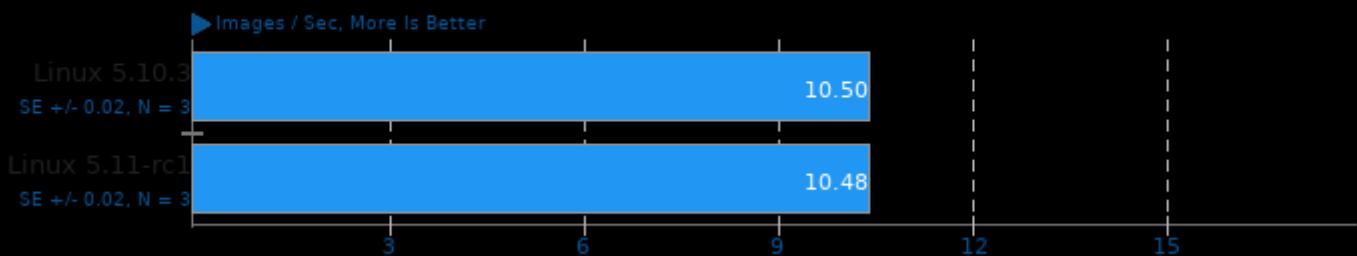
Video Input: Bosphorus 1080p



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

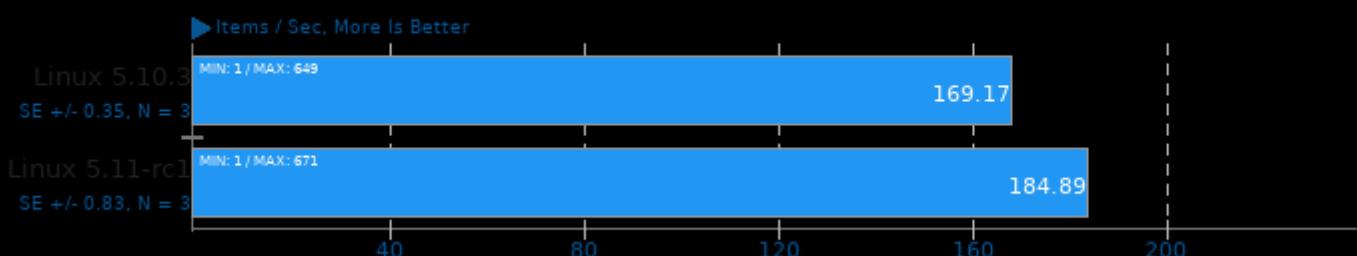
Intel Open Image Denoise 1.2.0

Scene: Memorial



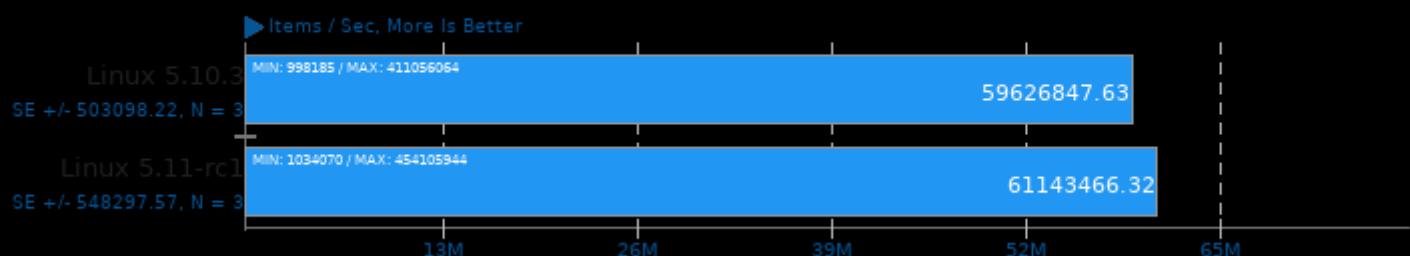
OpenVKL 0.9

Benchmark: vklBenchmark



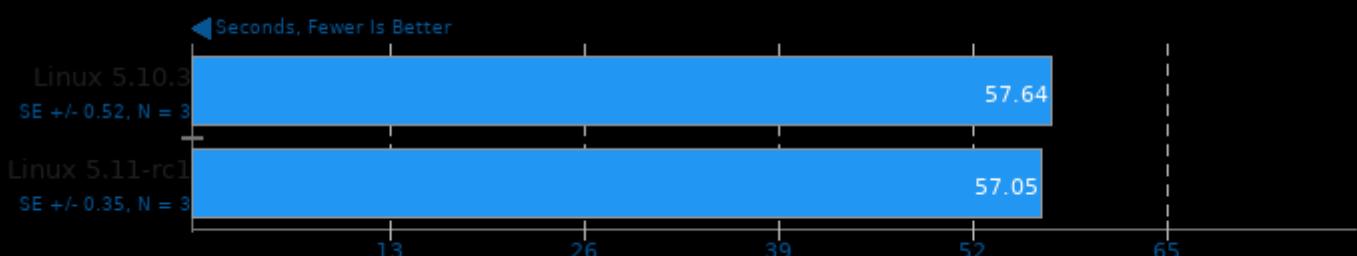
OpenVKL 0.9

Benchmark: vklBenchmarkStructuredVolume



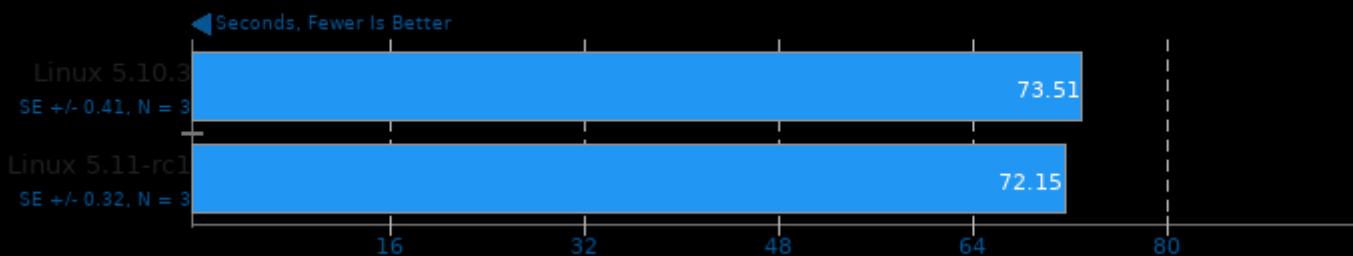
Timed Linux Kernel Compilation 5.4

Time To Compile



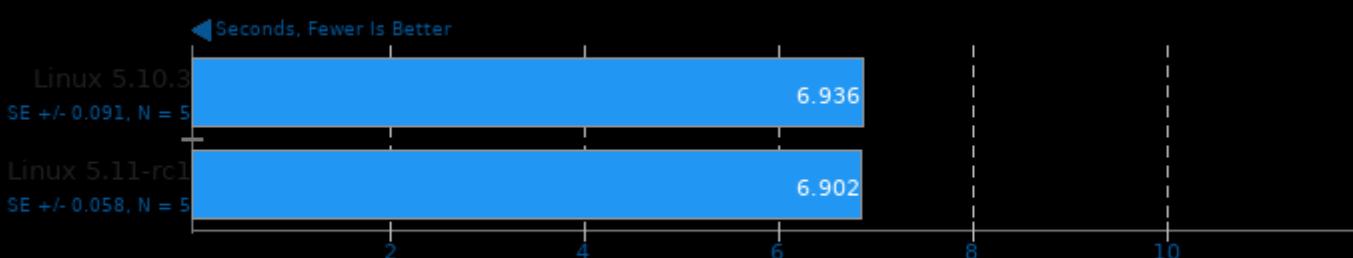
Timed Eigen Compilation 3.3.9

Time To Compile



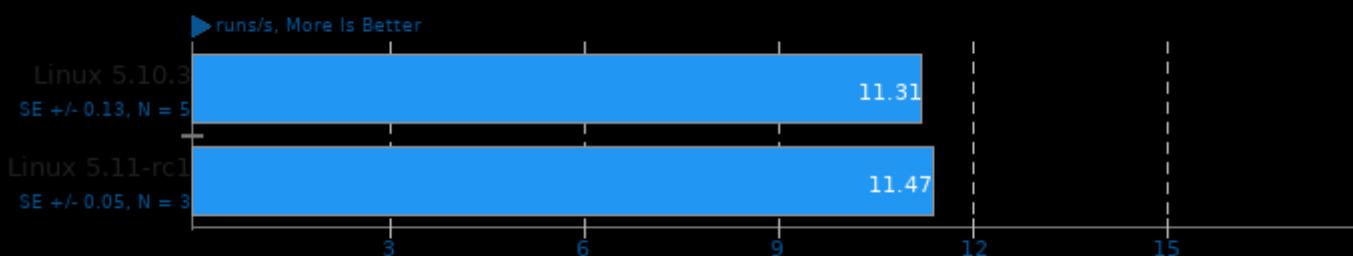
Opus Codec Encoding 1.3.1

WAV To Opus Encode



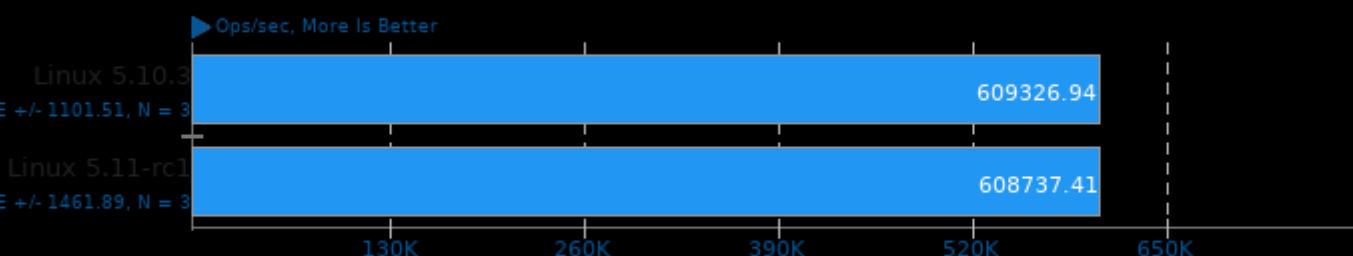
1. (CXX) g++ options: -fvisibility=hidden -logg -lm

Node.js V8 Web Tooling Benchmark



1. Nodejs
v12.18.2

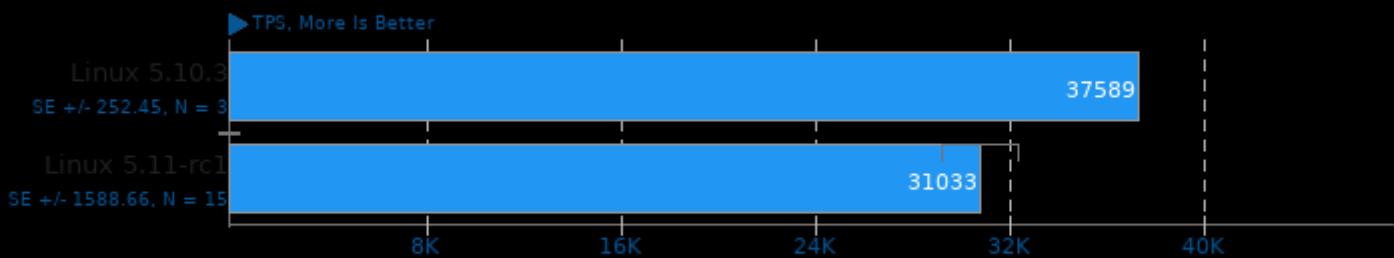
KeyDB 6.0.16



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

PostgreSQL pgbench 13.0

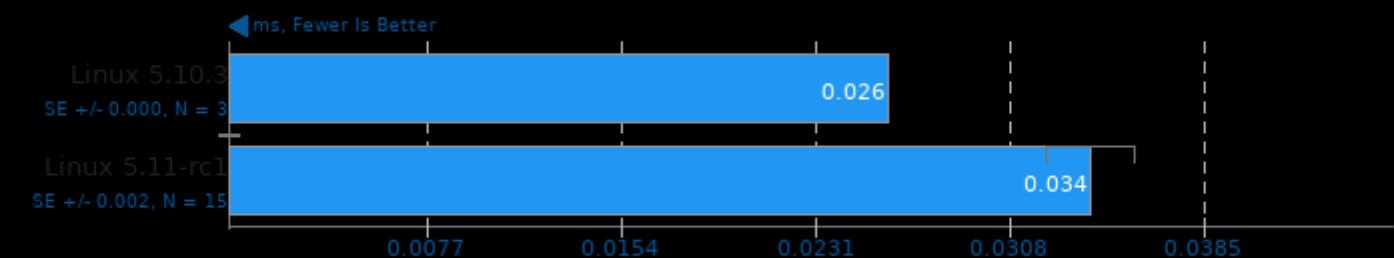
Scaling Factor: 1 - Clients: 1 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

