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WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

WSL2 Windows vs. Linux benchmarking by Michael Larabel.

Automated Executive Summary

Ubuntu 20.04.2 LTS had the most wins, coming in first place for 38% of the tests.

Based on the geometric mean of all complete results, the fastest (Ubuntu 20.04.2 LTS) was 1.137x the speed of the slowest (Windows 11 22000.51). Ubuntu 21.04 was 0.991x the speed of Ubuntu 20.04.2 LTS, Windows 10 21H1 was 0.927x the speed of Ubuntu 21.04, Windows 11 22000.51 was 0.958x the speed of Windows 10 21H1.

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

SQLite Speedtest (Timed Time - Size 1,000) at 3.785x

Git (Time To Complete Common Git Commands) at 2.74x

Timed Godot Game Engine Compilation (Time To Compile) at 2.07x

Timed Node.js Compilation (Time To Compile) at 1.495x

PJSIP (Method: INVITE) at 1.252x

Chia Blockchain VDF (Test: Square Assembly Optimized) at 1.246x

VP9 libvpx Encoding (Speed: Speed 5 - Input: Bosphorus 4K) at 1.183x

C-Blosc (Compressor: blosclz) at 1.18x

AOM AV1 (Encoder Mode: Speed 9 Realtime - Input: Bosphorus 4K) at 1.164x

PJSIP (*Method: OPTIONS, Stateful*) at 1.15x.

Test Systems:

Windows 10 21H1

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Memory: 32GB, Disk: 466GB

OS: Ubuntu 20.04, Kernel: 4.4.0-19041-Microsoft (x86_64), Compiler: GCC 9.3.0, File-System: wslfs, System Layer: wsl

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEA/gcc-9-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: CPU Microcode: 0xffffffff
Python Notes: Python 3.8.5

Windows 11 22000.51

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Memory: 32GB, Disk: 466GB

OS: Ubuntu 20.04, Kernel: 4.4.0-22000-Microsoft (x86_64), Compiler: GCC 9.3.0, File-System: wslfs, System Layer: wsl

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEA/gcc-9-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: CPU Microcode: 0xffffffff
Python Notes: Python 3.8.5

Ubuntu 20.04.2 LTS

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (3302 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 500GB Western Digital WDS500G3X0C-00SJG0, Graphics: AMD Radeon RX 5600 OEM/5600 XT / 5700/5700 8GB (2055/875MHz), Audio: AMD Navi 10 HDMI Audio, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.8.0-59-generic (x86_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.9, Vulkan: 1.2.131, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEA/gcc-9-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Disk Notes: NONE / errors=remount-ro,relatime,rw / Block Size: 4096
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0xa201009
Python Notes: Python 3.8.10

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

Ubuntu 21.04

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (3302 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 500GB Western Digital WDS500G3X0C-00SJG0, Graphics: AMD Radeon RX 5600 OEM/5600 XT / 5700/5700 (2100/875MHz), Audio: AMD Navi 10 HDMI Audio, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 21.04, Kernel: 5.11.0-22-generic (x86_64), Desktop: GNOME Shell 3.38.4, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.0.1 (LLVM 11.0.1), Vulkan: 1.2.145, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/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-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v

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

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

Python Notes: Python 3.9.5

Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD repoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbd: Not affected + tsx_async_abort: Not affected

	Windows 10 21H1	Windows 11	Ubuntu 20.04.2 LTS	Ubuntu 21.04
C-Blosc - blosclz (MB/s)	25887	26576	30550	28807
Normalized	84.74%	86.99%	100%	94.29%
Standard Deviation	0.2%	1.2%	0.4%	0.9%
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	1.08557	1.09619	1.07253	1.08976
Normalized	98.8%	97.84%	100%	98.42%
Standard Deviation	0.7%	1%	0.6%	0.4%
Chia Blockchain VDF - Square Plain C++ (IPS)	221700	218667	211433	210767
Normalized	100%	98.63%	95.37%	95.07%
Standard Deviation	0.4%	0.2%	0.1%	0.7%
Chia Blockchain VDF - S.A.O (IPS)	213300	208300	171167	182267
Normalized	100%	97.66%	80.25%	85.45%
Standard Deviation	0.2%	0.2%	0.5%	1.3%
Zstd Compression - 19 - Compression Speed (MB/s)	49.5	49.5	51.2	51.1
Normalized	96.68%	96.68%	100%	99.8%
Standard Deviation	0.5%	1.4%	0.3%	0.2%
Zstd Compression - 19 - D.S (MB/s)	4115	4091	4031	4083
Normalized	100%	99.42%	97.95%	99.23%
Standard Deviation	0.3%	0.4%	1.3%	1.1%
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	35.5	34.9	36.2	36.2
Normalized	98.07%	96.41%	100%	100%
Standard Deviation	0.3%	0.5%	0.3%	0%

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Zstd Compression - 19, Long Mode -	4174	4145	4100	4086
D.S (MB/s)				
Normalized	100%	99.31%	98.22%	97.89%
Standard Deviation	0.5%	0.1%	1.1%	1.4%
AOM AV1 - Speed 6 Realtime -	22.38	21.78	20.95	21.25
Bosphorus 4K (FPS)				
Normalized	100%	97.32%	93.61%	94.95%
Standard Deviation	0.2%	1%	0.7%	2%
AOM AV1 - Speed 8 Realtime -	53.27	52.64	57.44	53.80
Bosphorus 4K (FPS)				
Normalized	92.74%	91.64%	100%	93.66%
Standard Deviation	0.3%	0.3%	0.7%	5.6%
AOM AV1 - Speed 9 Realtime -	65.46	64.41	73.01	62.71
Bosphorus 4K (FPS)				
Normalized	89.66%	88.22%	100%	85.89%
Standard Deviation	0.4%	0.1%	0.3%	1%
Embree - Pathtracer - Crown (FPS)	23.3711	22.5042	23.7523	24.0420
Normalized	97.21%	93.6%	98.8%	100%
Standard Deviation	0.5%	0.5%	0.3%	0.4%
Embree - Pathtracer ISPC - Crown	21.9030	21.2182	22.2058	22.3829
(FPS)				
Normalized	97.86%	94.8%	99.21%	100%
Standard Deviation	0.3%	0.2%	0.4%	0.5%
Embree - Pathtracer - Asian Dragon	24.3007	23.7718	24.5817	24.9421
(FPS)				
Normalized	97.43%	95.31%	98.56%	100%
Standard Deviation	0.4%	0.2%	0.9%	0.5%
Embree - Pathtracer ISPC - Asian	22.8986	22.2733	23.1245	22.9713
Dragon (FPS)				
Normalized	99.02%	96.32%	100%	99.34%
Standard Deviation	0.3%	0.4%	0.5%	0.3%
SVT-AV1 - Preset 4 - Bosphorus 4K	2.209	2.126	2.124	2.144
(FPS)				
Normalized	100%	96.24%	96.15%	97.06%
Standard Deviation	0.4%	0.2%	0.1%	0.4%
SVT-AV1 - Preset 8 - Bosphorus 4K	23.463	22.900	23.485	22.600
(FPS)				
Normalized	99.91%	97.51%	100%	96.23%
Standard Deviation	0.8%	1.3%	0.3%	0.8%
VP9 libvpx Encoding - Speed 0 -	7.89	7.52	8.31	8.28
Bosphorus 4K (FPS)				
Normalized	94.95%	90.49%	100%	99.64%
Standard Deviation	2.1%	0.4%	0.7%	0.3%
VP9 libvpx Encoding - Speed 5 -	18.32	17.18	20.06	20.33
Bosphorus 4K (FPS)				
Normalized	90.11%	84.51%	98.67%	100%
Standard Deviation	0.2%	0.5%	1.3%	0.4%
Coremark - CoreMark Size 666 - I.P.S	837126	814921	829936	807167
(Iterations/Sec)				
Normalized	100%	97.35%	99.14%	96.42%
Standard Deviation	0.2%	1.2%	0.1%	0.2%
Stockfish - Total Time (Nodes/s)	54764581	52481105	53394741	57445220
Normalized	95.33%	91.36%	92.95%	100%

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PJSIP - INVITE (Responses/sec)	4875	0.5%	1.7%	3.8%
	4220	5285		5006
PJSIP - OPTIONS, Stateful (Responses/sec)	8741	79.85%	100%	94.72%
	7957	9153		8075
Timed Godot Game Engine	122.280	1.4%	4.4%	2.3%
Compilation - Time To Compile (sec)				
Normalized	95.5%	86.93%	100%	88.22%
Standard Deviation	1.2%	1%	1.1%	0.7%
Timed Linux Kernel Compilation - Time To Compile (sec)	96.847	149.563	76.194	72.247
Normalized	59.08%	48.31%	94.82%	100%
Standard Deviation	1.1%	1.8%	0.4%	0.3%
Timed Node.js Compilation - Time To Compile (sec)	332.275	110.257	47.717	46.824
Normalized	48.35%	42.47%	98.13%	100%
Standard Deviation	3.9%	6.2%	1.2%	1.1%
SecureMark - SecureMark-TLS	342518	341291	323292	321021
Normalized	72.8%	66.87%	98.36%	100%
Standard Deviation	0.6%	1%	0.1%	0.2%
Node.js V8 Web Tooling Benchmark	15.46	323292	321021	
Normalized	93.36%	90.28%	100%	89.92%
Standard Deviation	0.7%	1.5%	0.8%	1.4%
GROMACS - MPI CPU - water_GMX50_bare (Ns/Day)	1.259	1.254	1.277	1.254
Normalized	98.59%	98.2%	100%	98.2%
Standard Deviation	0.4%	0.4%	0.2%	0%
SQLite Speedtest - Timed Time - Size 1,000 (sec)	164.296	164.236	43.488	43.404
Normalized	26.42%	26.43%	99.81%	100%
Standard Deviation	1.3%	0.3%	0.7%	0.5%
KTX-Software toktx - UASTC 3 (sec)	6.794	6.859	6.398	6.455
Normalized	94.17%	93.28%	100%	99.12%
Standard Deviation	0.1%	0.3%	0.4%	0%
KTX-Software toktx - Zstd Compression 9 (sec)	2.238	2.265	2.147	2.136
Normalized	95.44%	94.3%	99.49%	100%
Standard Deviation	0.1%	0.3%	0.6%	0.4%
KTX-Software toktx - Z.C.1 (sec)	14.301	14.606	14.751	14.536
Normalized	100%	97.91%	96.95%	98.38%
Standard Deviation	0.1%	0.2%	0.5%	2.3%
KTX-Software toktx - U.3.Z.C.1 (sec)	10.915	11.062	10.565	10.548
Normalized	96.64%	95.35%	99.84%	100%
Standard Deviation	0.1%	0.2%	1.3%	0.4%
KTX-Software toktx - U.4.Z.C.1 (sec)	156.505	158.929	156.190	156.850
Normalized	99.8%	98.28%	100%	99.58%
Standard Deviation	0.2%	0.3%	0.2%	0.2%
Google Draco - Lion (ms)	4127	4152	4207	4102
Normalized	99.39%	98.8%	97.5%	100%
Standard Deviation	0.3%	0%	0.2%	2.3%

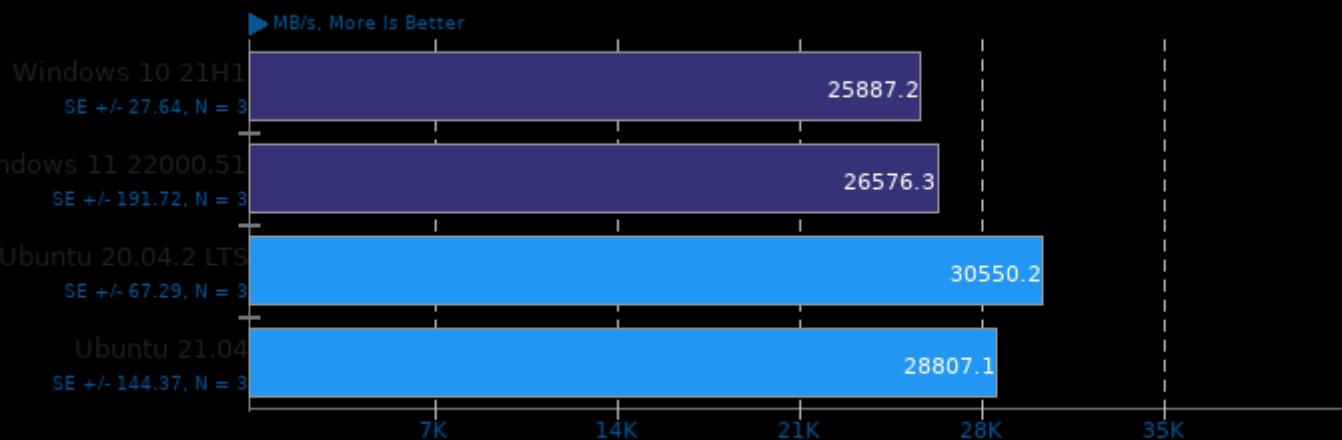
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Google Draco - Church Facade (ms)	5343	5420	5297	5441
Normalized	99.14%	97.73%	100%	97.35%
Standard Deviation	0.1%	0.2%	2.5%	0.9%
TNN - CPU - DenseNet (ms)	2347	2389	2401	2400
Normalized	100%	98.27%	97.77%	97.81%
Standard Deviation	0.1%	0.6%	0.3%	0.4%
TNN - CPU - MobileNet v2 (ms)	216.955	220.551	223.568	224.537
Normalized	100%	98.37%	97.04%	96.62%
Standard Deviation	0.1%	0.2%	0%	0.8%
TNN - CPU - SqueezeNet v2 (ms)	46.191	47.230	49.316	50.556
Normalized	100%	97.8%	93.66%	91.37%
Standard Deviation	2.4%	2.6%	1.9%	1.4%
TNN - CPU - SqueezeNet v1.1 (ms)	202.263	206.597	210.212	207.870
Normalized	100%	97.9%	96.22%	97.3%
Standard Deviation	0%	2%	0.4%	1.6%
Git - T.T.C.C.G.C (sec)	63.598	103.497	38.439	37.777
Normalized	59.4%	36.5%	98.28%	100%
Standard Deviation	2%	2.4%	0.3%	0.5%