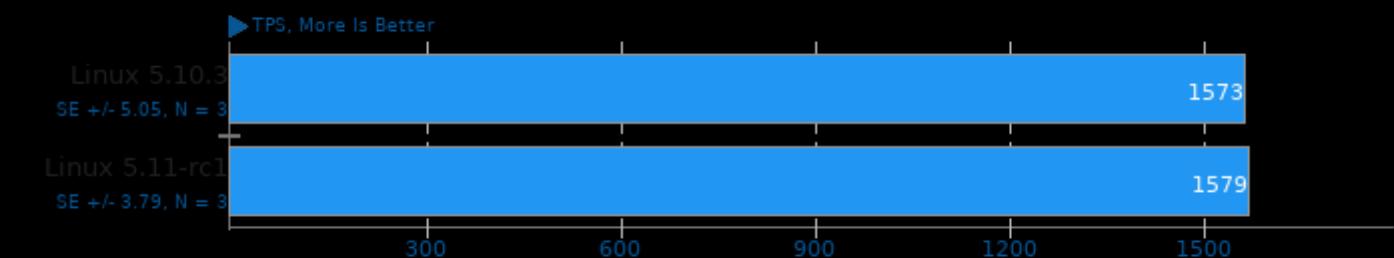
Scaling Factor: 1 - Clients: 1 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

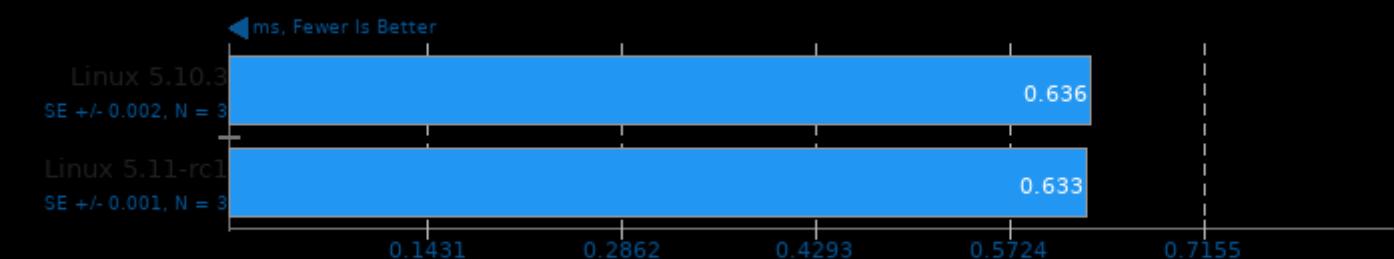
Scaling Factor: 1 - Clients: 1 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

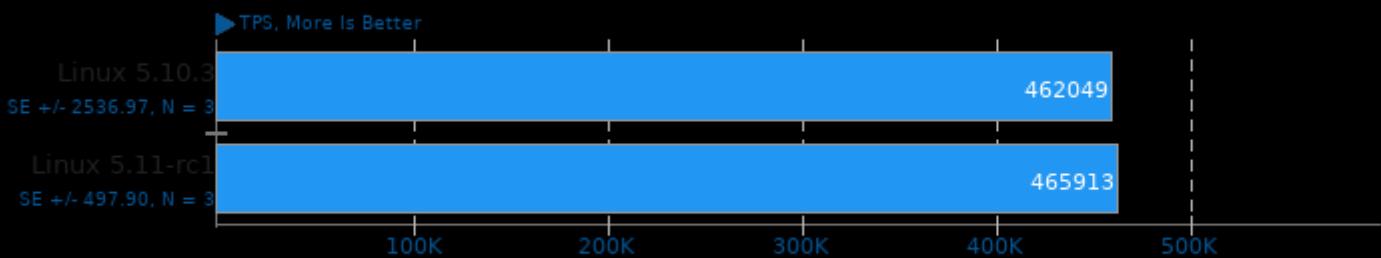
Scaling Factor: 1 - Clients: 1 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

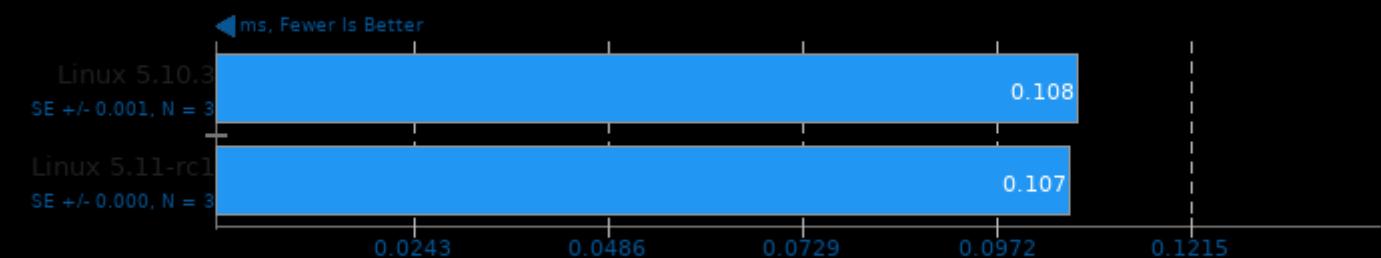
PostgreSQL pgbench 13.0

Scaling Factor: 1 - Clients: 50 - Mode: Read Only



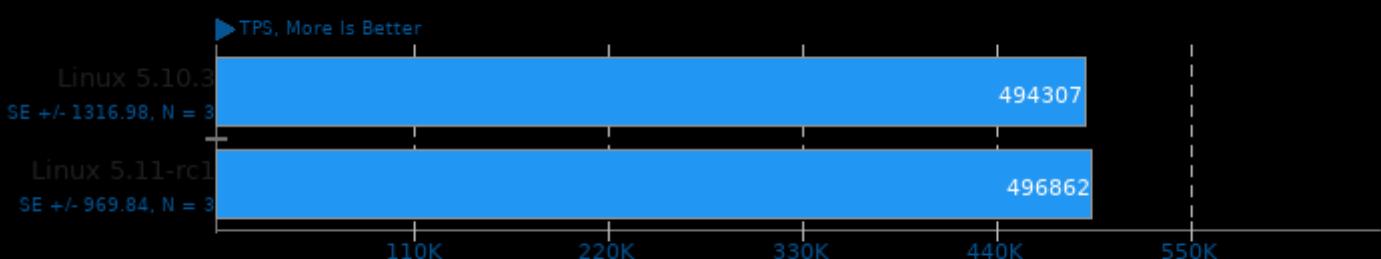
PostgreSQL pgbench 13.0

Scaling Factor: 1 - Clients: 50 - Mode: Read Only - Average Latency



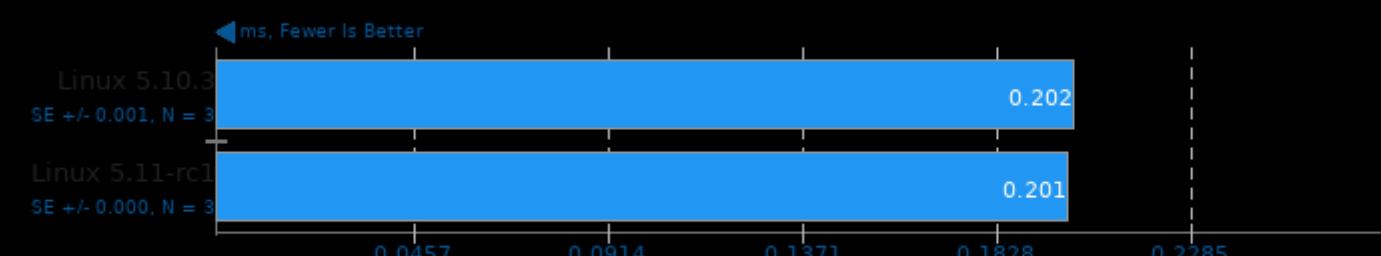
PostgreSQL pgbench 13.0

Scaling Factor: 1 - Clients: 100 - Mode: Read Only



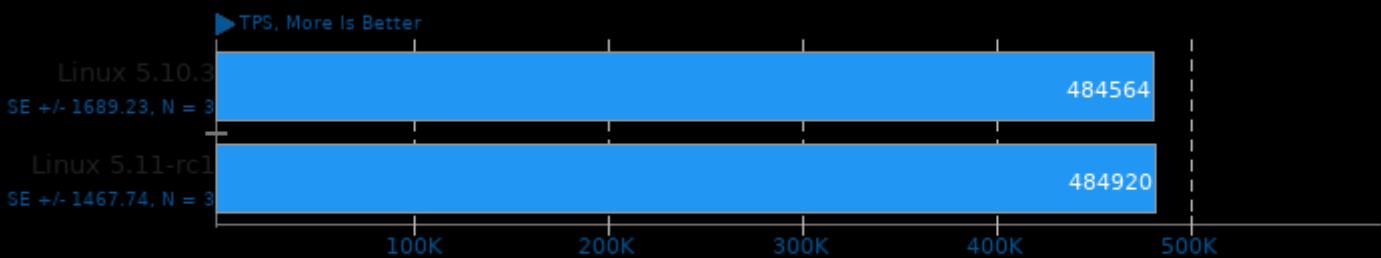
PostgreSQL pgbench 13.0

Scaling Factor: 1 - Clients: 100 - Mode: Read Only - Average Latency



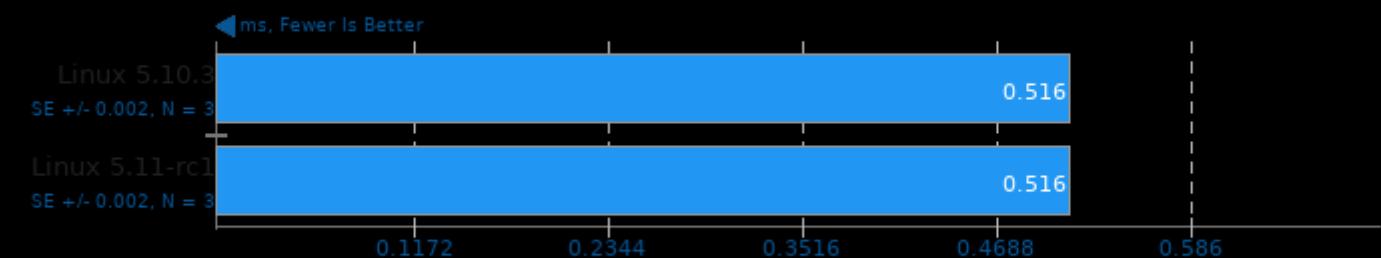
PostgreSQL pgbench 13.0

Scaling Factor: 1 - Clients: 250 - Mode: Read Only



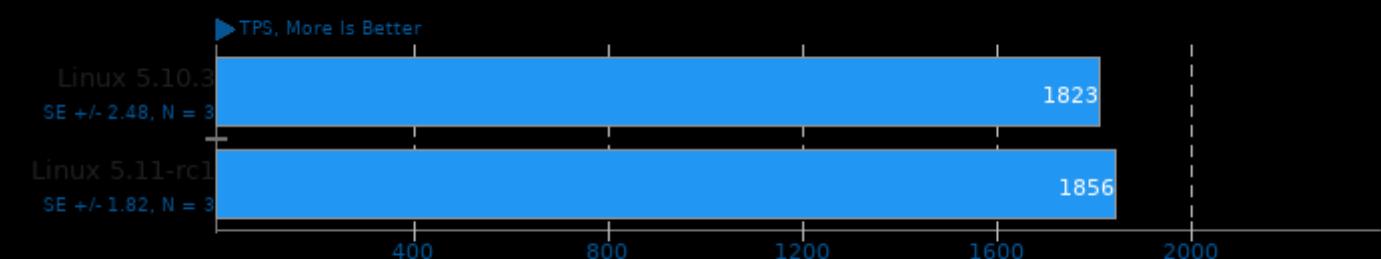
PostgreSQL pgbench 13.0

Scaling Factor: 1 - Clients: 250 - Mode: Read Only - Average Latency



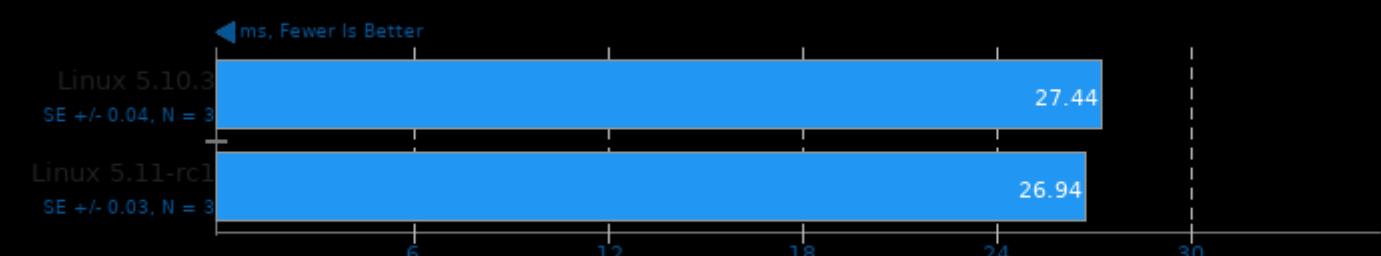
PostgreSQL pgbench 13.0

Scaling Factor: 1 - Clients: 50 - Mode: Read Write



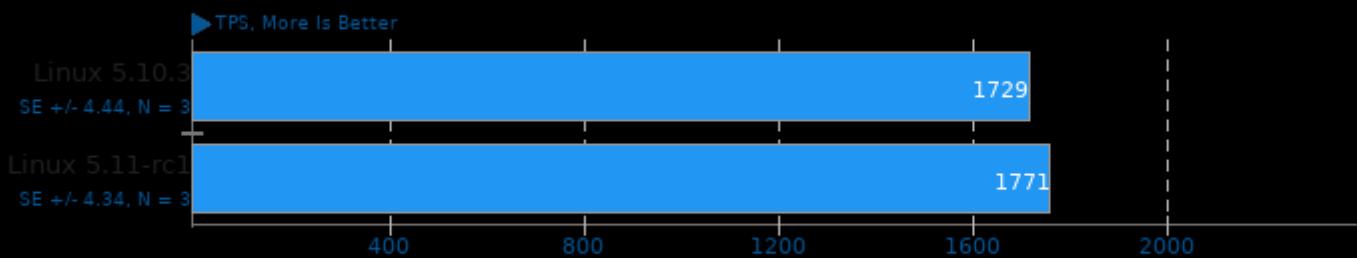
PostgreSQL pgbench 13.0

Scaling Factor: 1 - Clients: 50 - Mode: Read Write - Average Latency



PostgreSQL pgbench 13.0

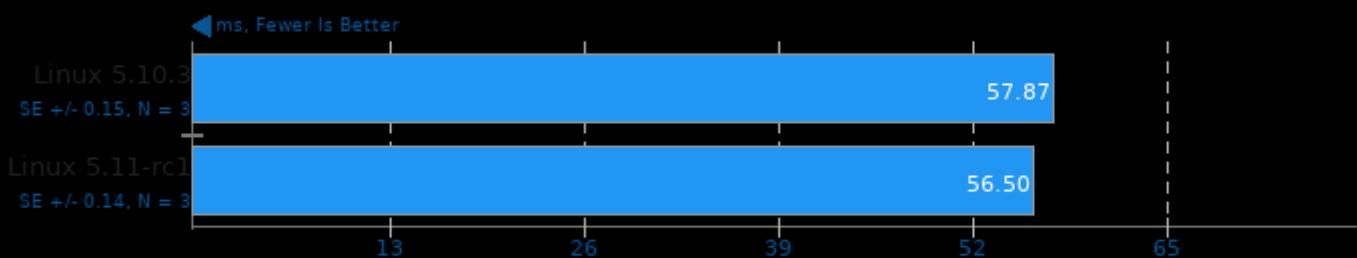
Scaling Factor: 1 - Clients: 100 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

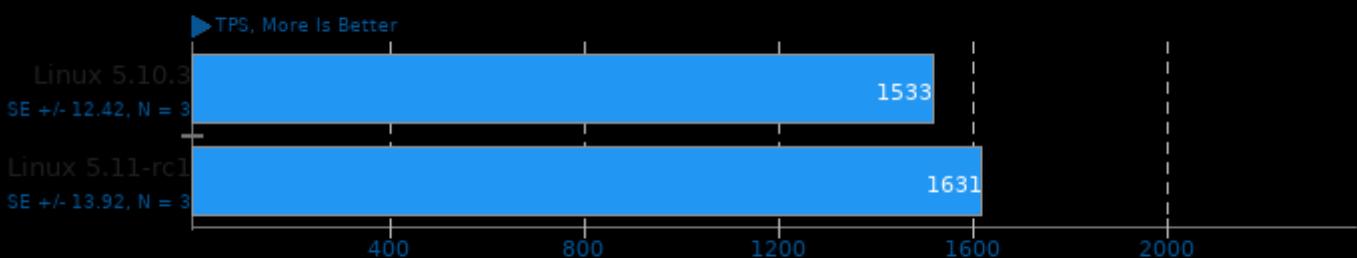
Scaling Factor: 1 - Clients: 100 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

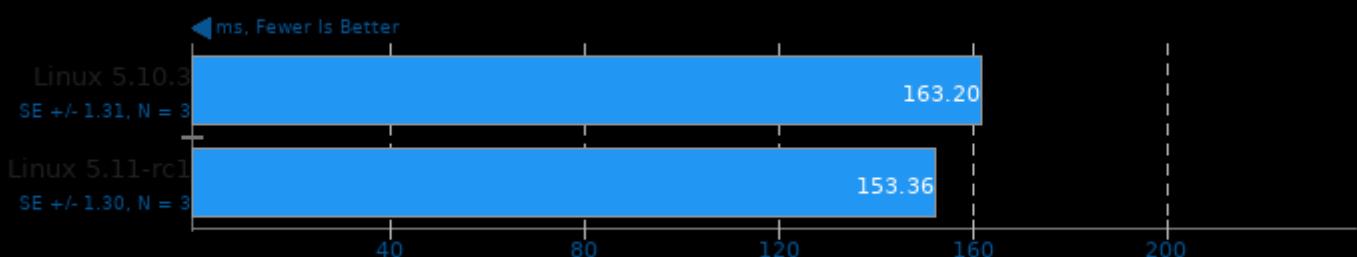
Scaling Factor: 1 - Clients: 250 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

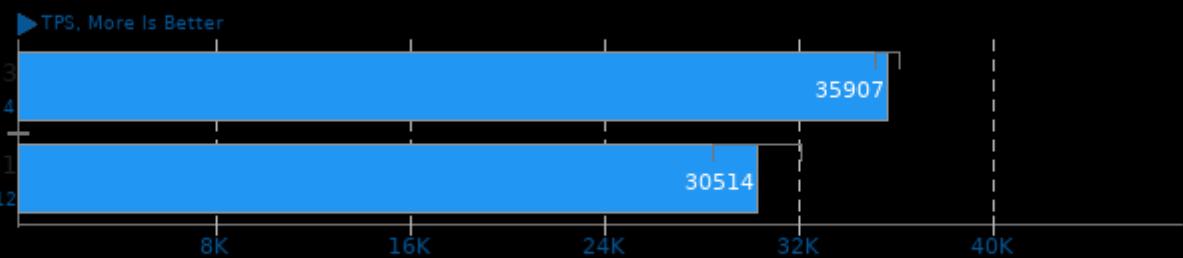
Scaling Factor: 1 - Clients: 250 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

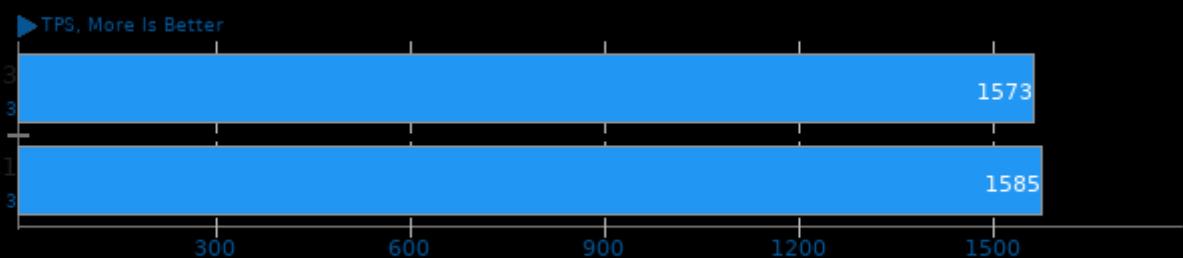
Scaling Factor: 1 - Clients: 1 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

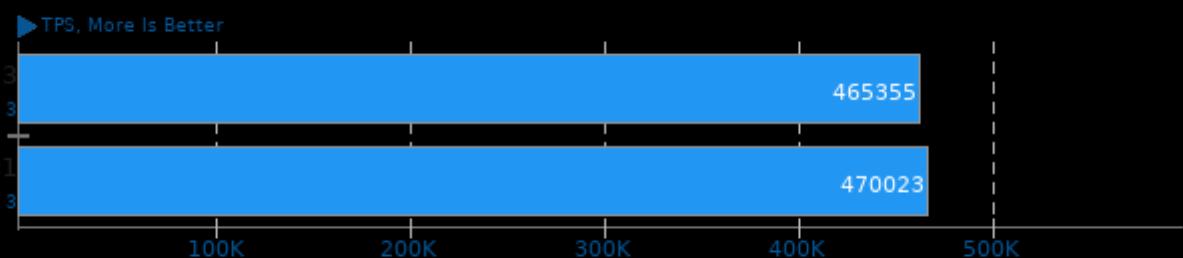
Scaling Factor: 1 - Clients: 1 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

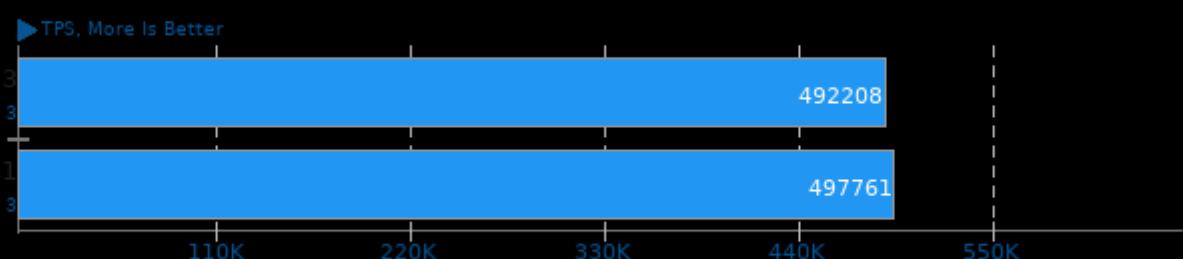
Scaling Factor: 1 - Clients: 50 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

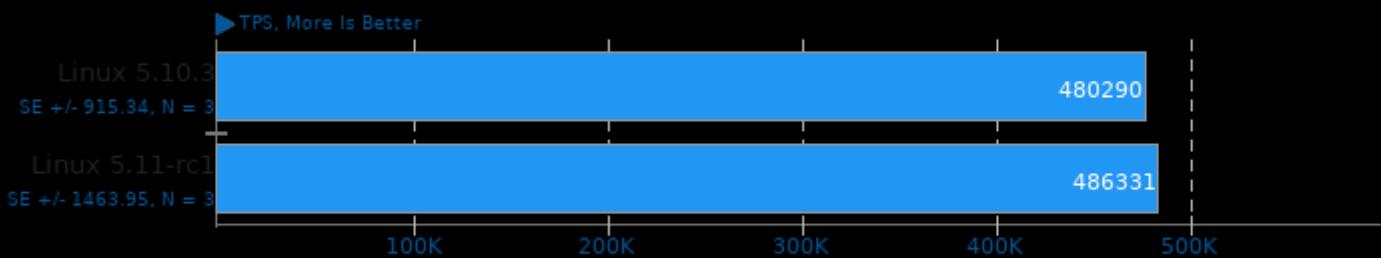
Scaling Factor: 1 - Clients: 100 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

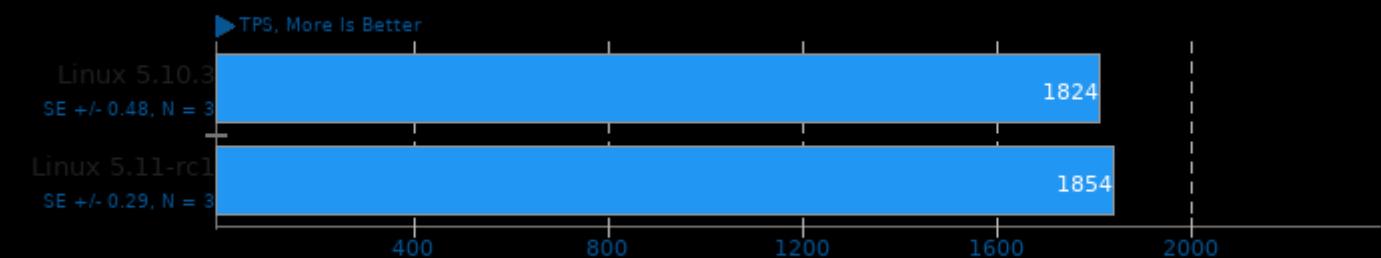
Scaling Factor: 1 - Clients: 250 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

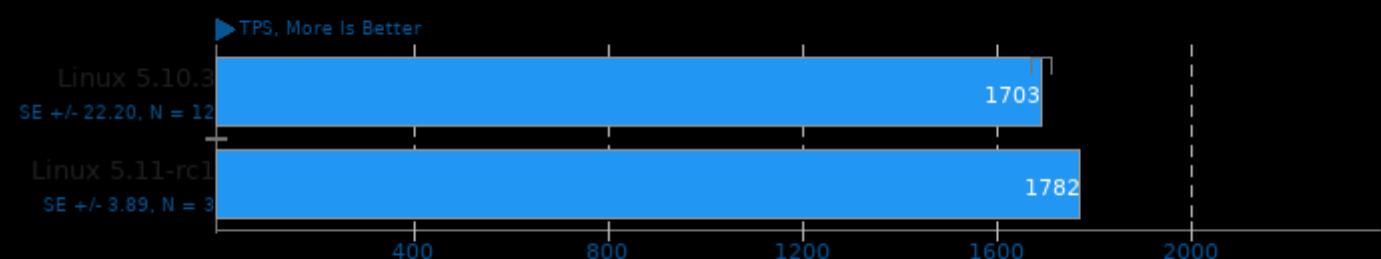
Scaling Factor: 1 - Clients: 50 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