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

C-Blosc 2.0

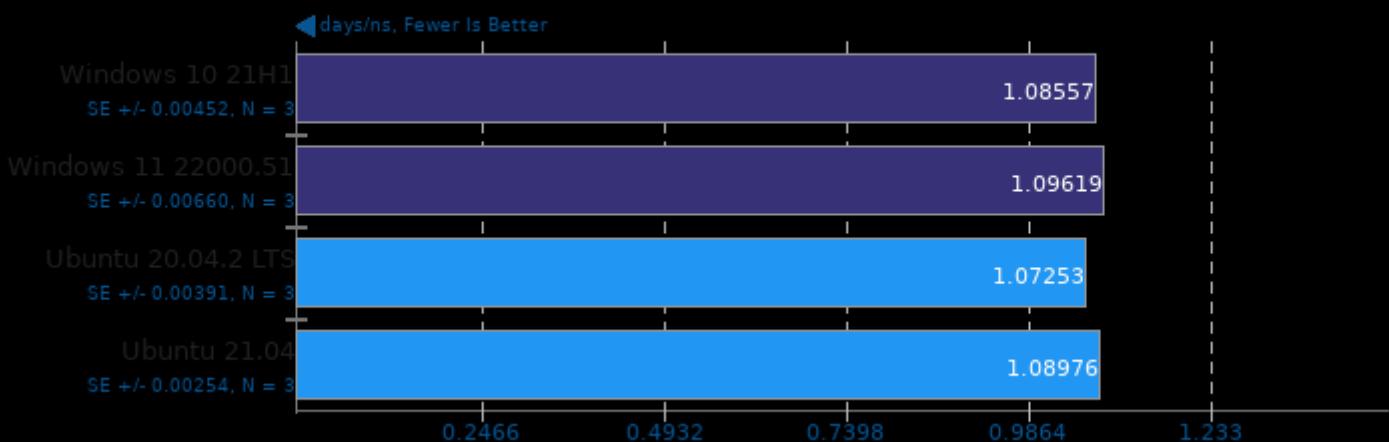
Compressor: blosclz



1. (CC) gcc options: -std=gnu99 -O3 -pthread -lrt -lm

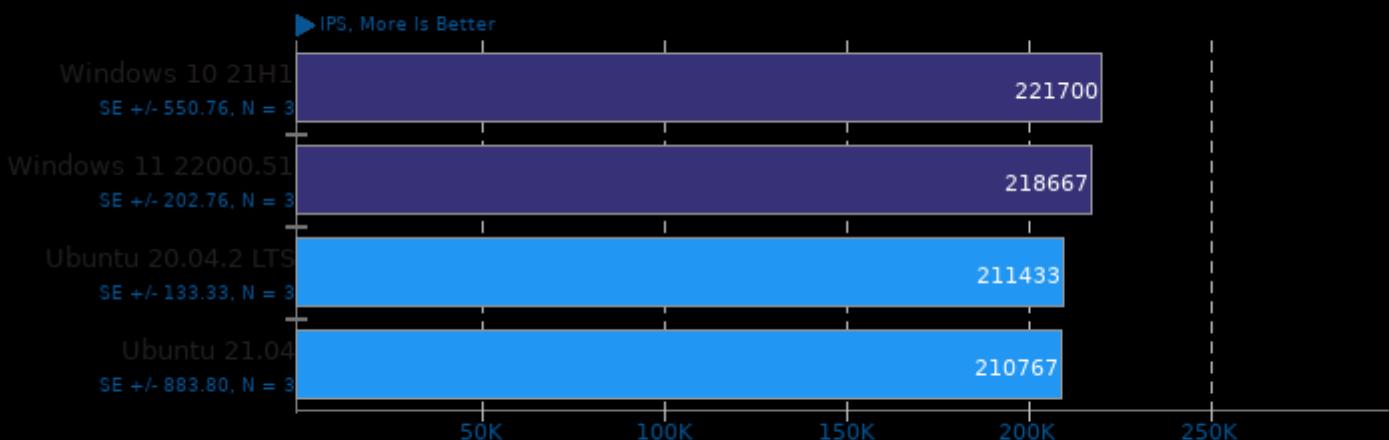
NAMD 2.14

ATPase Simulation - 327,506 Atoms



Chia Blockchain VDF 1.0.1

Test: Square Plain C++

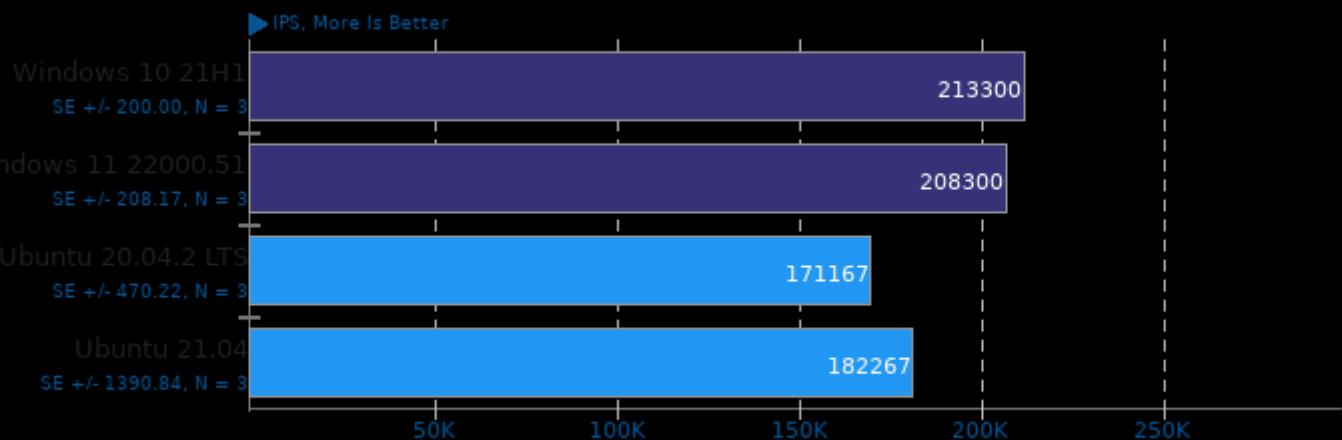


1. (CXX) g++ options: -fno-pie -no-pie -lgmpxx -lgmp -boost_system -pthread

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

Chia Blockchain VDF 1.0.1

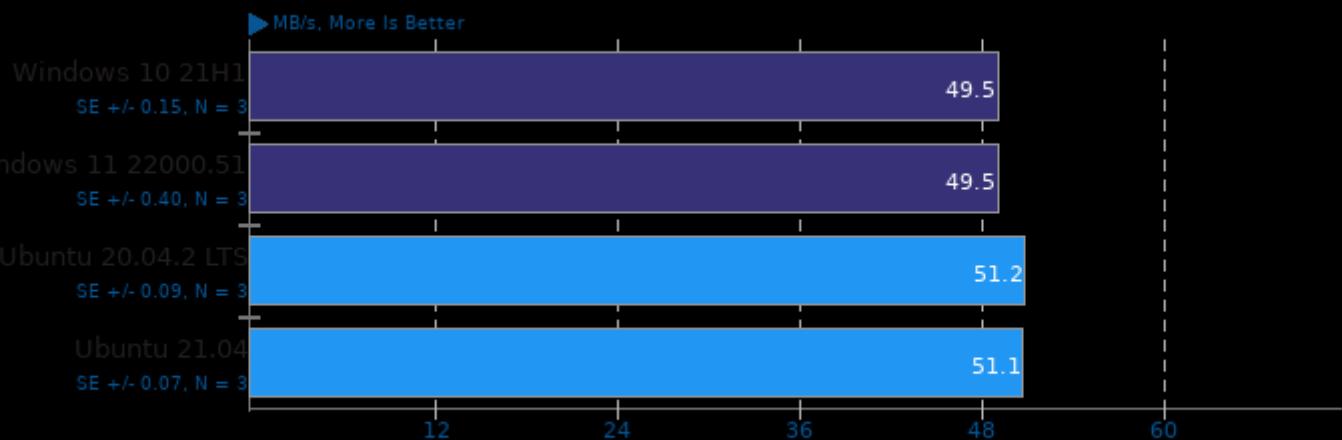
Test: Square Assembly Optimized



1. (CXX) g++ options: -fno-pie -lgmpxx -lgmp -lboost_system -pthread

Zstd Compression 1.5.0

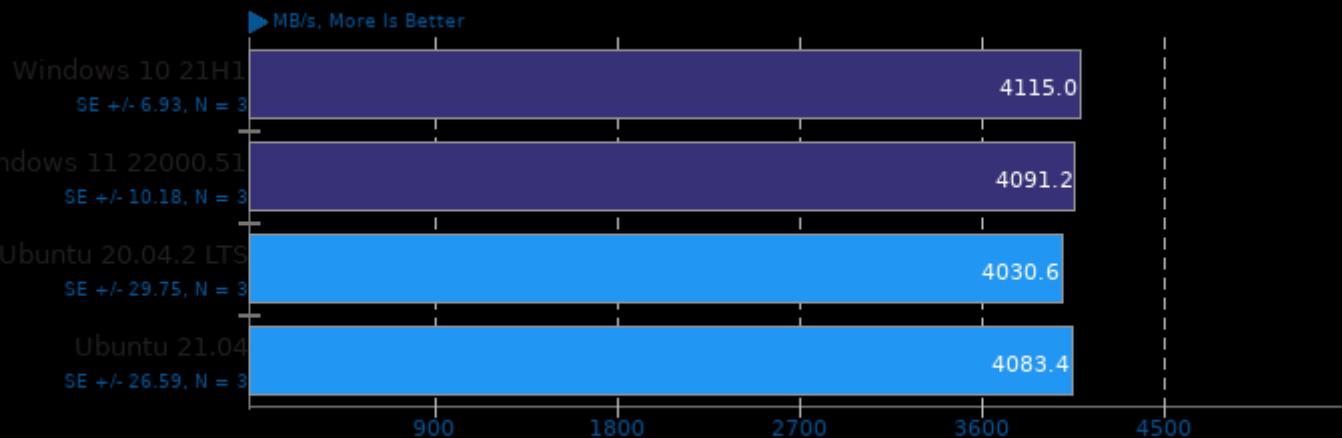
Compression Level: 19 - Compression Speed



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

Zstd Compression 1.5.0

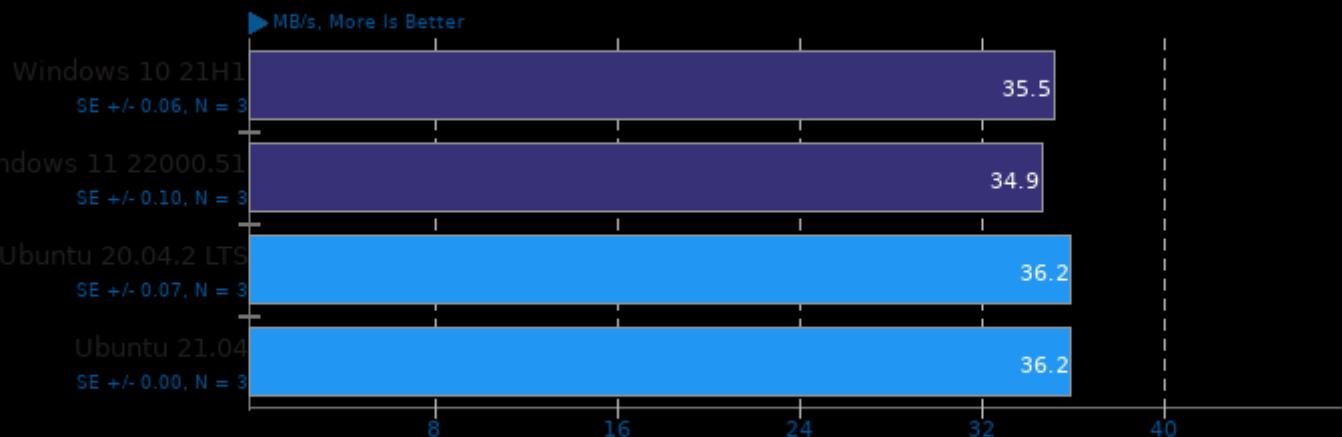
Compression Level: 19 - Decompression Speed