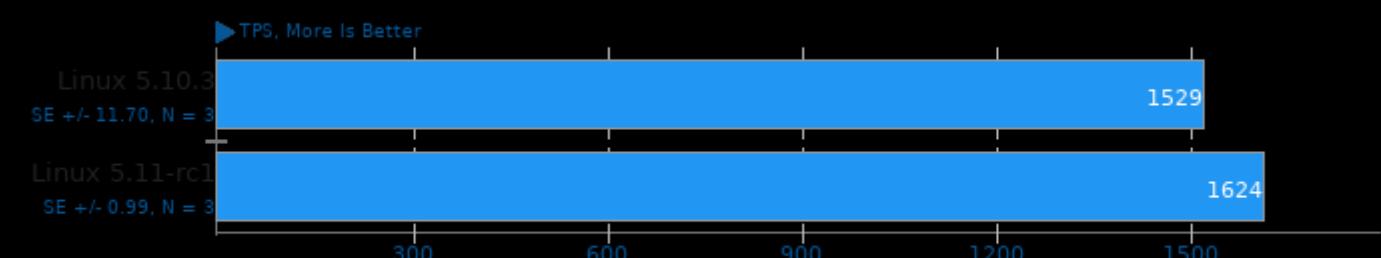
Scaling Factor: 1 - Clients: 100 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

PostgreSQL pgbench 13.0

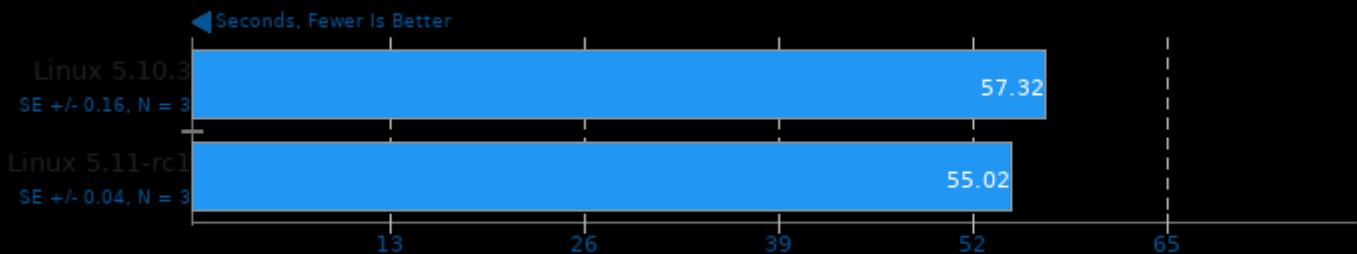
Scaling Factor: 1 - Clients: 250 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

SQLite Speedtest 3.30

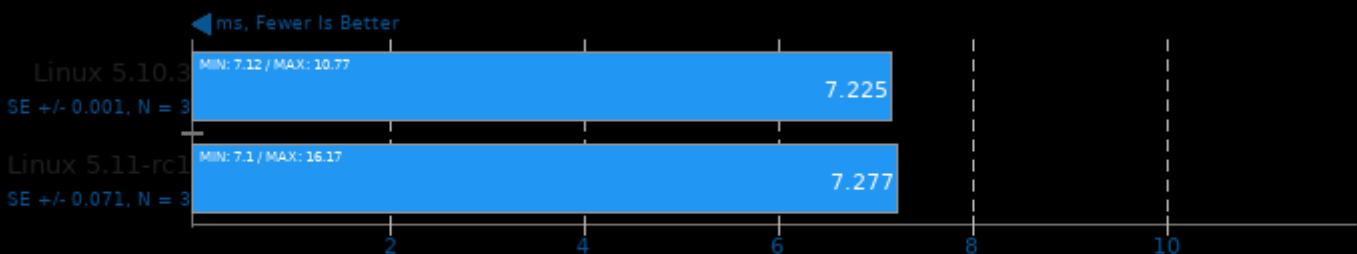
Timed Time - Size 1,000



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

Mobile Neural Network 2020-09-17

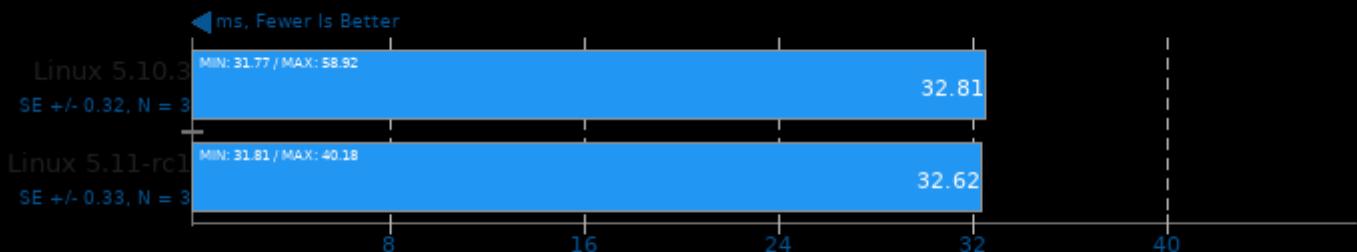
Model: SqueezeNetV1.0



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

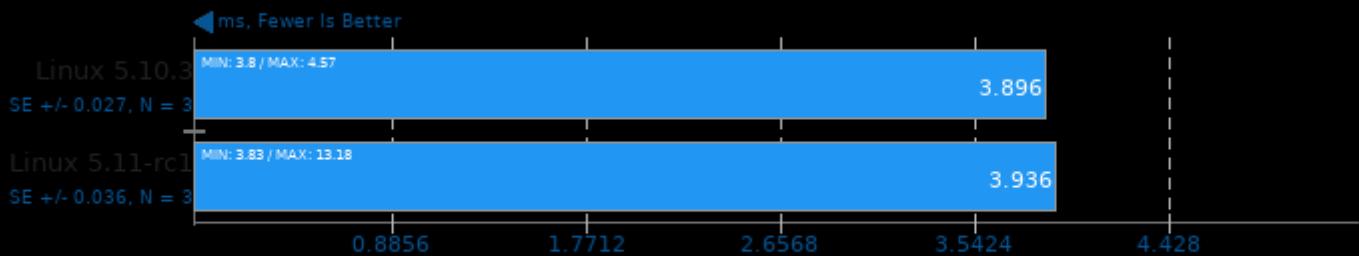
Mobile Neural Network 2020-09-17

Model: resnet-v2-50

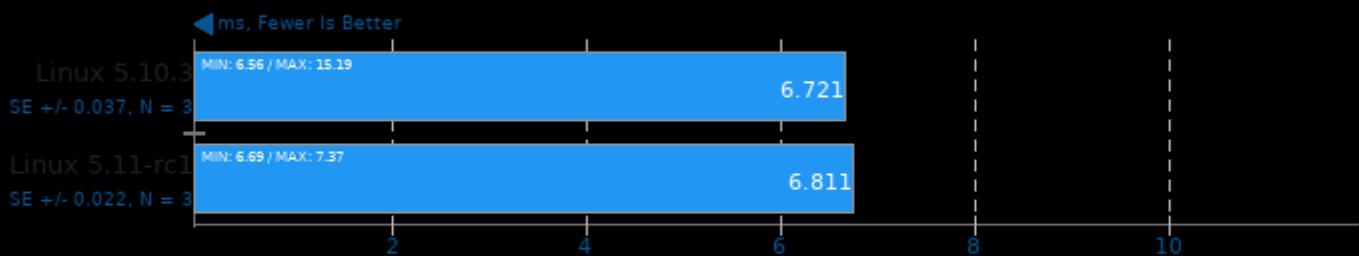


1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-threadsafe-statics

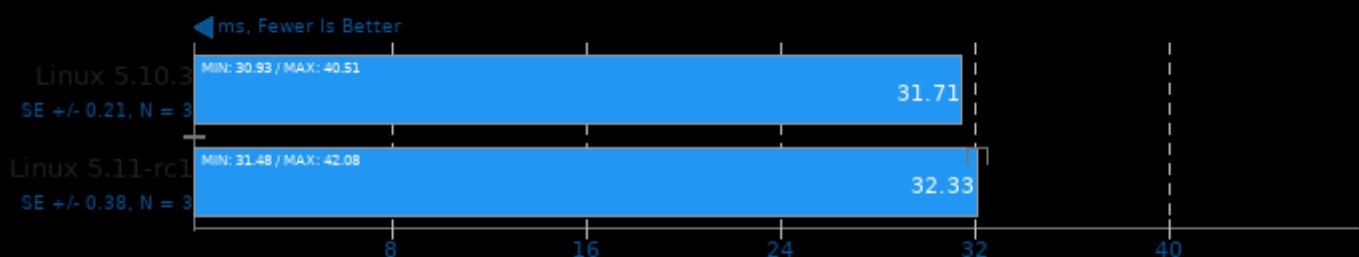
Mobile Neural Network 2020-09-17



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



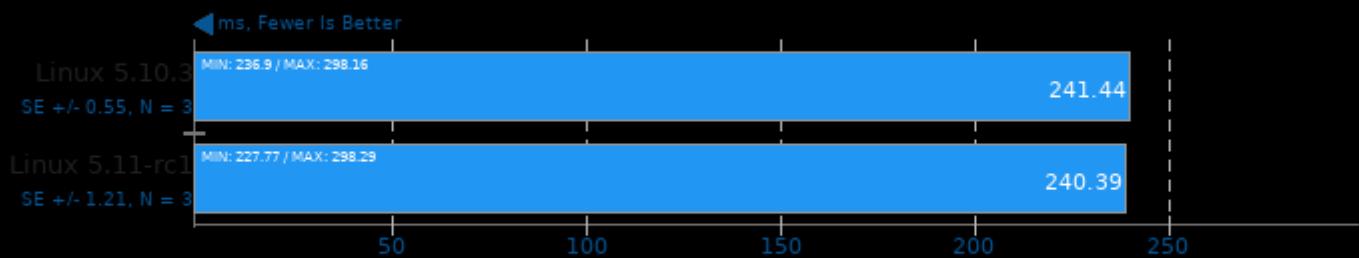
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-threadsafe-statics



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

TNN 0.2.3

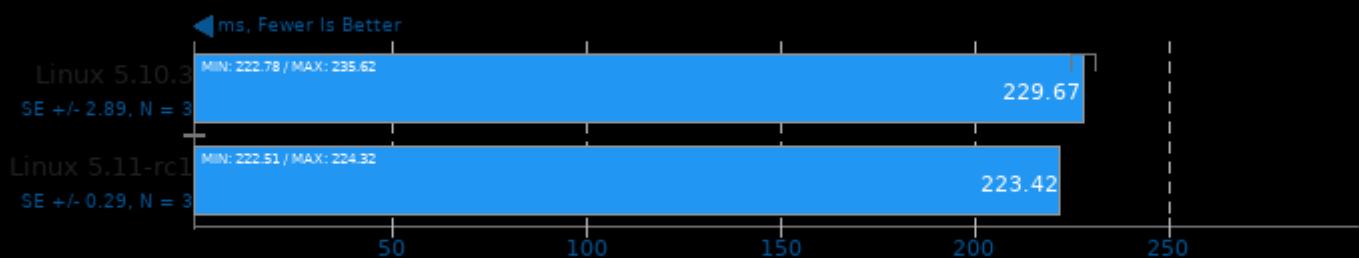
Target: CPU - Model: MobileNet v2



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

TNN 0.2.3

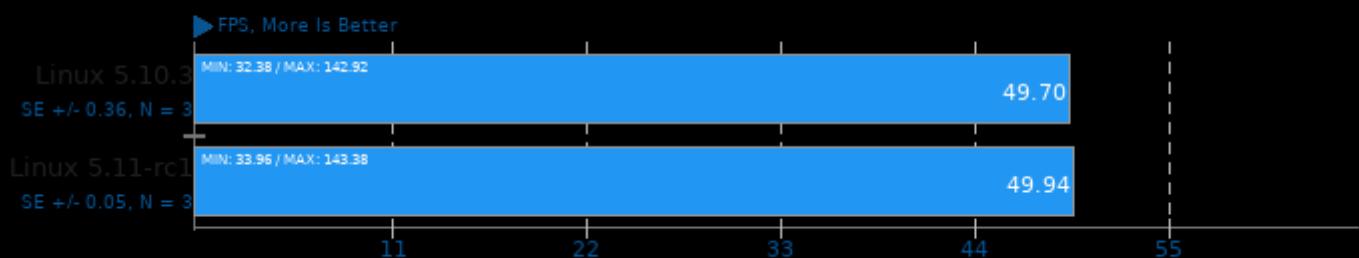
Target: CPU - Model: SqueezeNet v1.1



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

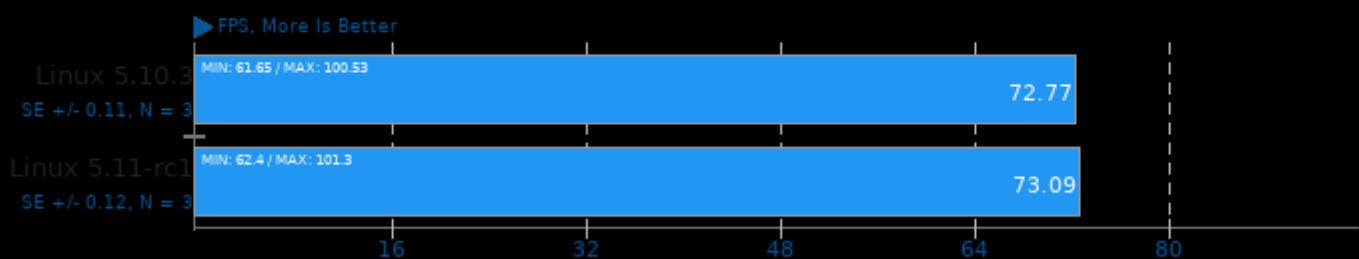
Basemark GPU 1.2

Renderer: OpenGL - Resolution: 3840 x 2160 - Graphics Preset: High



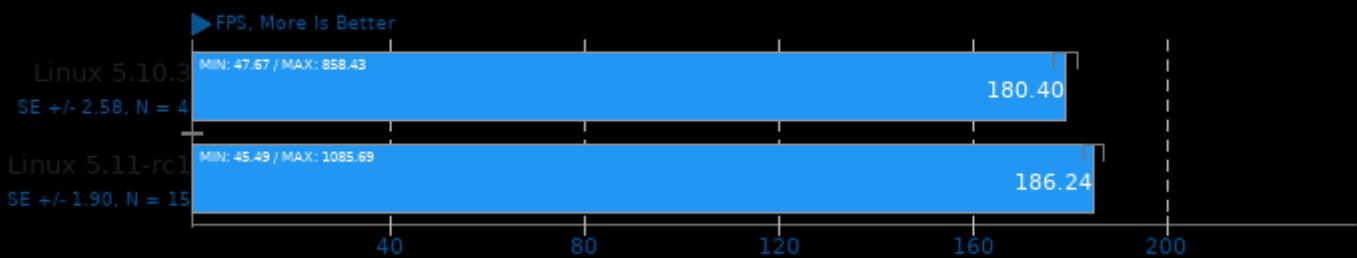
Basemark GPU 1.2

Renderer: Vulkan - Resolution: 3840 x 2160 - Graphics Preset: High



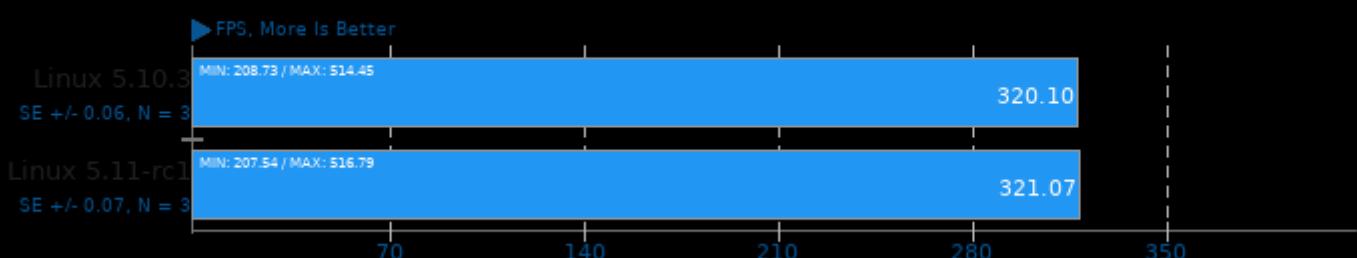
Basemark GPU 1.2

Renderer: OpenGL - Resolution: 3840 x 2160 - Graphics Preset: Medium



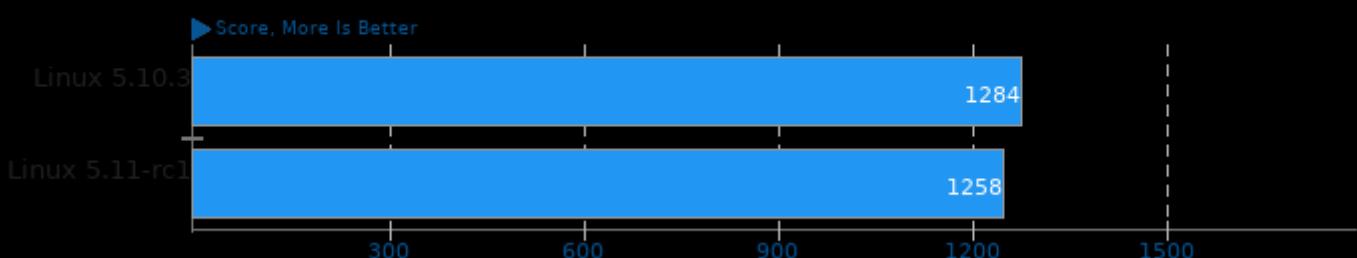
Basemark GPU 1.2

Renderer: Vulkan - Resolution: 3840 x 2160 - Graphics Preset: Medium



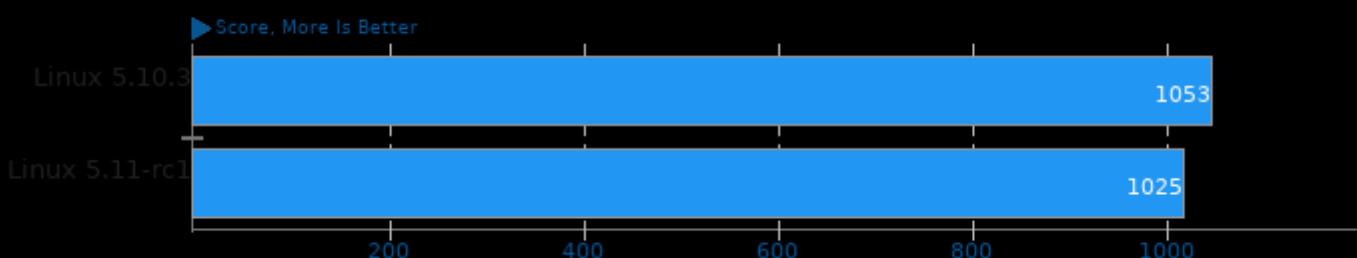
AI Benchmark Alpha 0.1.2

Device Inference Score



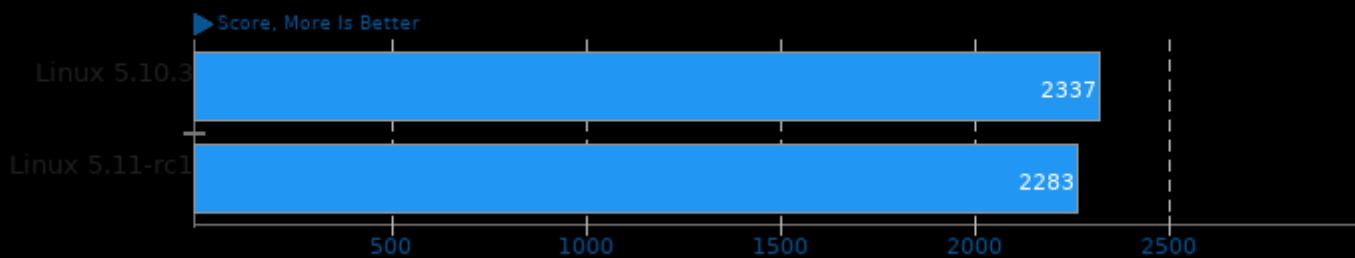
AI Benchmark Alpha 0.1.2

Device Training Score



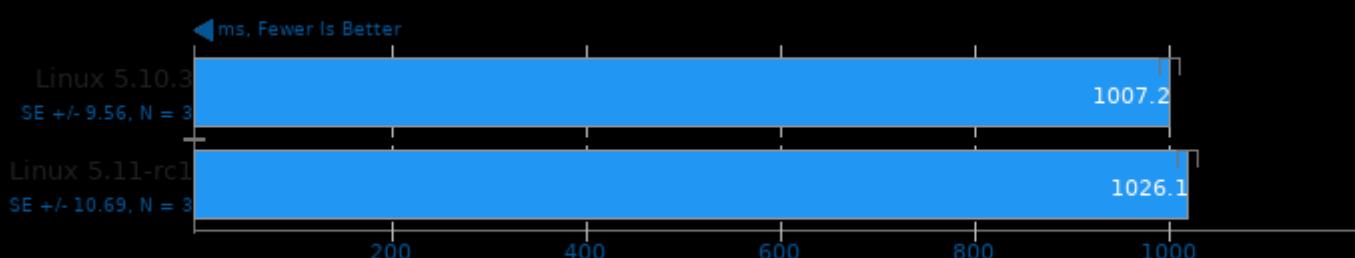
AI Benchmark Alpha 0.1.2

Device AI Score



Selenium

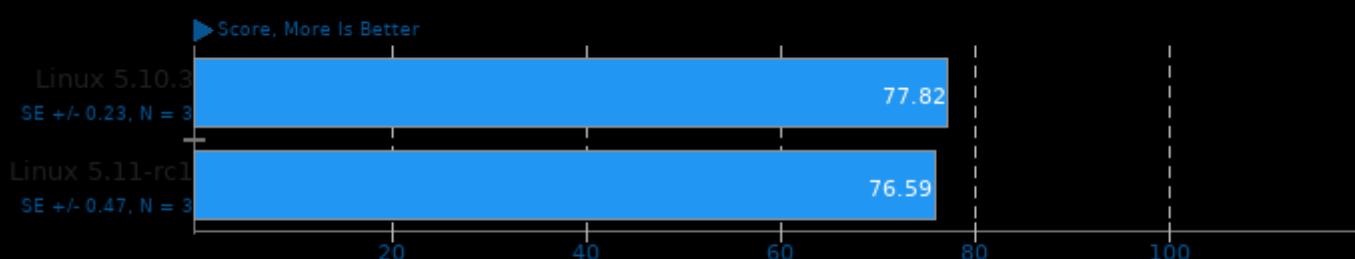
Benchmark: Kraken - Browser: Firefox



1. firefox 84.0

Selenium

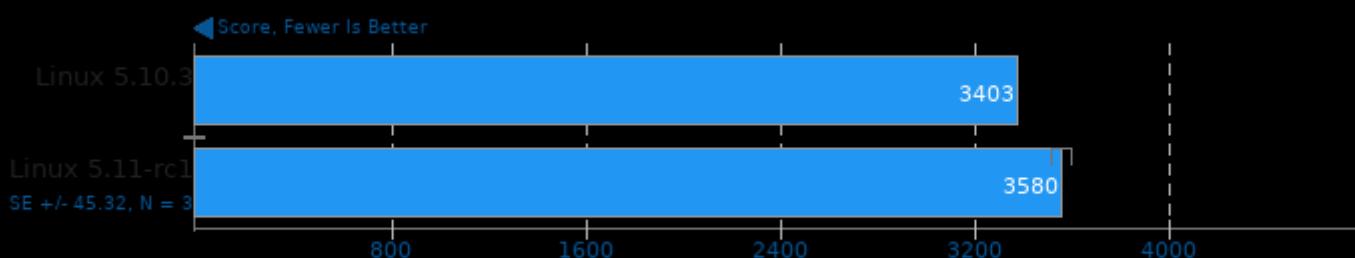
Benchmark: Jetstream 2 - Browser: Firefox



1. firefox 84.0

Selenium

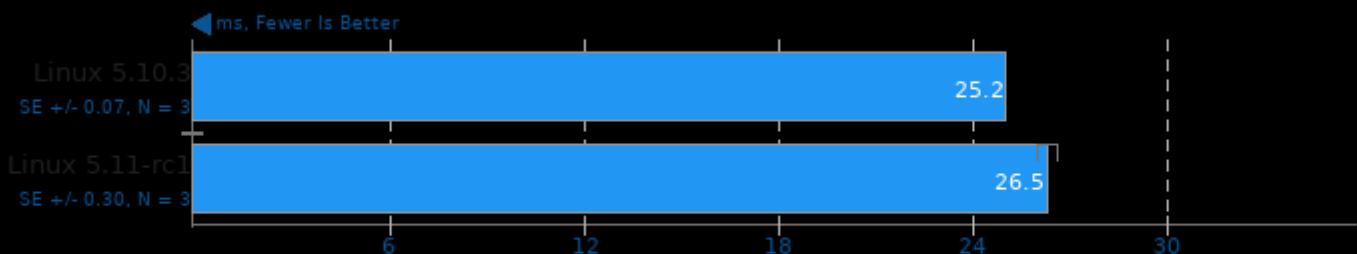
Benchmark: PSPDFKit WASM - Browser: Firefox



1. firefox 84.0

Selenium

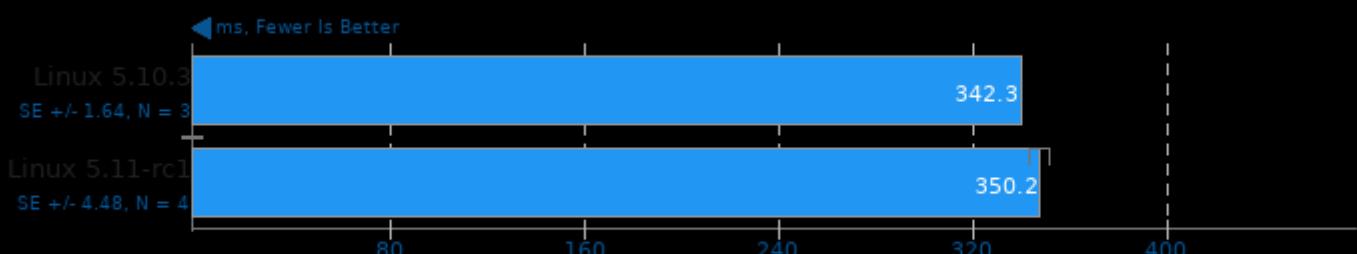
Benchmark: WASM imageConvolute - Browser: Firefox