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

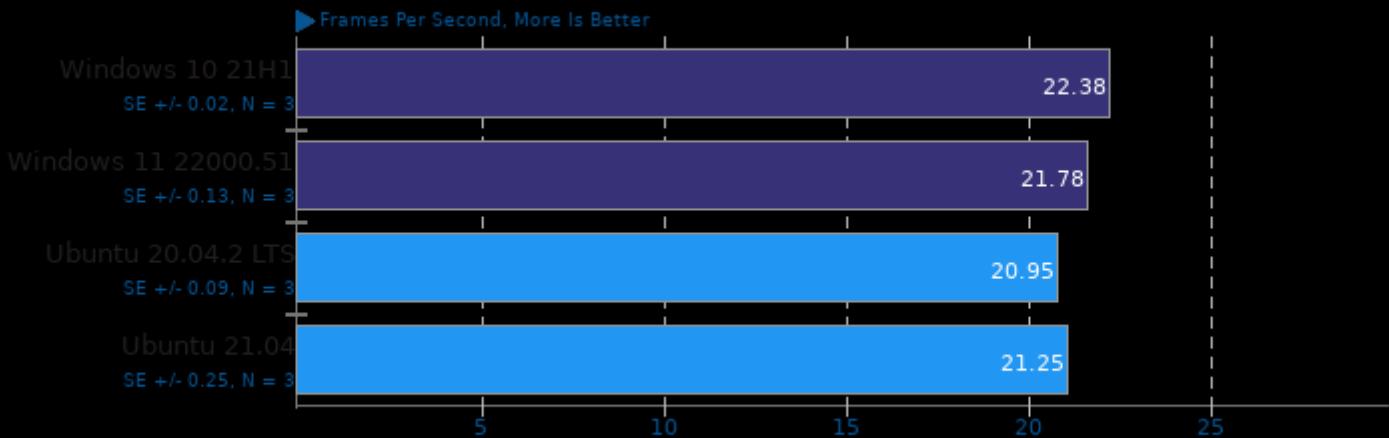
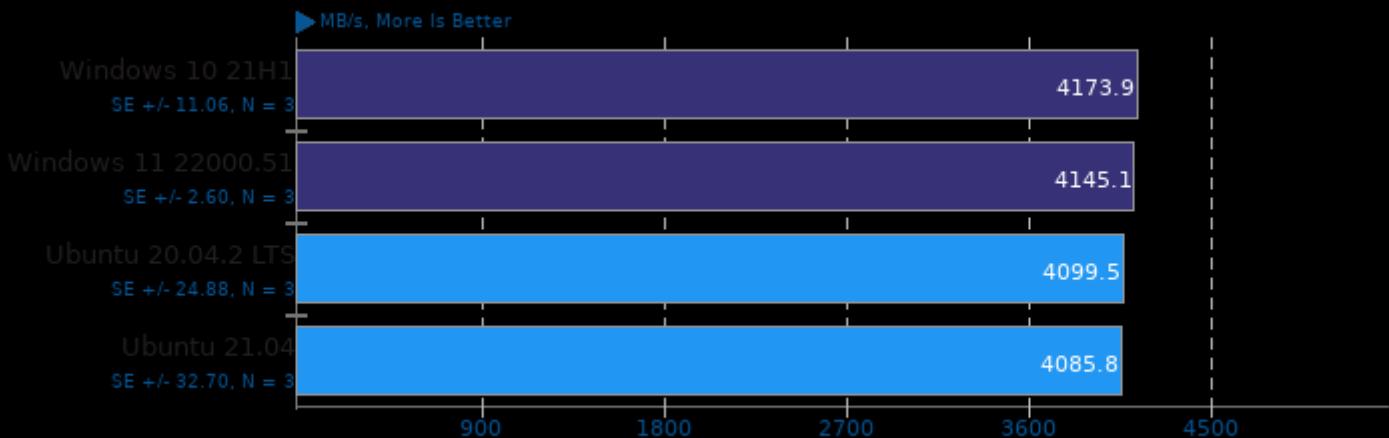
Zstd Compression 1.5.0

Compression Level: 19, Long Mode - Compression Speed



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

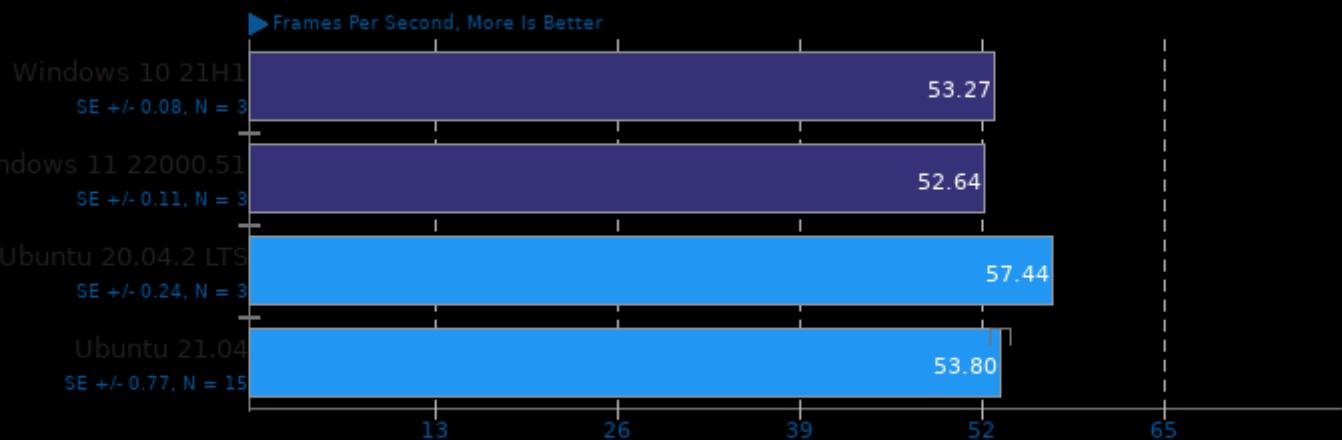
Zstd Compression 1.5.0



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AOM AV1 3.1

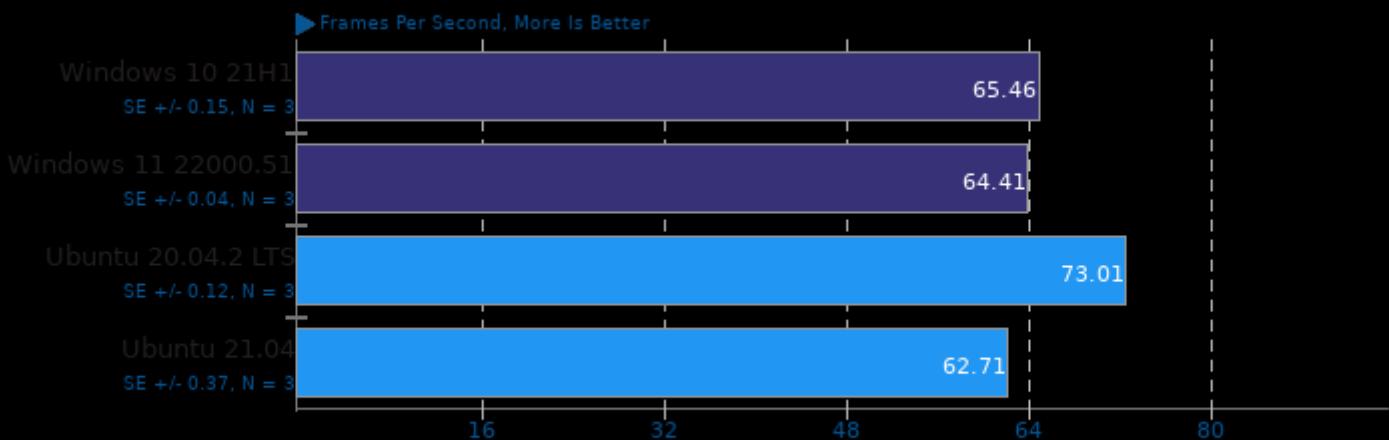
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 4K



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

AOM AV1 3.1

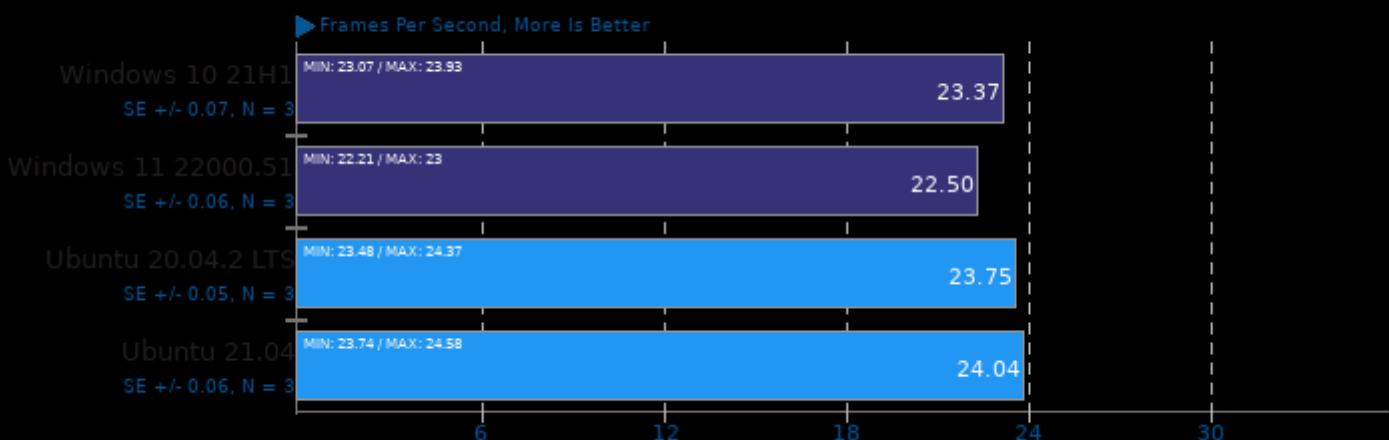
Encoder Mode: Speed 9 Realtime - Input: Bosphorus 4K