1. firefox 84.0

Selenium

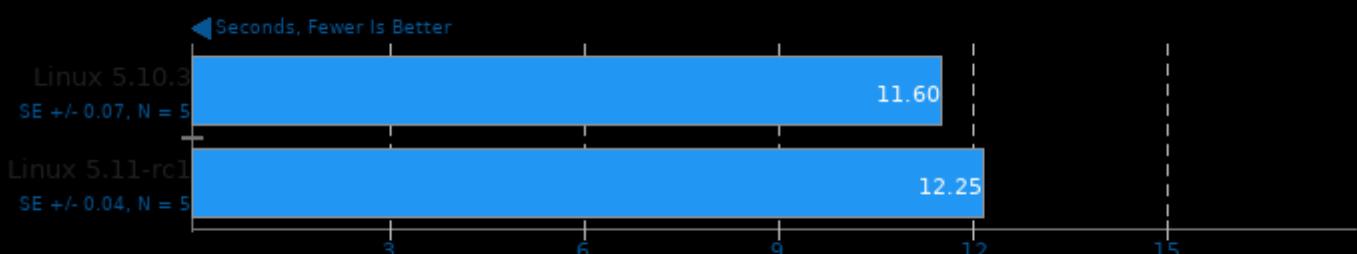
Benchmark: WASM collisionDetection - Browser: Firefox



1. firefox 84.0

WavPack Audio Encoding 5.3

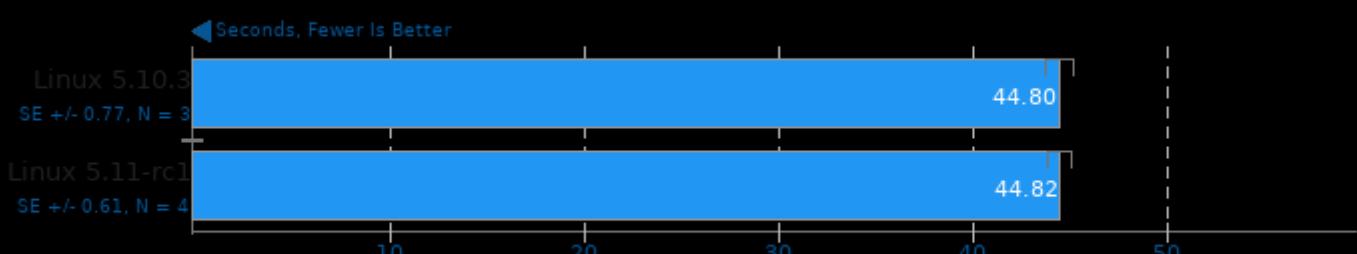
WAV To WavPack



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

Git

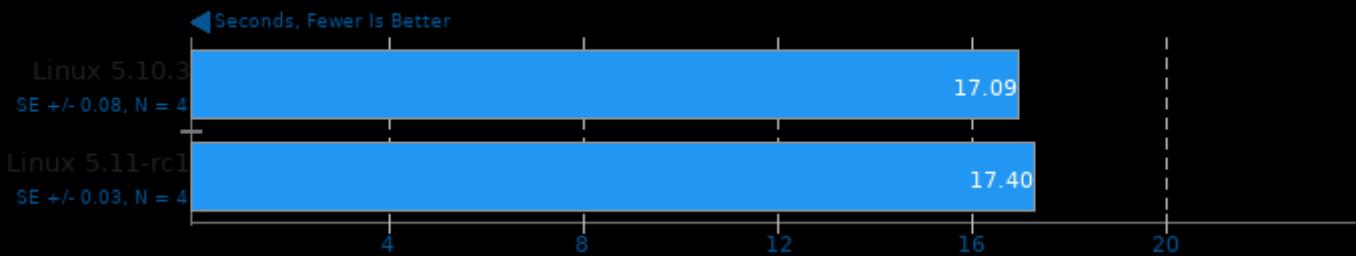
Time To Complete Common Git Commands



1. git version 2.27.0

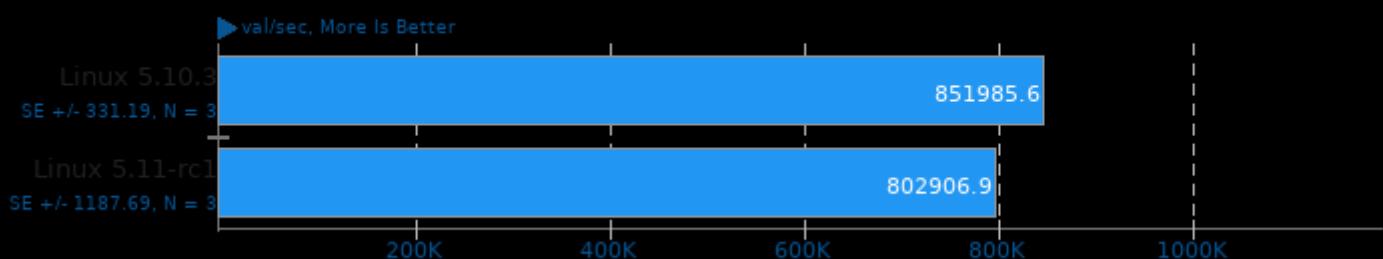
Unpacking Firefox 84.0

Extracting: firefox-84.0.source.tar.xz



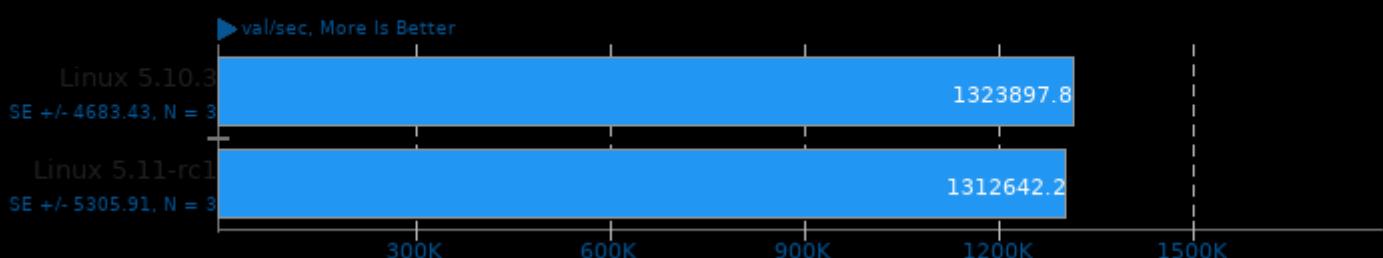
InfluxDB 1.8.2

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

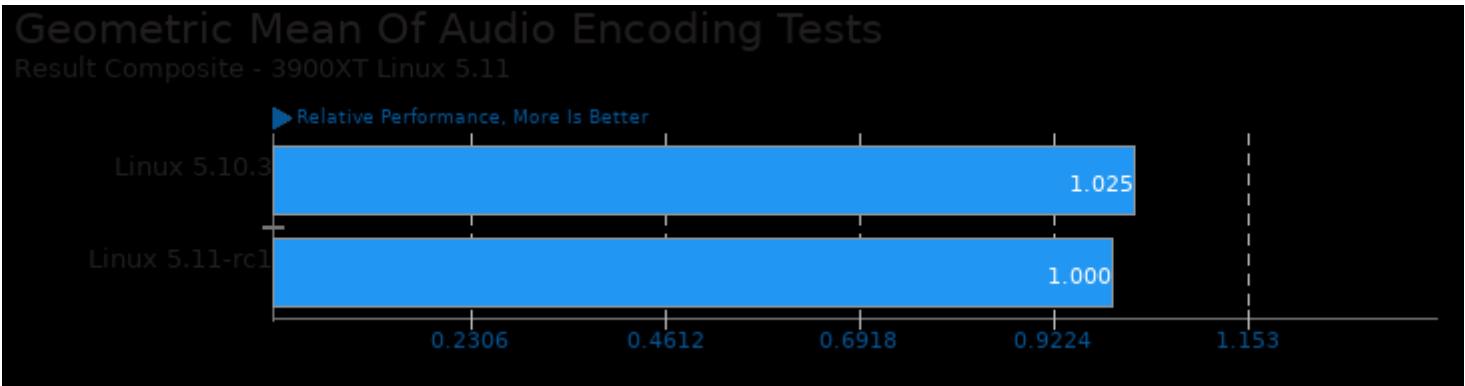


InfluxDB 1.8.2

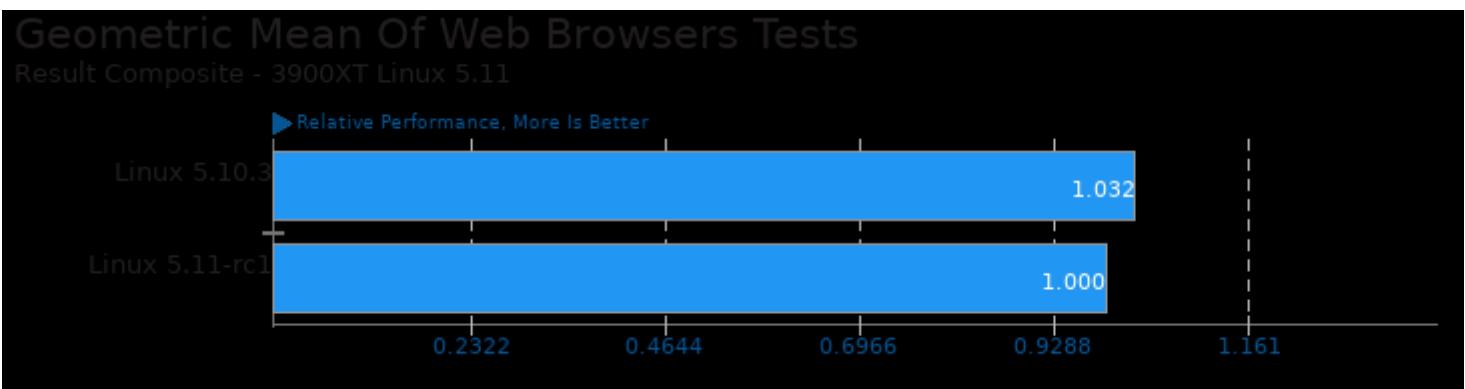
Concurrent Streams: 64 - Batch Size: 10000 - Tags: 2,5000,1 - Points Per Series: 10000



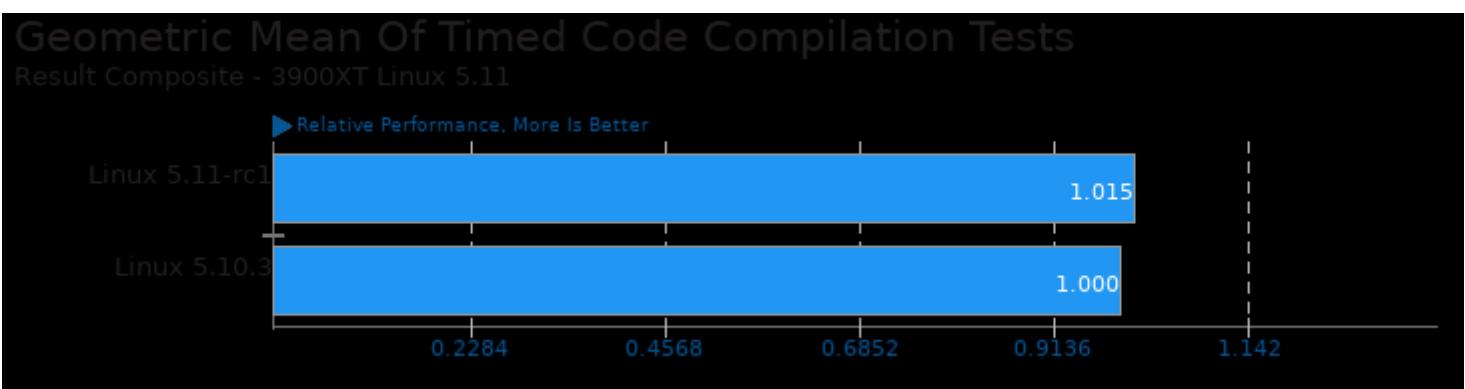
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/encode-wavpack and pts/encode-opus



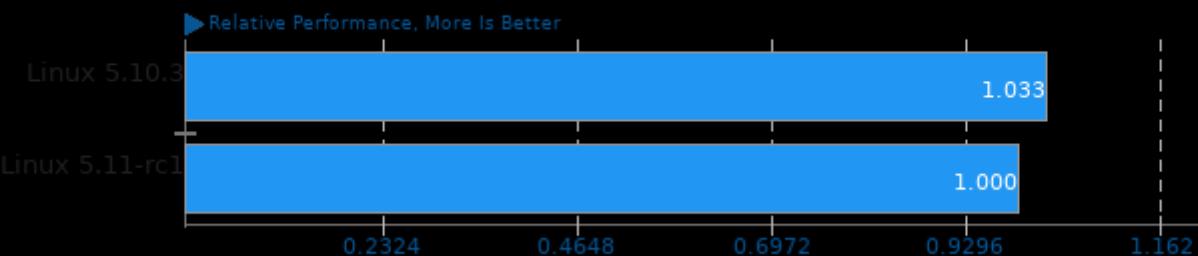
Geometric mean based upon tests: system/selenium



Geometric mean based upon tests: pts/build-eigen and pts/build-linux-kernel

Geometric Mean Of C/C++ Compiler Tests

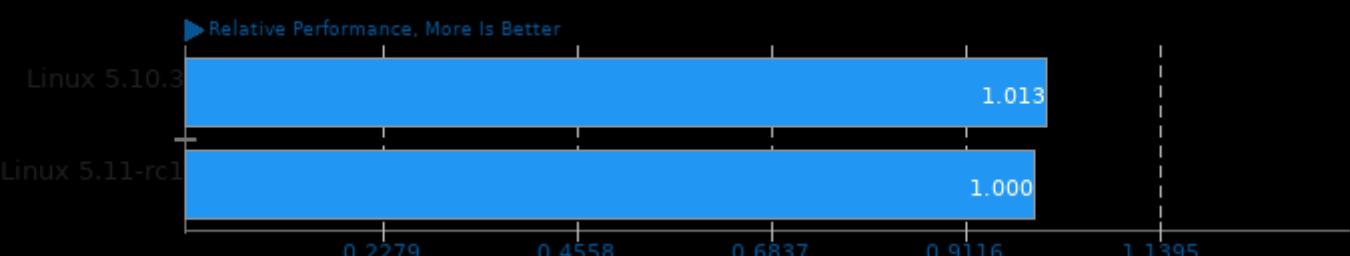
Result Composite - 3900XT Linux 5.11



Geometric mean based upon tests: pts/pgbench, pts/sqlite-speedtest, pts/x265, pts/kvazaar, pts/clomp and pts/keydb

Geometric Mean Of CPU Massive Tests

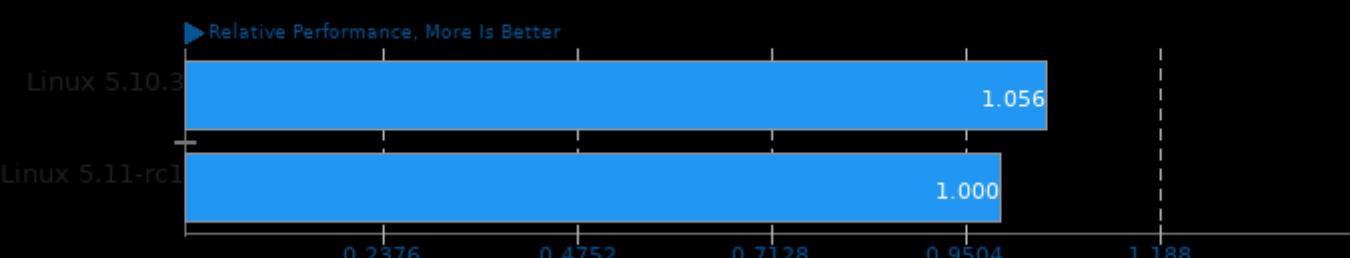
Result Composite - 3900XT Linux 5.11



Geometric mean based upon tests: pts/build-linux-kernel, pts/x265, pts/pgbench and pts/clomp

Geometric Mean Of Creator Workloads Tests

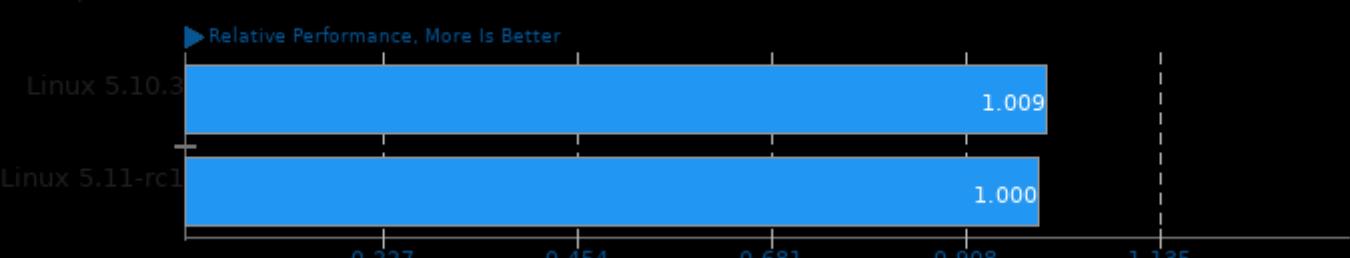
Result Composite - 3900XT Linux 5.11



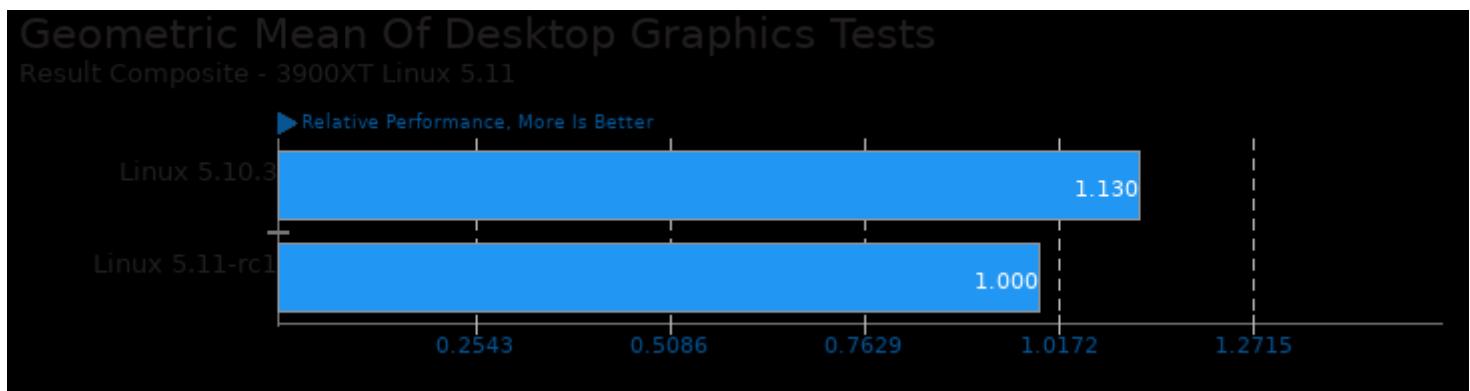
Geometric mean based upon tests: pts/ospray, pts/x265, pts/kvazaar, pts/encode-wavpack, pts/encode-opus, pts/oidn and pts/openvkl

Geometric Mean Of Database Test Suite

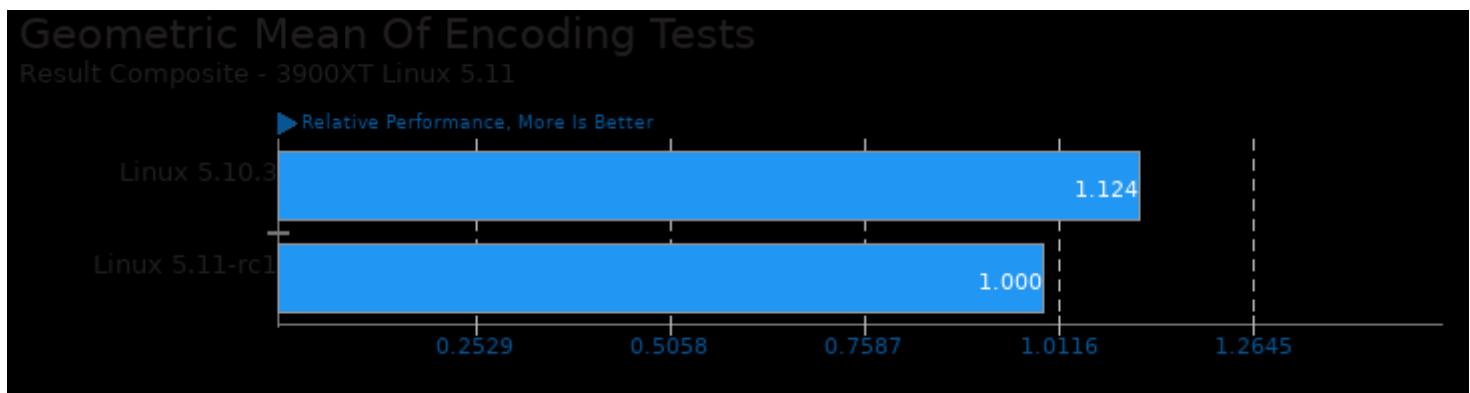
Result Composite - 3900XT Linux 5.11



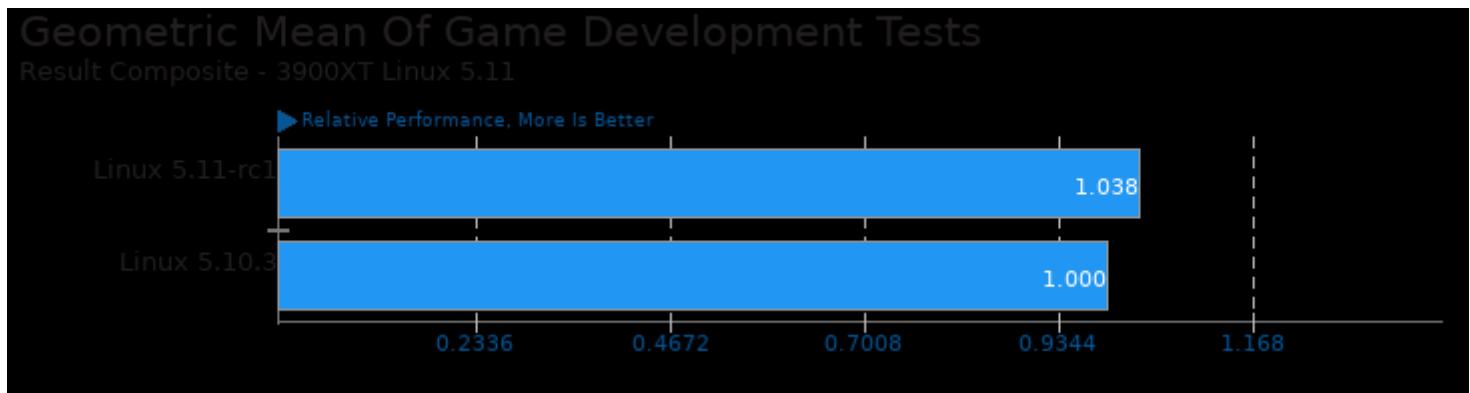
Geometric mean based upon tests: pts/sqlite-speedtest, pts/keydb, pts/pgbench and pts/influxdb



Geometric mean based upon tests: pts/xonotic, pts/tesseract and pts/unigine-valley



Geometric mean based upon tests: pts/encode-wavpack, pts/encode-opus, pts/x265 and pts/kvazaar