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

Embree 3.13

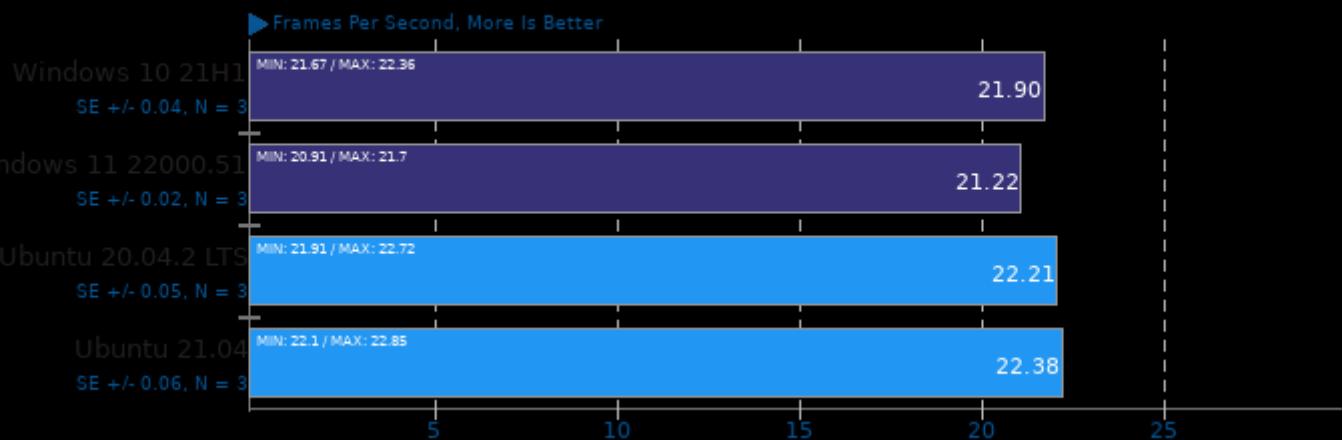
Binary: Pathtracer - Model: Crown



WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

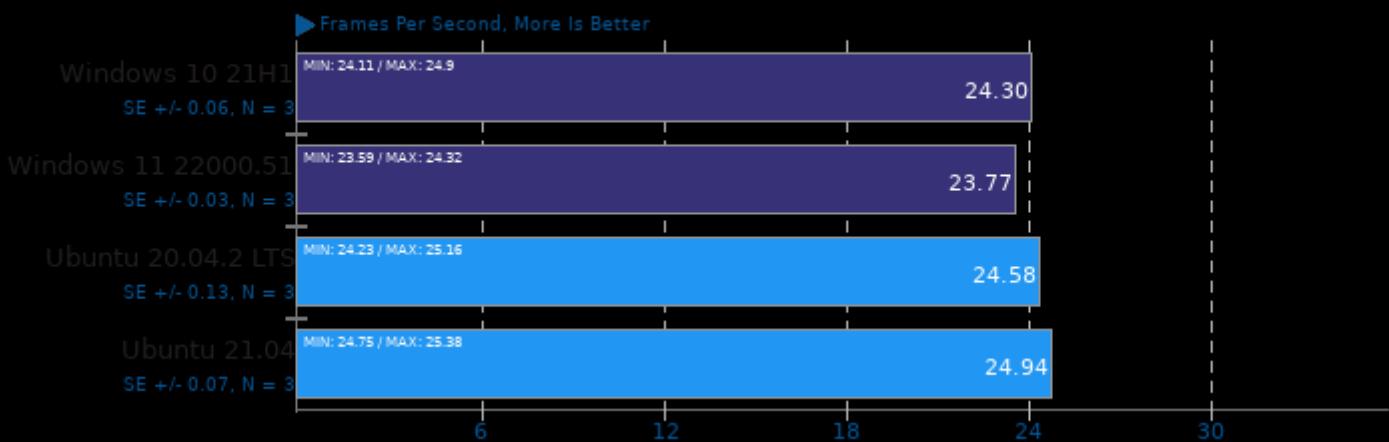
Embree 3.13

Binary: Pathtracer ISPC - Model: Crown



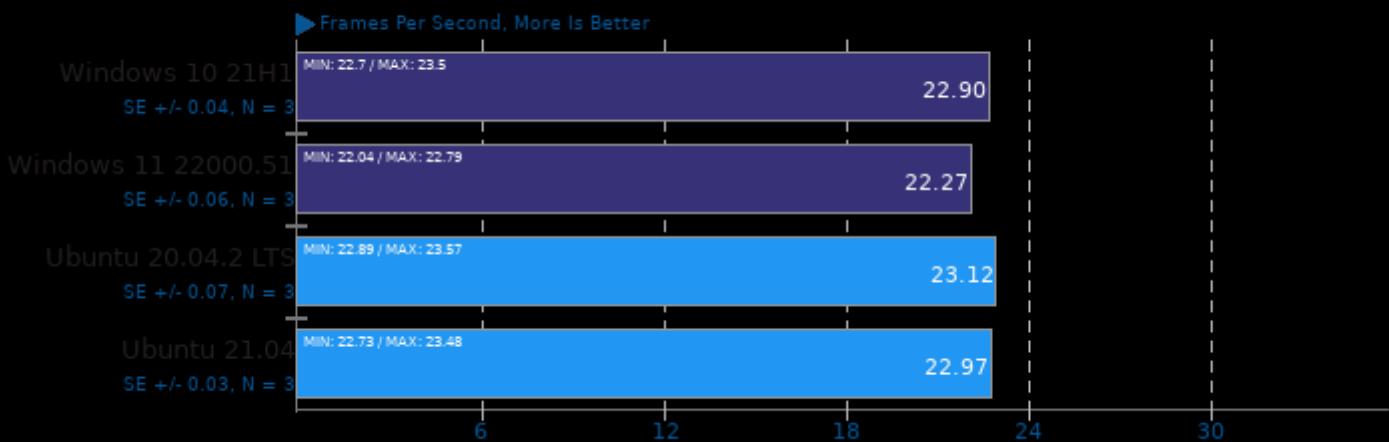
Embree 3.13

Binary: Pathtracer - Model: Asian Dragon



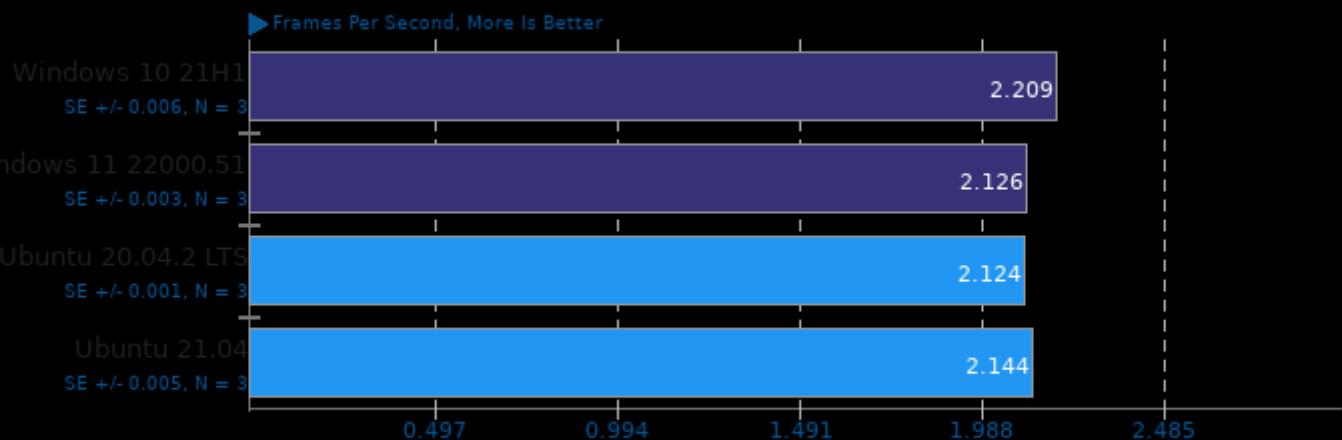
Embree 3.13

Binary: Pathtracer ISPC - Model: Asian Dragon



SVT-AV1 0.8.7

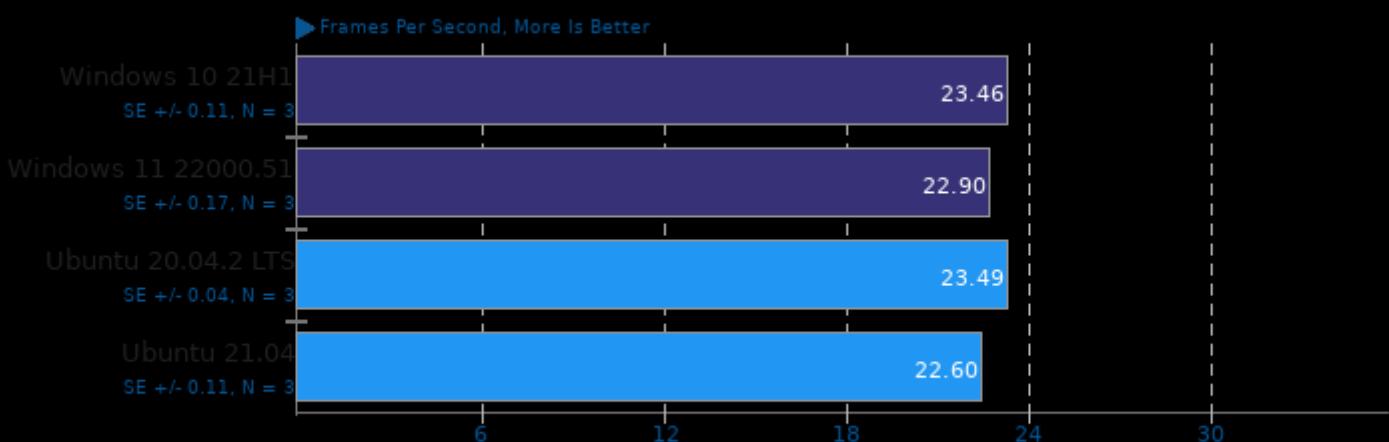
Encoder Mode: Preset 4 - Input: Bosphorus 4K



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

SVT-AV1 0.8.7

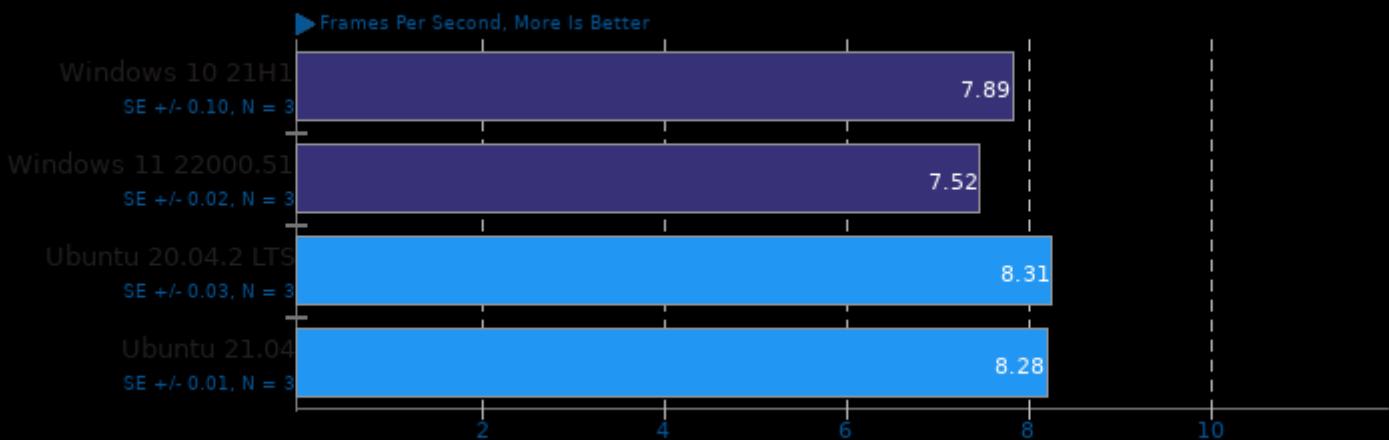
Encoder Mode: Preset 8 - Input: Bosphorus 4K



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

VP9 libvpx Encoding 1.10.0

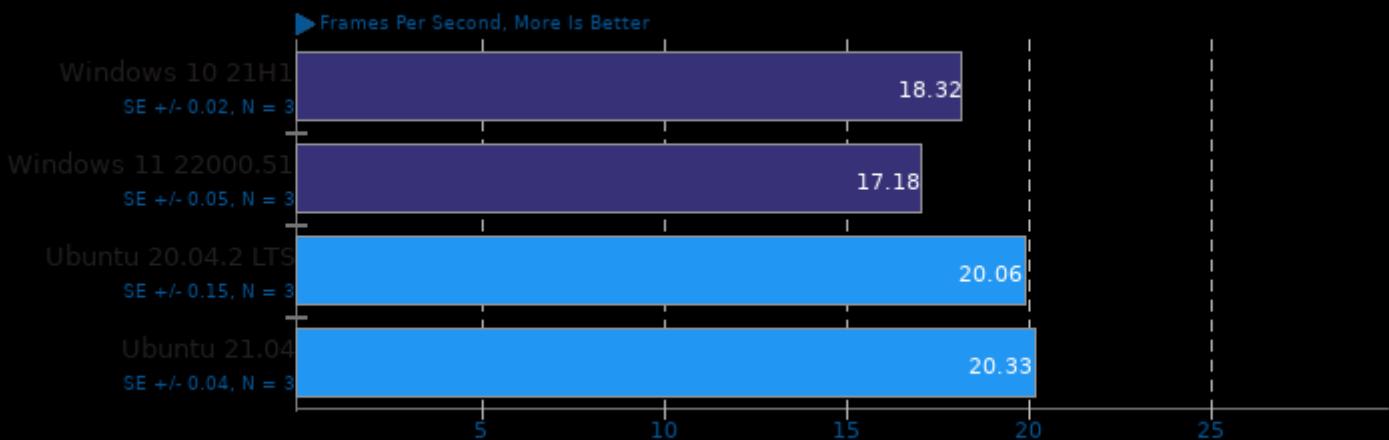
Speed: Speed 0 - Input: Bosphorus 4K



1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11

VP9 libvpx Encoding 1.10.0

Speed: Speed 5 - Input: Bosphorus 4K

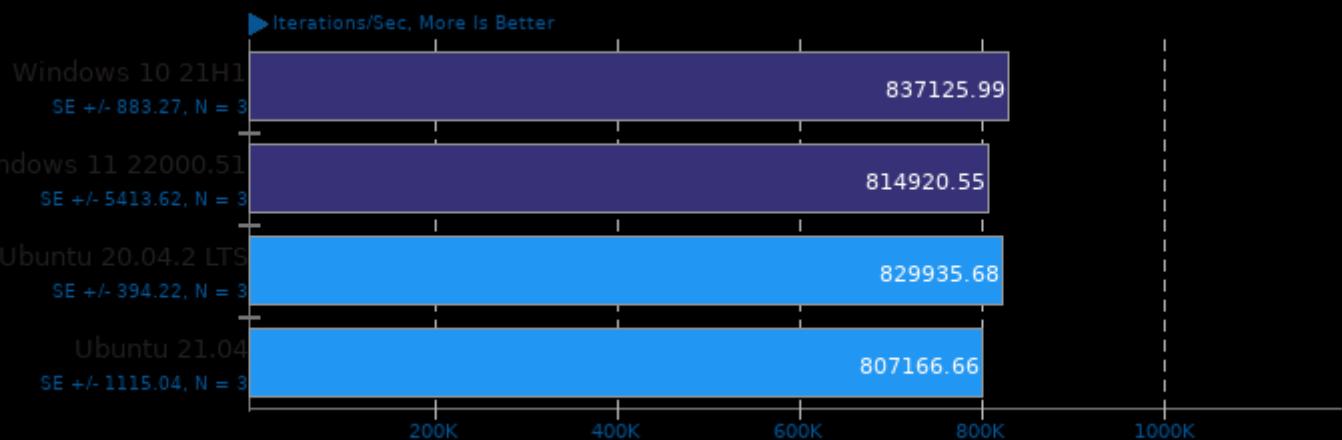


1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

Coremark 1.0

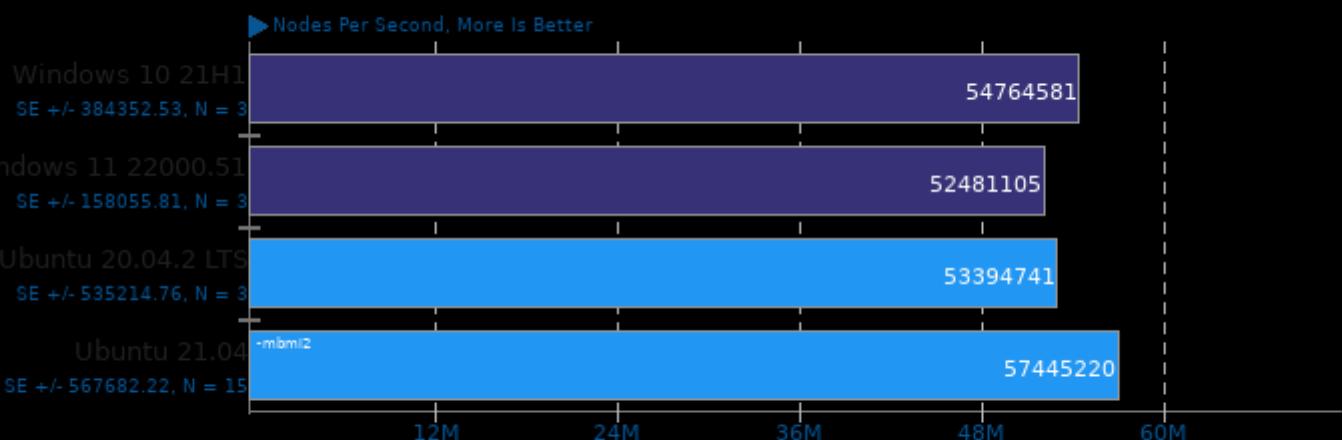
CoreMark Size 666 - Iterations Per Second