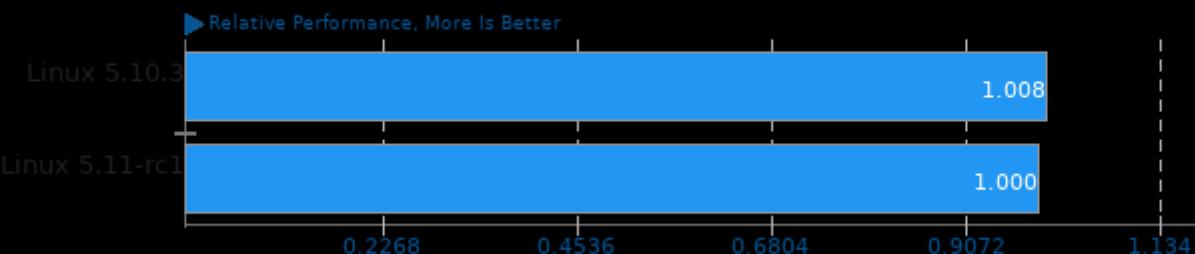


Geometric mean based upon tests: pts/oidn and pts/openvkl

3900XT Linux 5.11

Geometric Mean Of HPC - High Performance Computing Tests

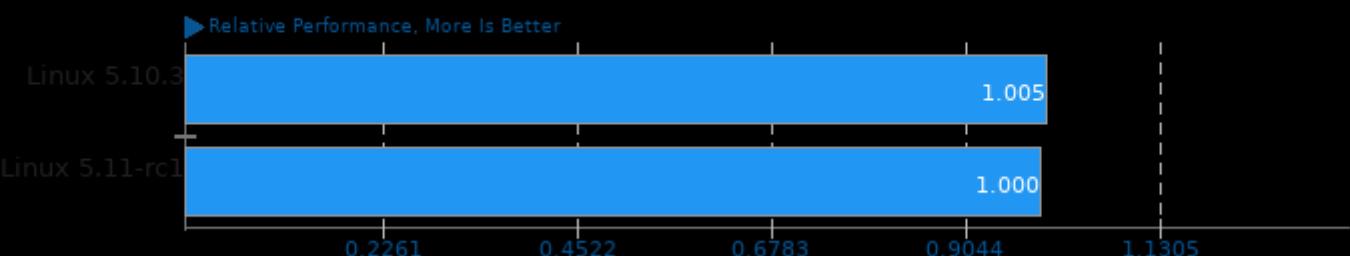
Result Composite - 3900XT Linux 5.11



Geometric mean based upon tests: pts/mnn, pts/tnn and pts/ai-benchmark

Geometric Mean Of Common Kernel Benchmarks Tests

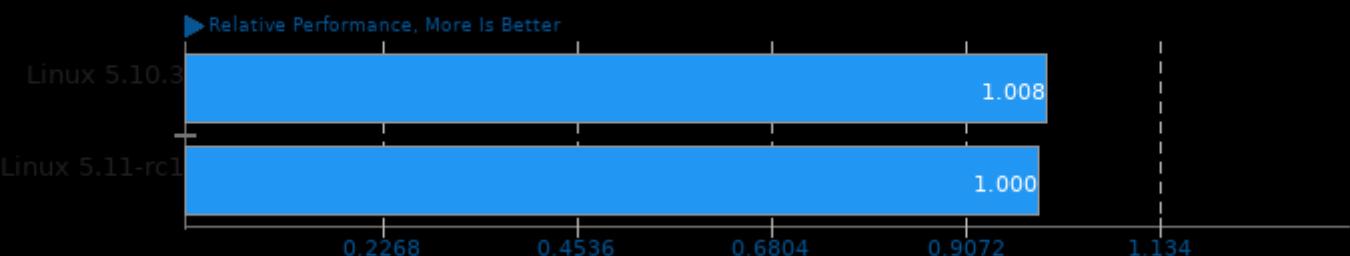
Result Composite - 3900XT Linux 5.11



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

Geometric Mean Of Machine Learning Tests

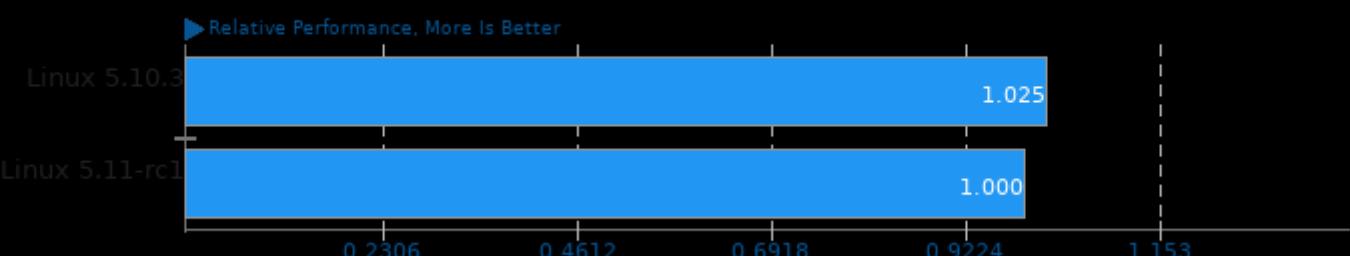
Result Composite - 3900XT Linux 5.11



Geometric mean based upon tests: pts/mnn, pts/tnn and pts/ai-benchmark

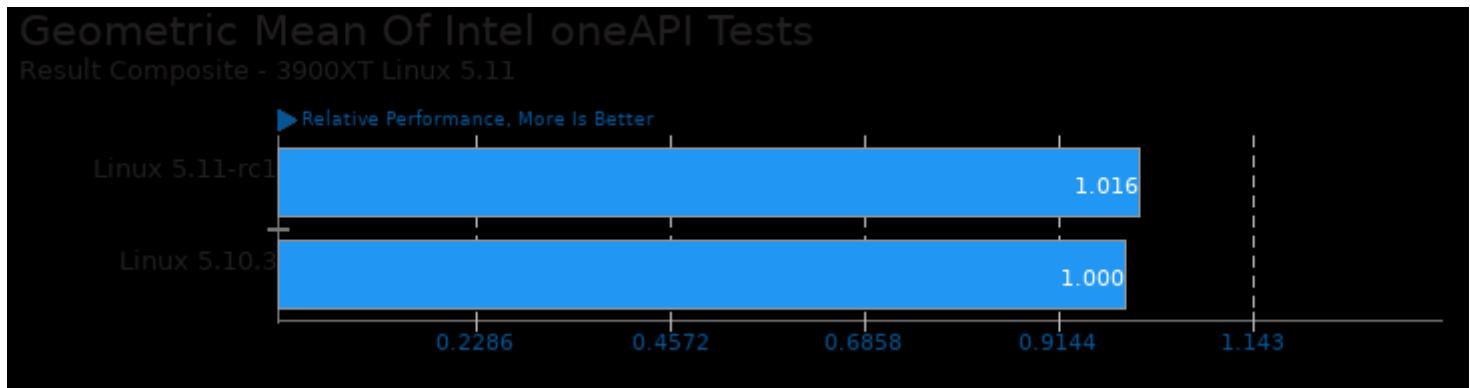
Geometric Mean Of Multi-Core Tests

Result Composite - 3900XT Linux 5.11

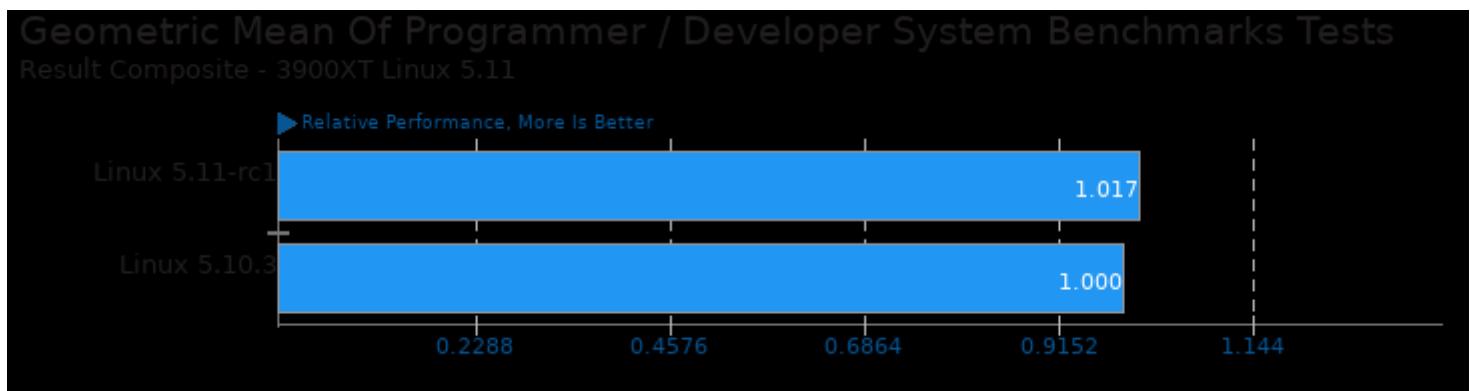


Geometric mean based upon tests: pts/ospray, pts/x265, pts/kvazaar, pts/build-eigen, pts/build-linux-kernel, pts/oidn,

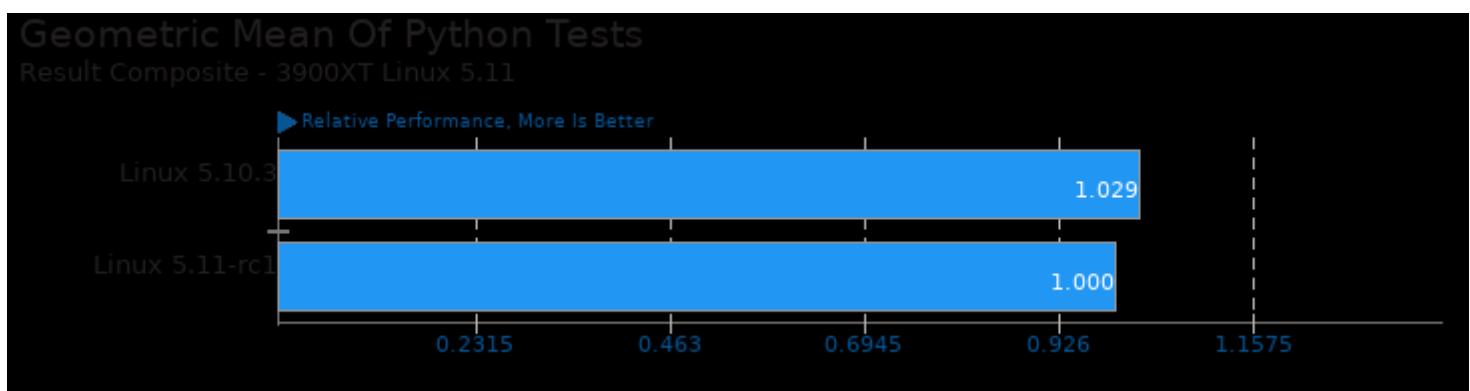
pts/openvkl and pts/pgbench



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



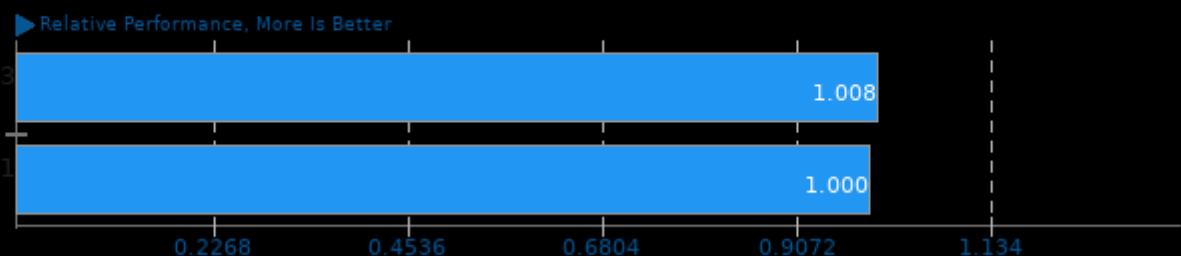
Geometric mean based upon tests: pts/sqlite-speedtest, pts/node-web-tooling, pts/git, pts/build-eigen and pts/build-linux-kernel



Geometric mean based upon tests: pts/ai-benchmark and system/selenium

Geometric Mean Of Server Tests

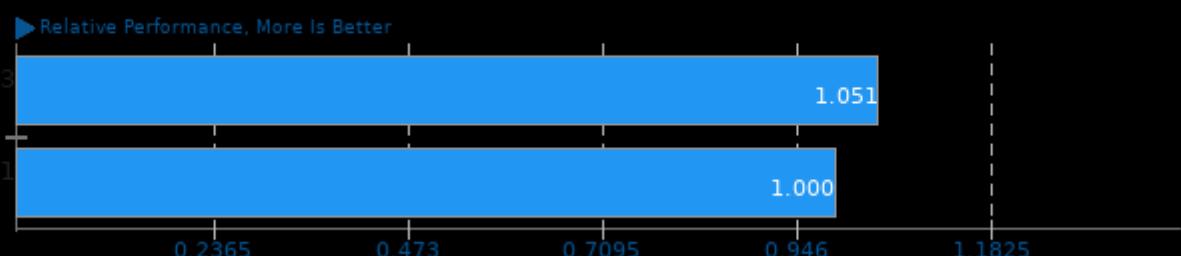
Result Composite - 3900XT Linux 5.11



Geometric mean based upon tests: pts/pgbench, pts/keydb, pts/node-web-tooling, pts/sqlite-speedtest and pts/influxdb

Geometric Mean Of Server CPU Tests

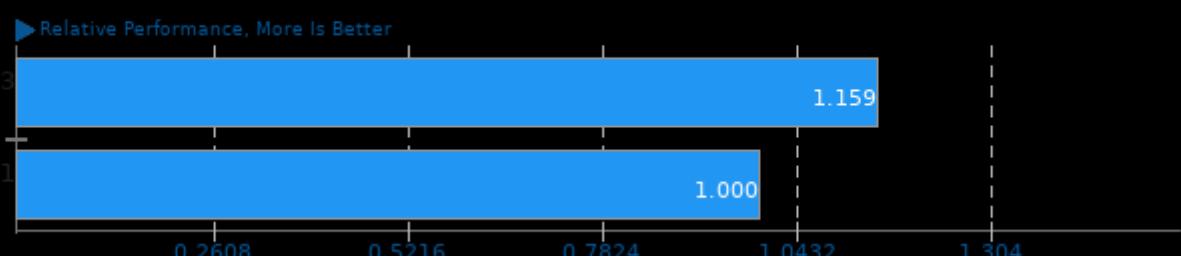
Result Composite - 3900XT Linux 5.11



Geometric mean based upon tests: pts/x265 and pts/build-linux-kernel

Geometric Mean Of Video Encoding Tests

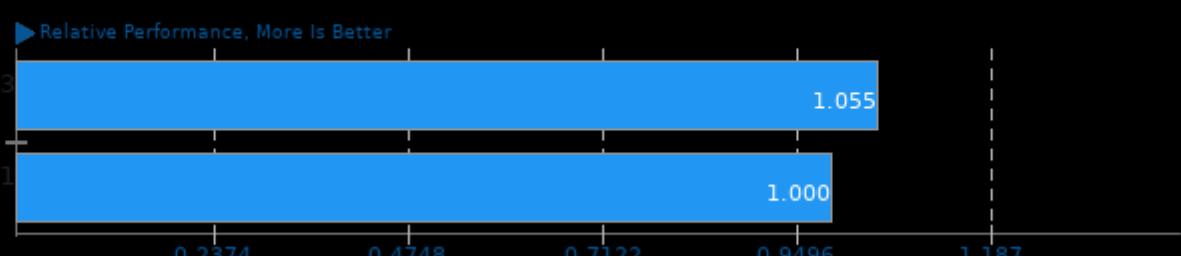
Result Composite - 3900XT Linux 5.11



Geometric mean based upon tests: pts/x265 and pts/kvazaar

Geometric Mean Of Common Workstation Benchmarks Tests

Result Composite - 3900XT Linux 5.11



Geometric mean based upon tests: pts/x265 and pts/git

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 13:47.