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

Stockfish 13

Total Time

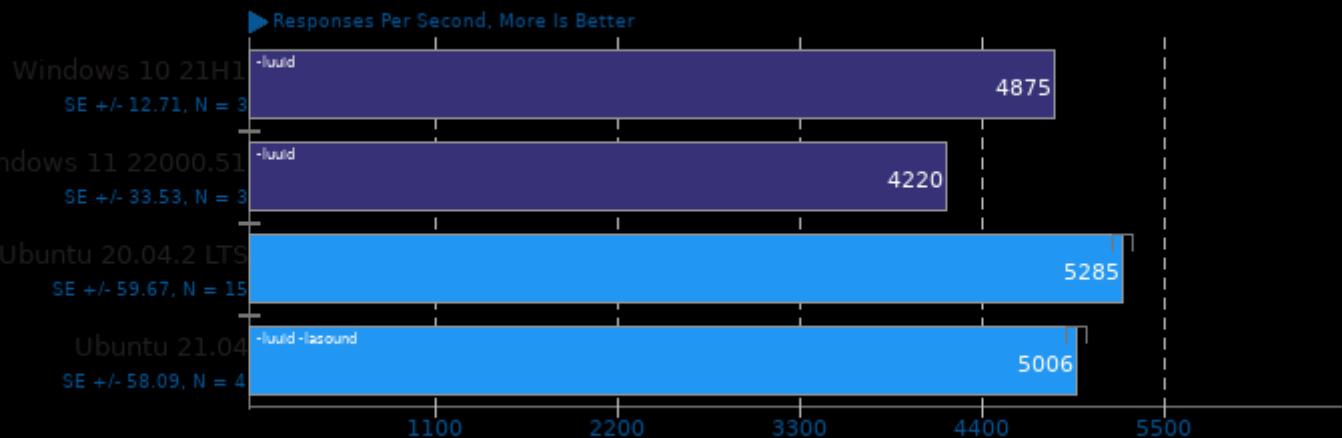


1. (CXX) g++ options: -lgcov -m64 -lpthread -fno-exceptions -std=c++17 -fprofile-use -fno-peel-loops -fno-tracer -pedantic -O3 -msse -msse3 -mpopcnt -mavx -mavx2

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

PJSIP 2.11

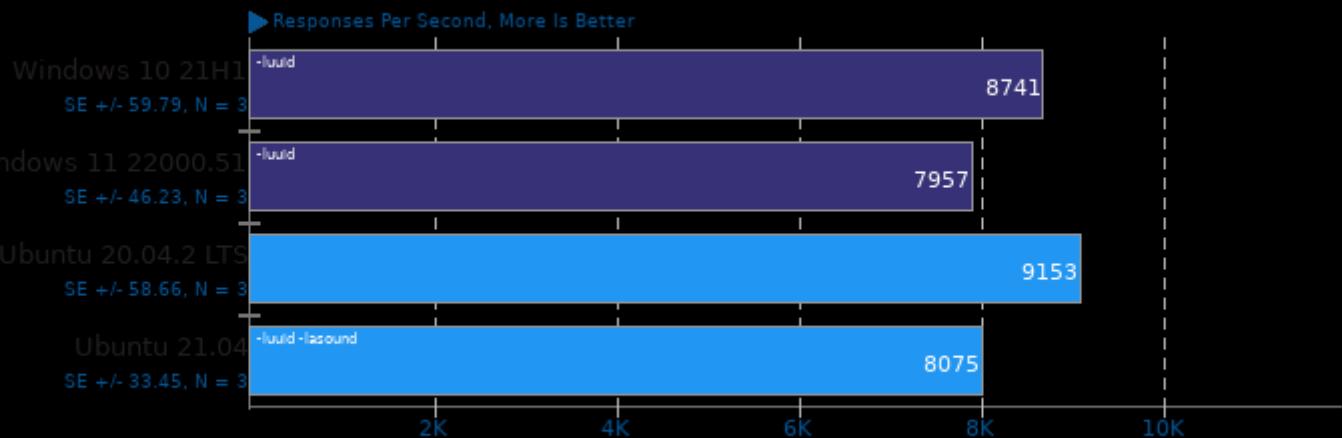
Method: INVITE



1. (CC) gcc options: -stdc++ -lssl -lcrypto -lm -lrt -lpthread -O2

PJSIP 2.11

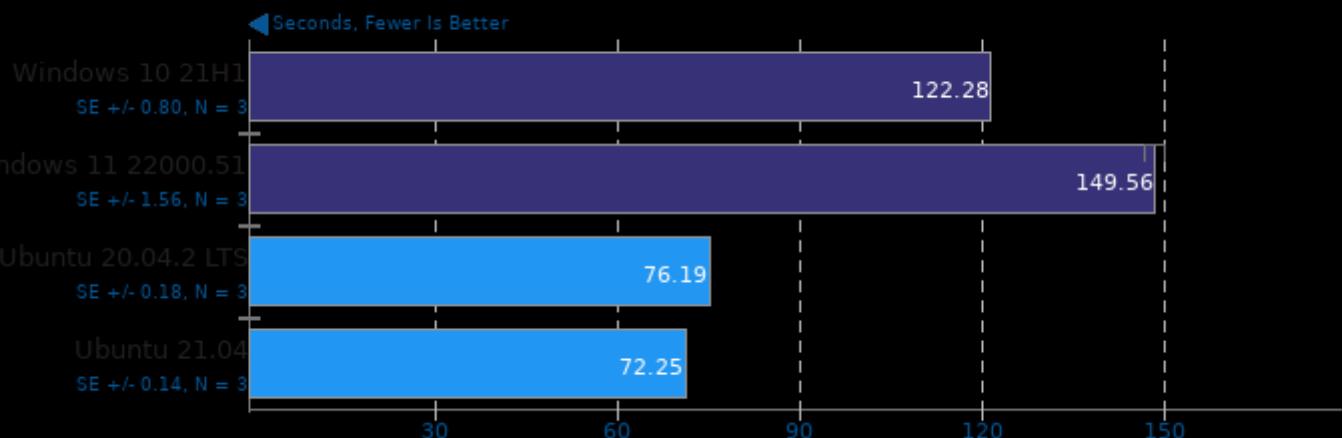
Method: OPTIONS, Stateful



1. (CC) gcc options: -stdc++ -lssl -lcrypto -lm -lrt -lpthread -O2

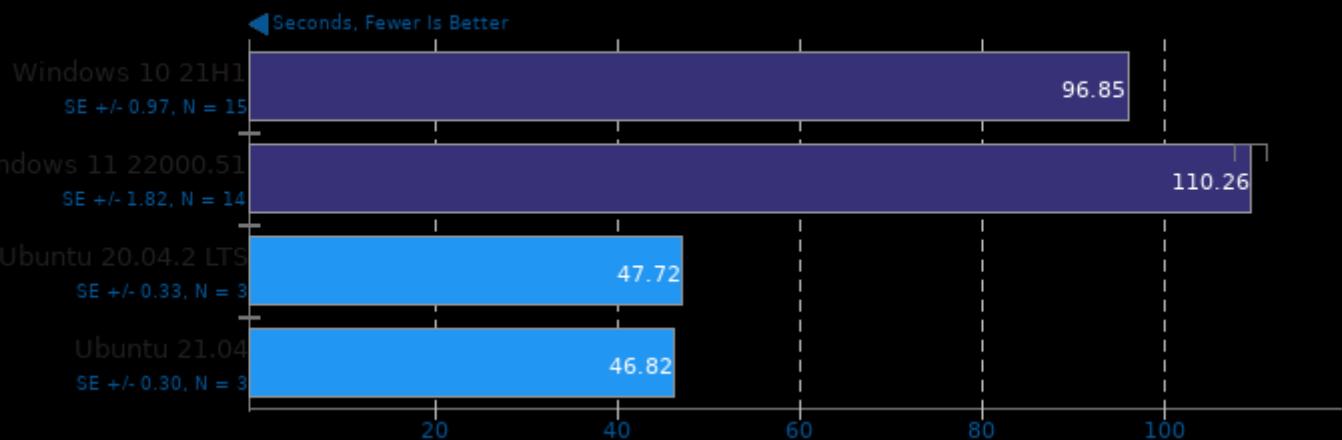
Timed Godot Game Engine Compilation 3.2.3

Time To Compile



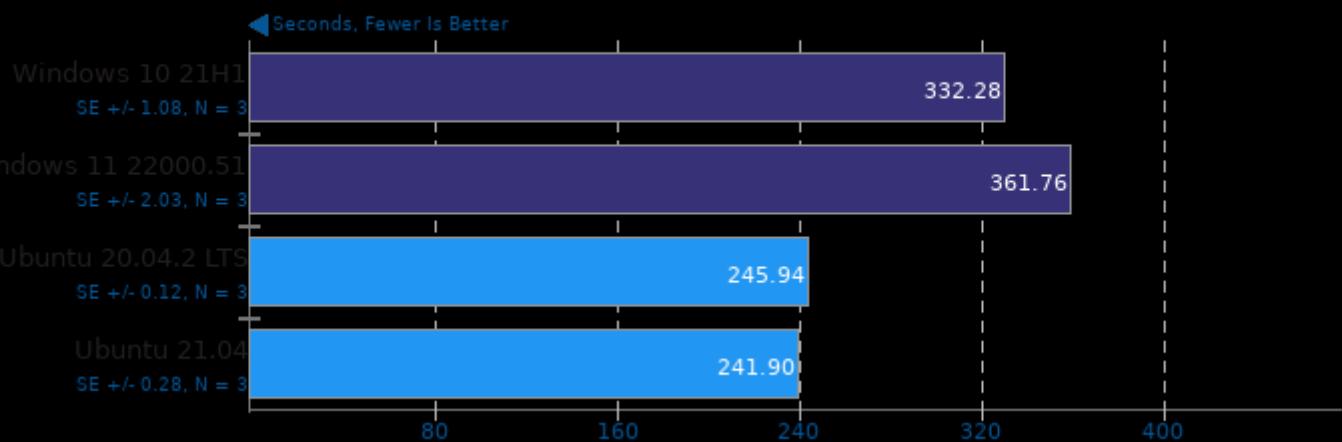
Timed Linux Kernel Compilation 5.10.20

Time To Compile



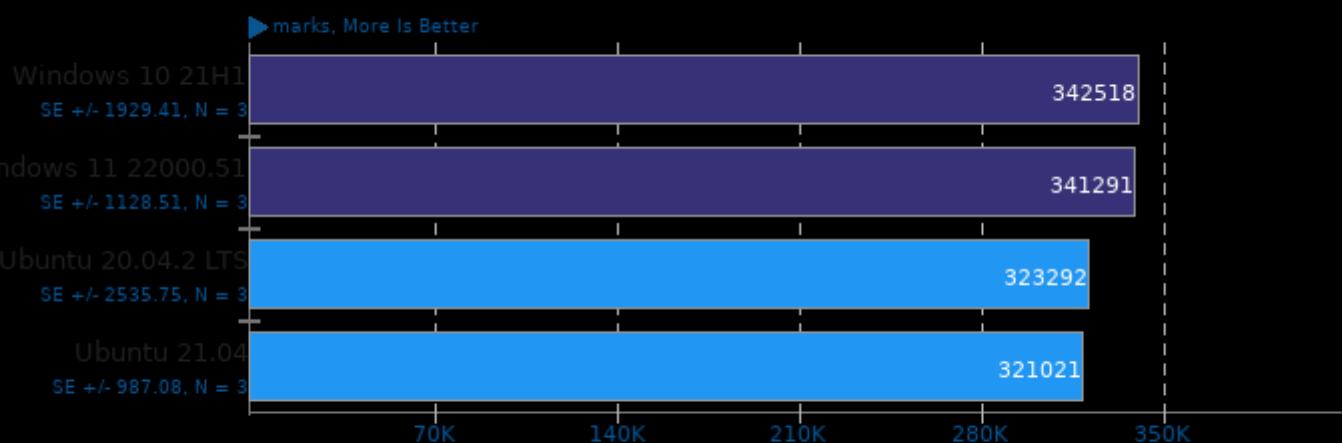
Timed Node.js Compilation 15.11

Time To Compile



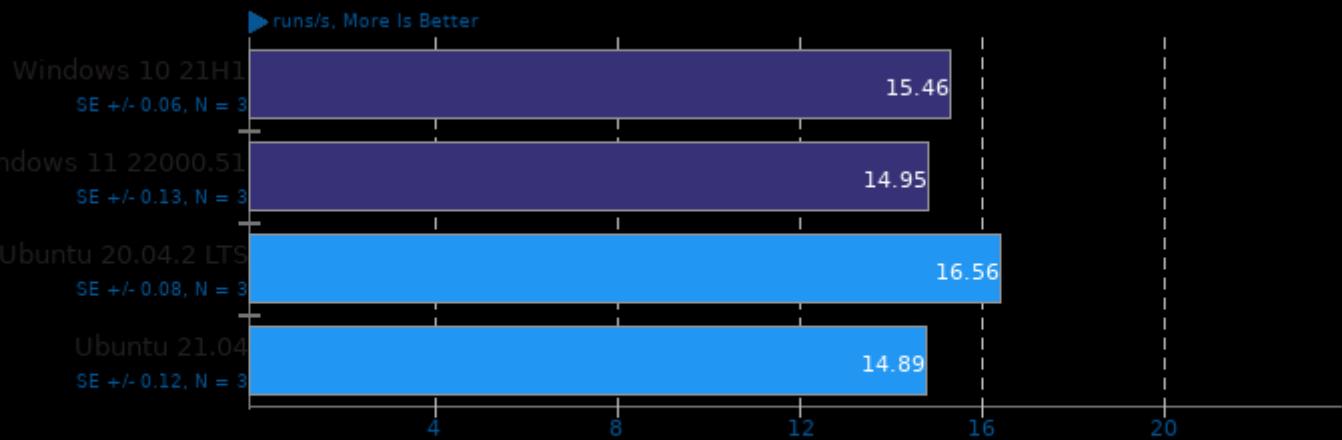
SecureMark 1.0.4

Benchmark: SecureMark-TLS



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

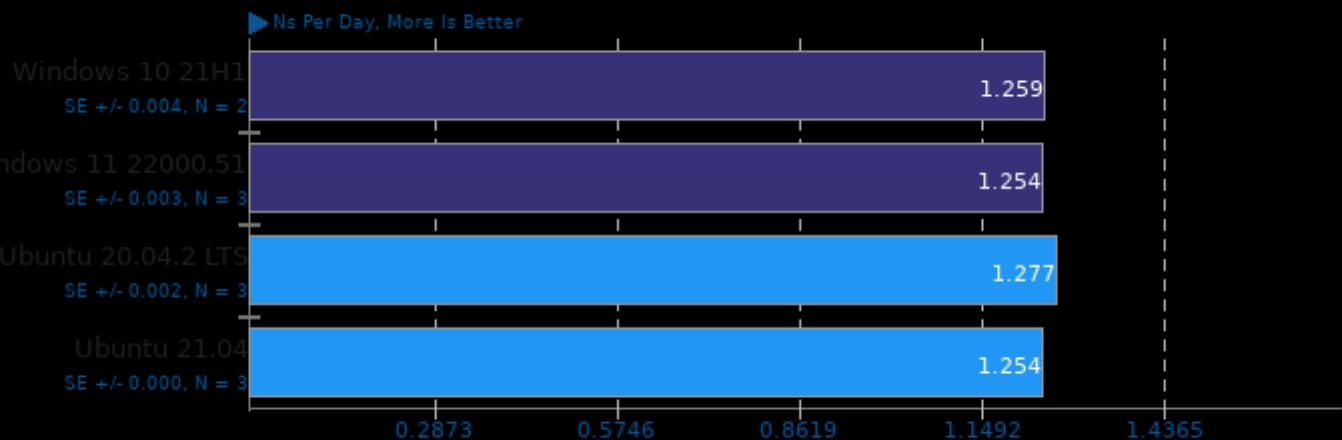
Node.js V8 Web Tooling Benchmark



1. Windows 10 21H1: Nodejs
 2. Windows 11 22000.51: Nodejs
 3. Ubuntu 20.04.2 LTS: Nodejs
 4. Ubuntu 21.04: Nodejs
 v12.21.0

GROMACS 2021.2

Implementation: MPI CPU - Input: water_GMX50_bare

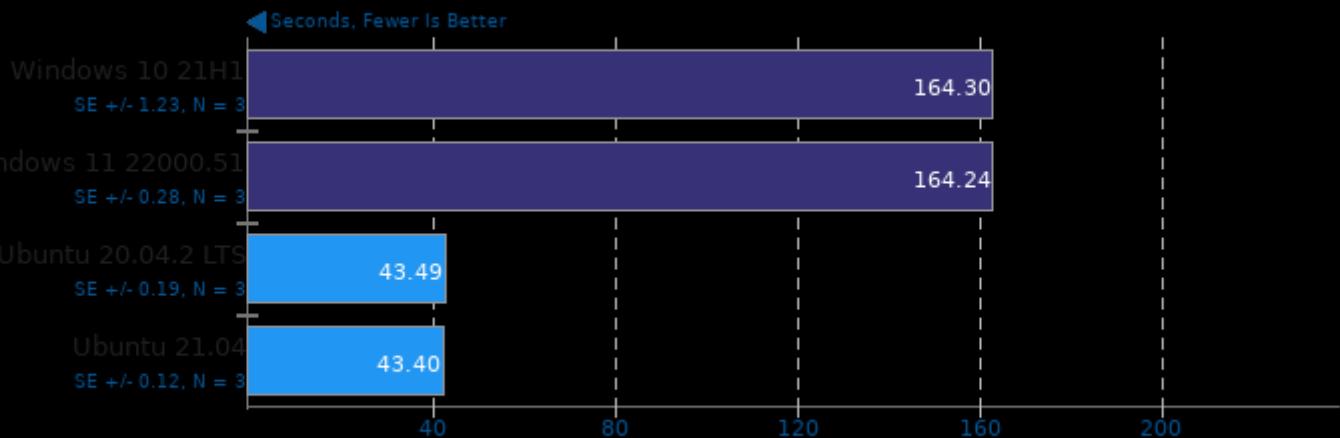


1. (CXX) g++ options: -O3 -pthread

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

SQLite Speedtest 3.30

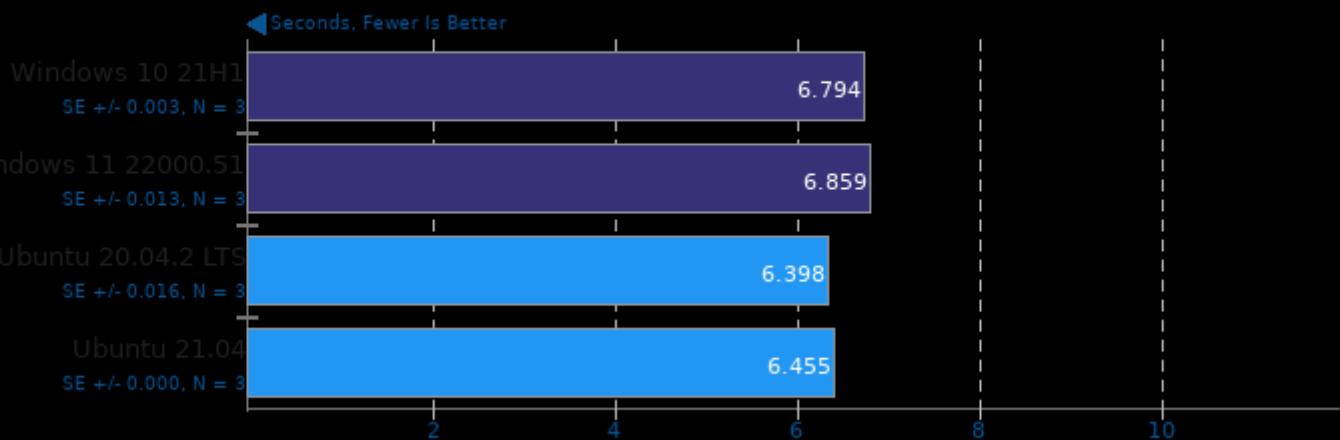
Timed Time - Size 1,000



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

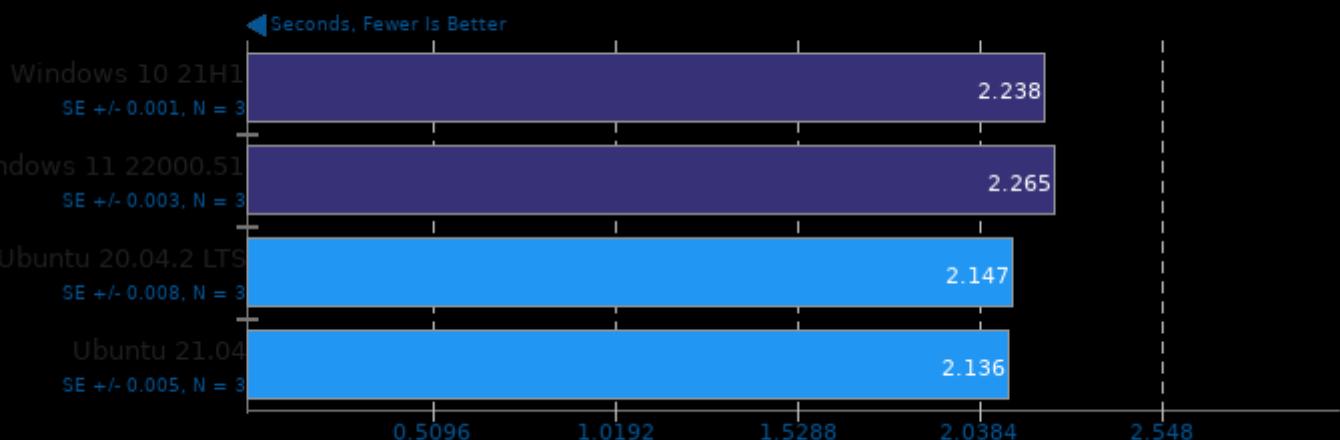
KTX-Software toktx 4.0

Settings: UASTC 3



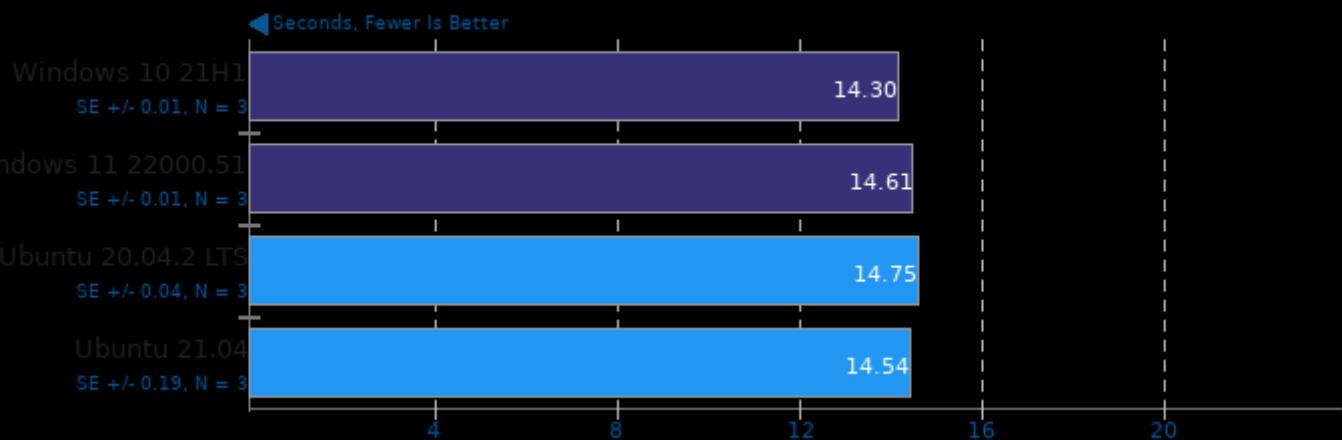
KTX-Software toktx 4.0

Settings: Zstd Compression 9



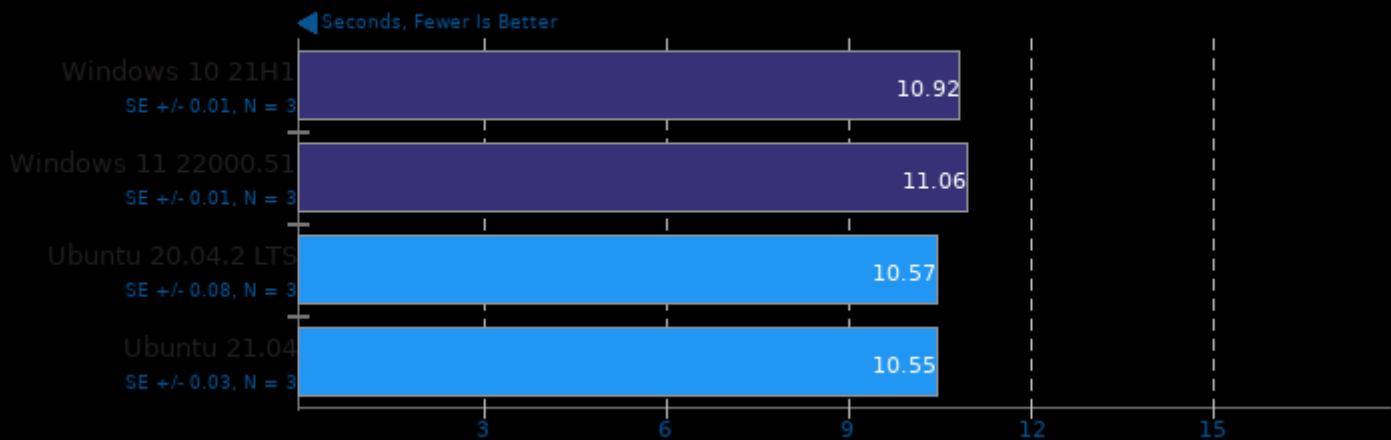
KTX-Software toktx 4.0

Settings: Zstd Compression 19



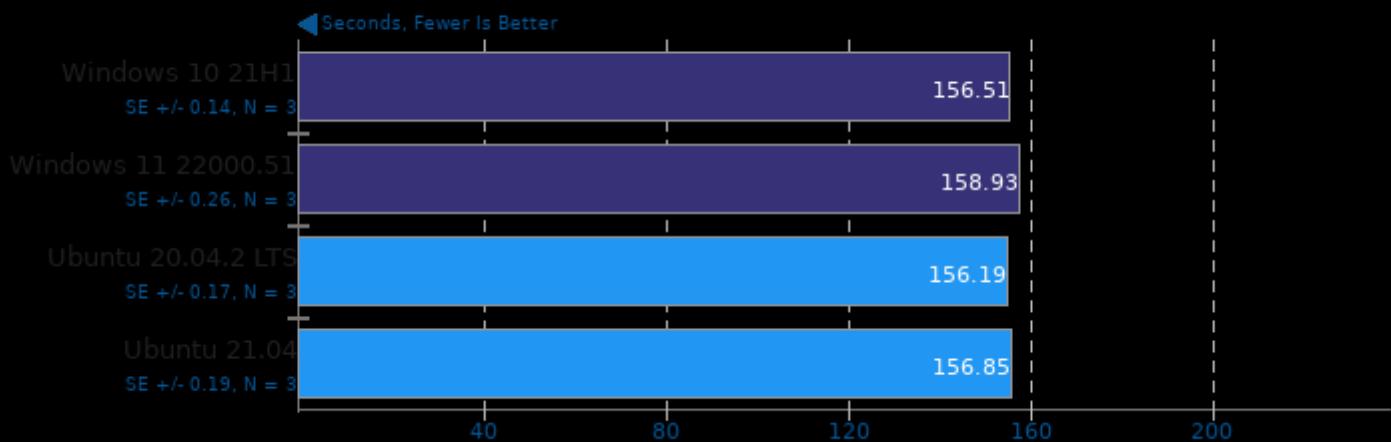
KTX-Software toktx 4.0

Settings: UASTC 3 + Zstd Compression 19



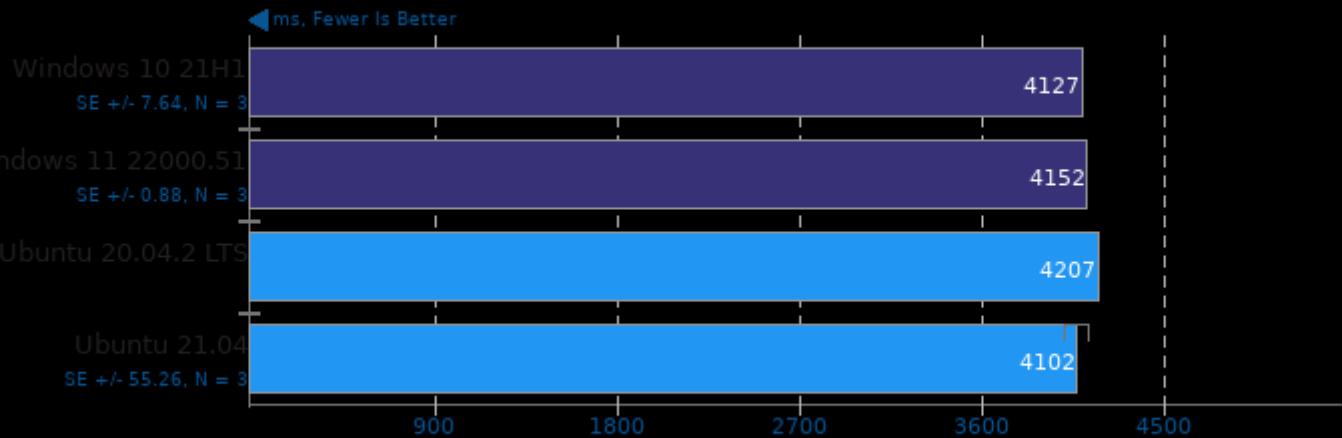
KTX-Software toktx 4.0

Settings: UASTC 4 + Zstd Compression 19



Google Draco 1.4.1

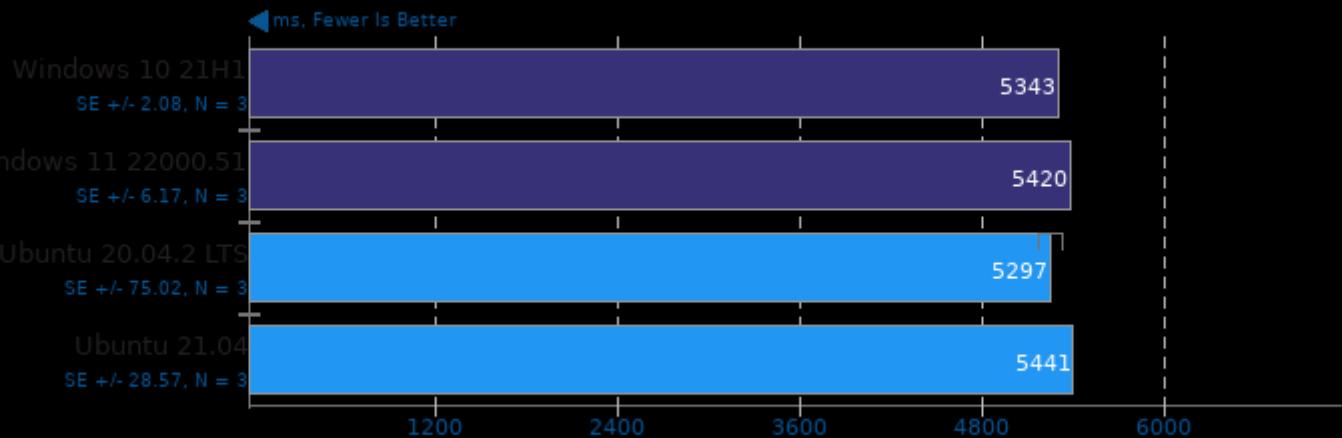
Model: Lion



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

Google Draco 1.4.1

Model: Church Facade

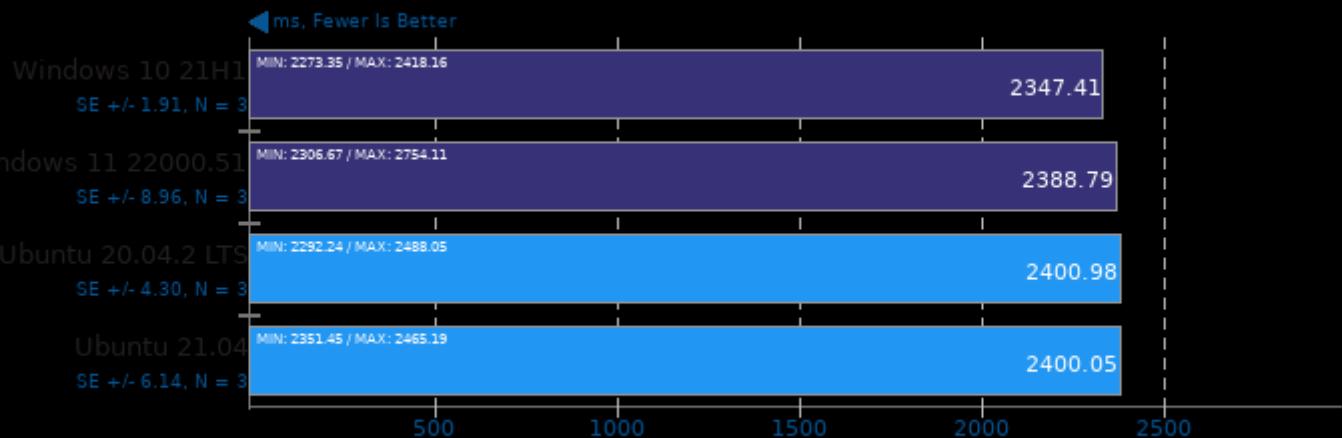


1. (CXX) g++ options: -O3

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

TNN 0.3

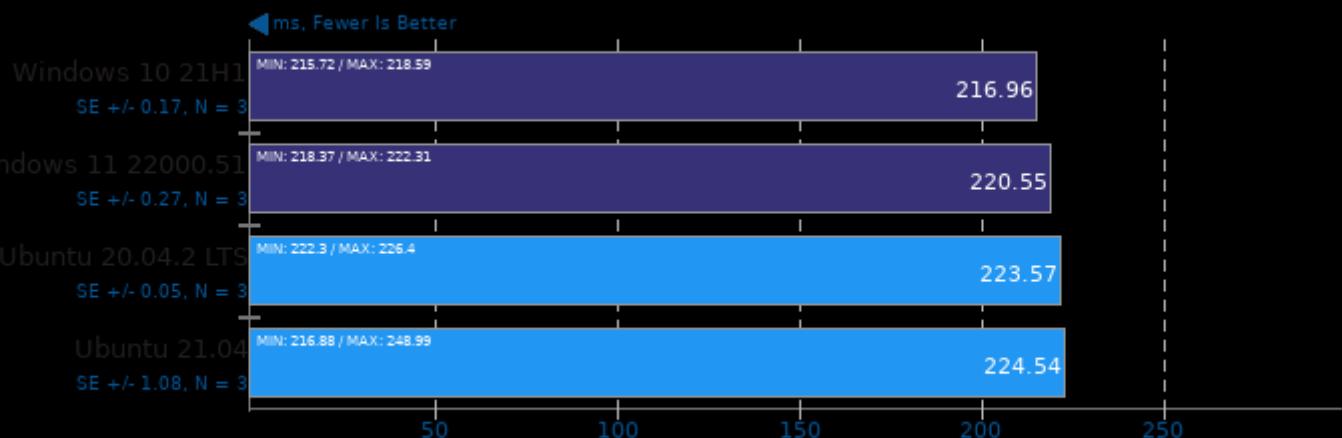
Target: CPU - Model: DenseNet



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

TNN 0.3

Target: CPU - Model: MobileNet v2

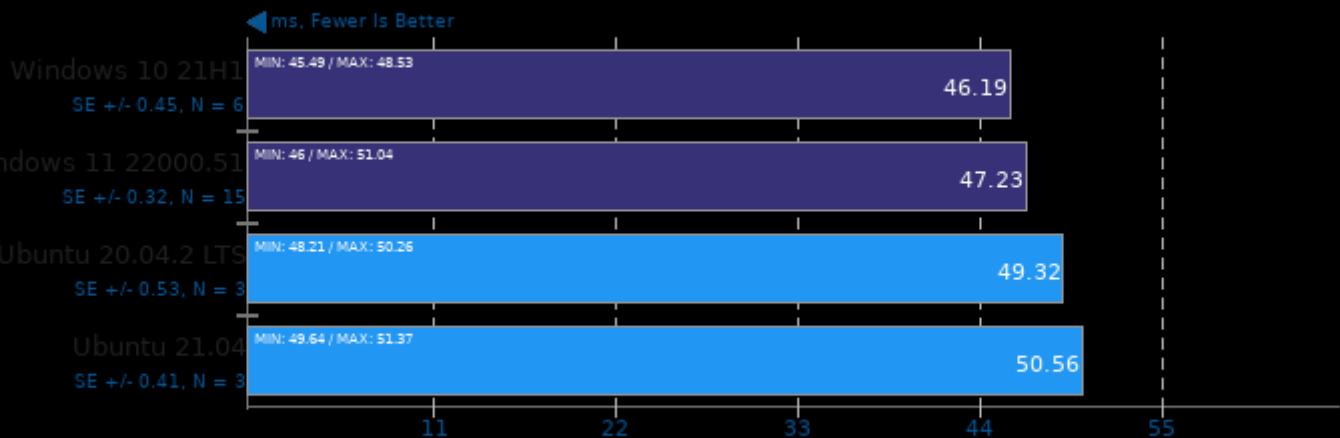


1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -fvisibility=default -O3 -rdynamic -ldl

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

TNN 0.3

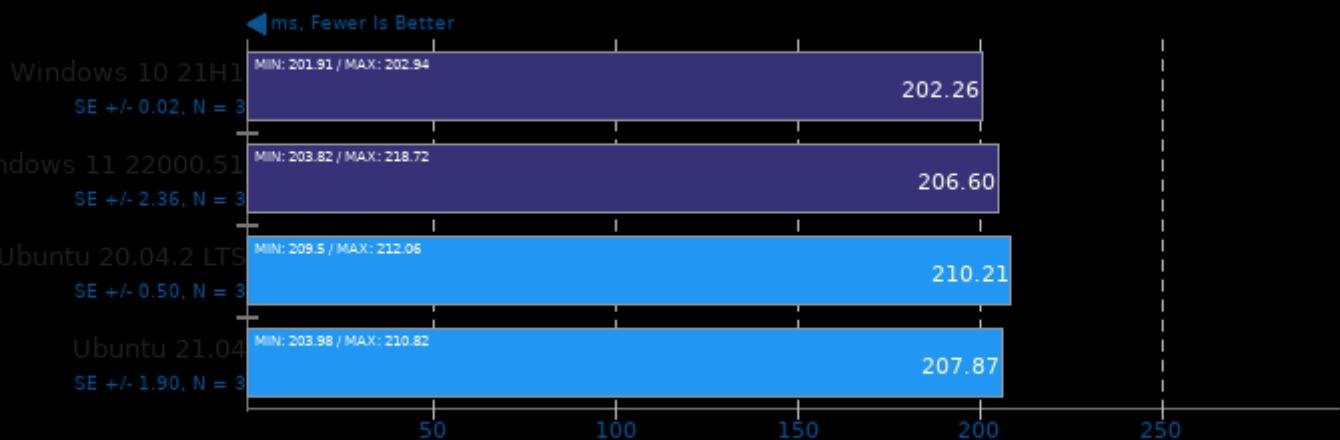
Target: CPU - Model: SqueezeNet v2



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

TNN 0.3

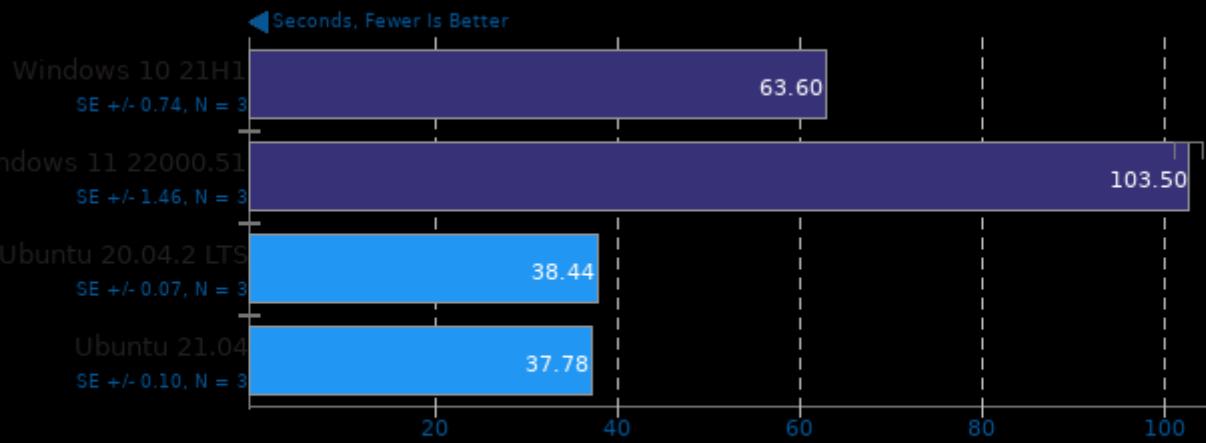
Target: CPU - Model: SqueezeNet v1.1



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

Git

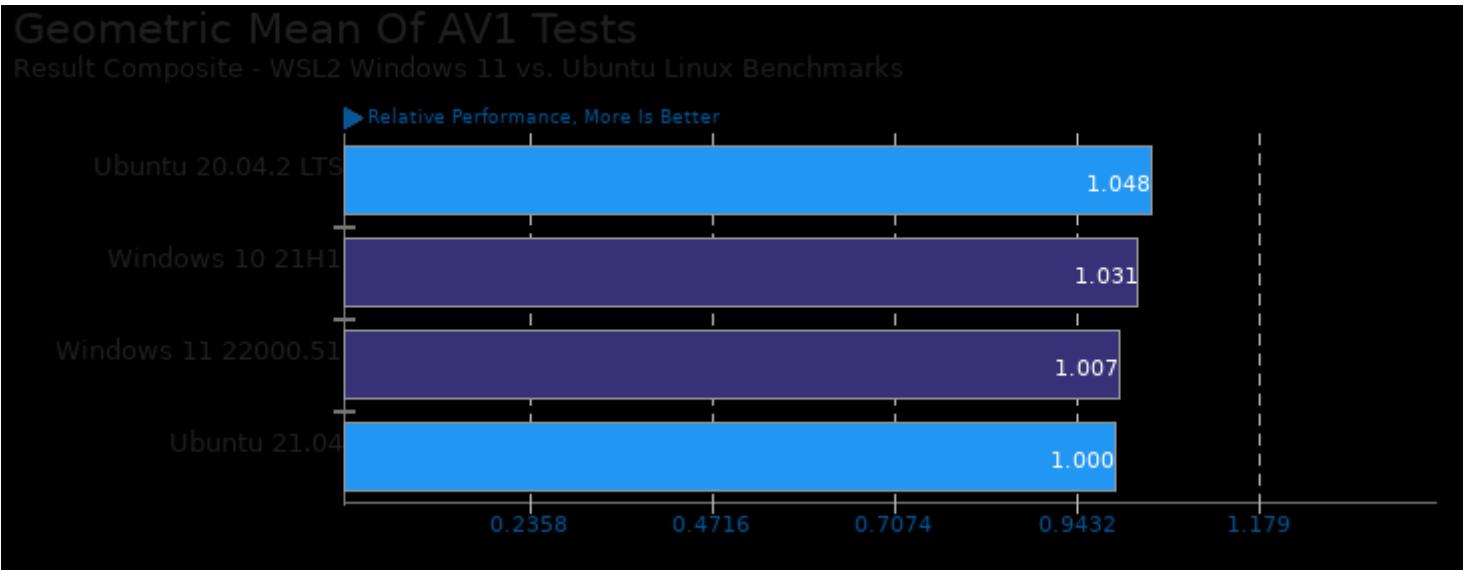
Time To Complete Common Git Commands



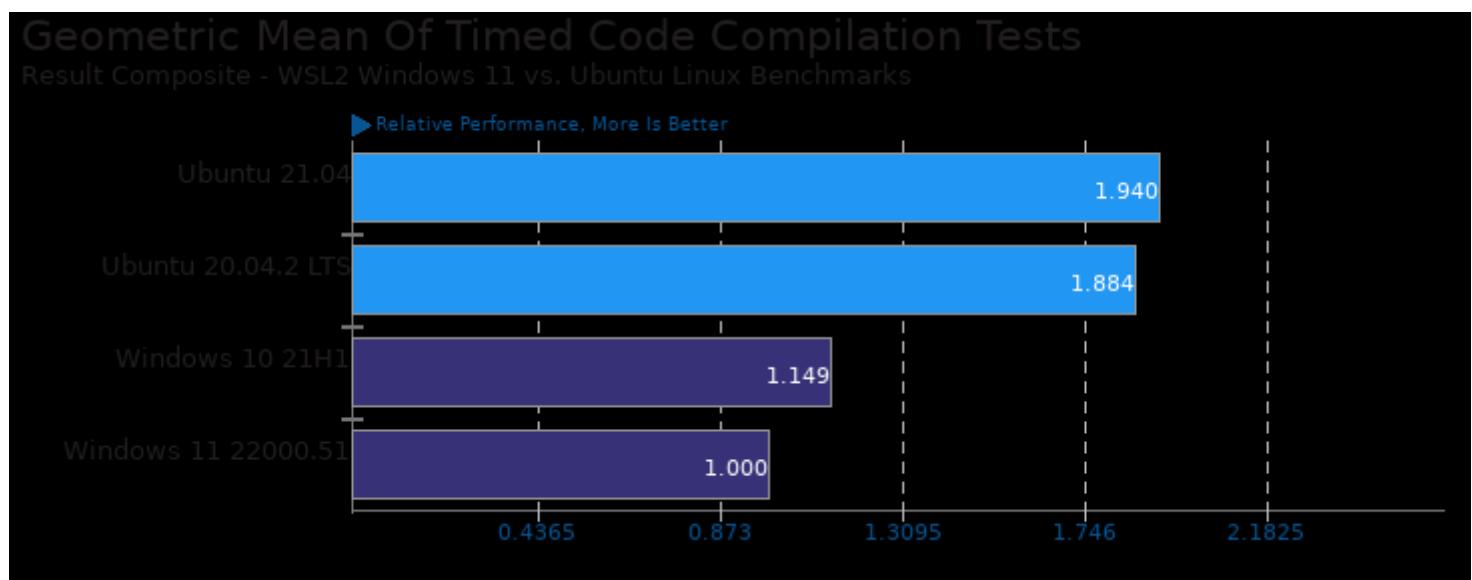
1. Windows 10 21H1: git version 2.25.1
2. Windows 11 22000.51: git version 2.25.1
3. Ubuntu 20.04.2 LTS: git version 2.25.1
4. Ubuntu 21.04: git version 2.30.2

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

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



Geometric mean based upon tests: pts/aom-av1 and pts/svt-av1

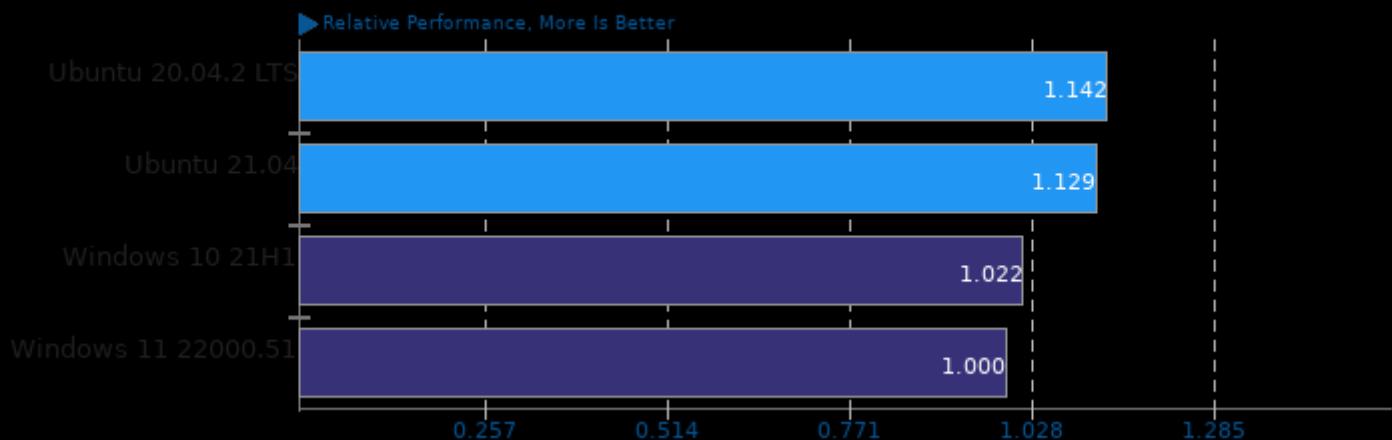


Geometric mean based upon tests: pts/build-linux-kernel, pts/build-godot and pts/build-nodejs

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

Geometric Mean Of C/C++ Compiler Tests

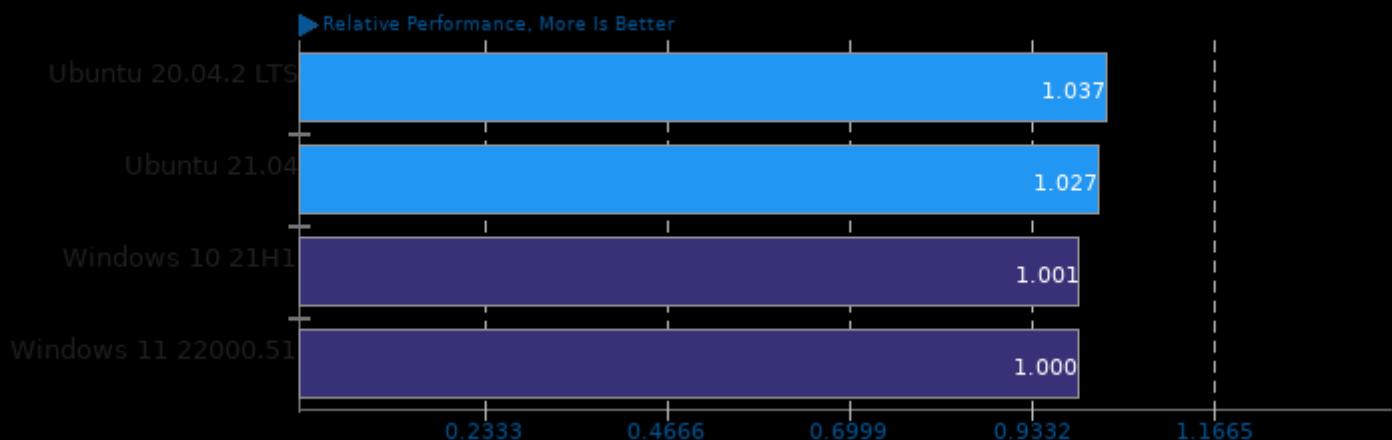
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/vpxenc, pts/stockfish, pts/sqlite-speedtest, pts/compress-zstd, pts/aom-av1, pts/svt-av1 and pts/gromacs

Geometric Mean Of Compression Tests

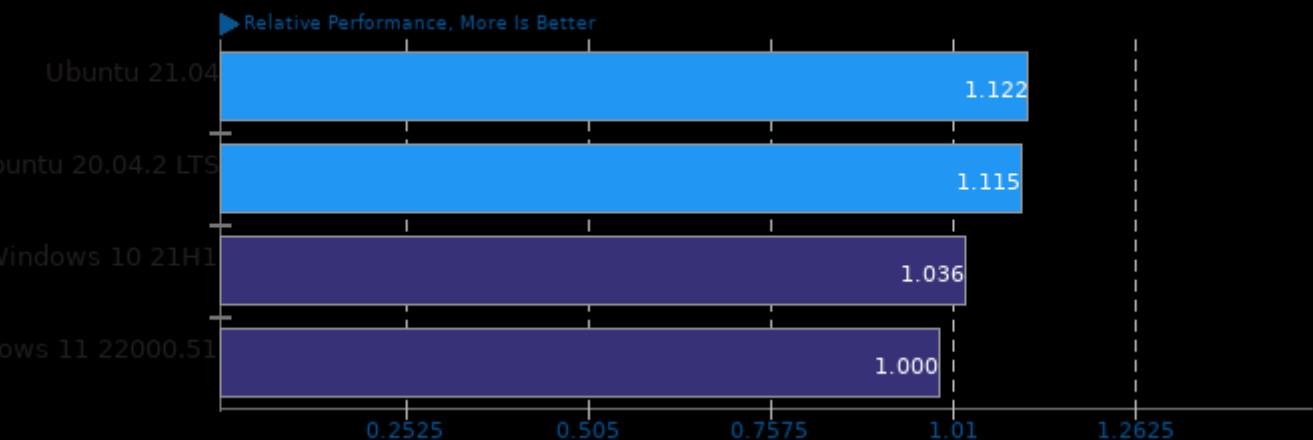
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/compress-zstd and pts/blosc

Geometric Mean Of CPU Massive Tests

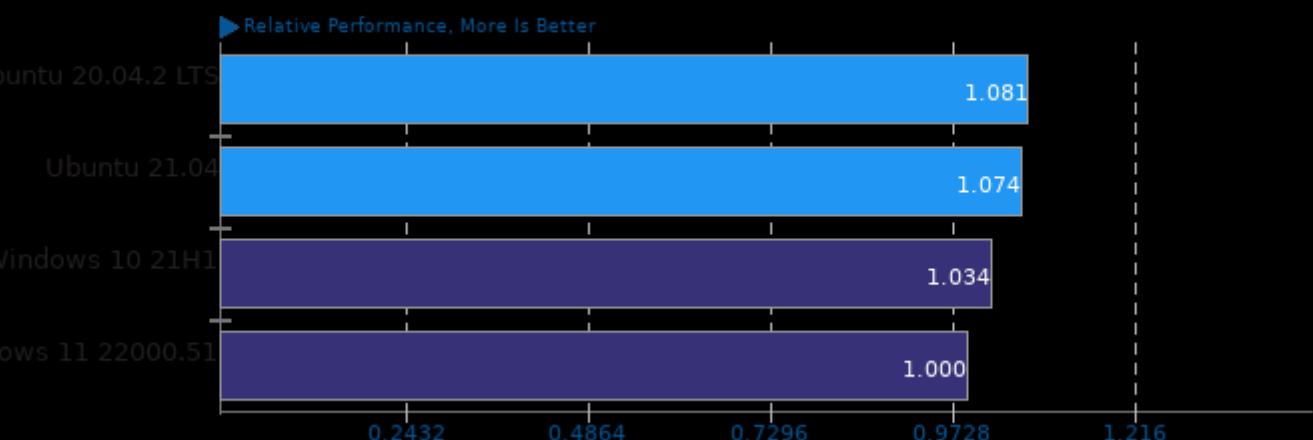
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/build-linux-kernel, pts/compress-zstd, pts/svt-av1, pts/vpxenc, pts/namd and pts/stockfish

Geometric Mean Of Creator Workloads Tests

Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

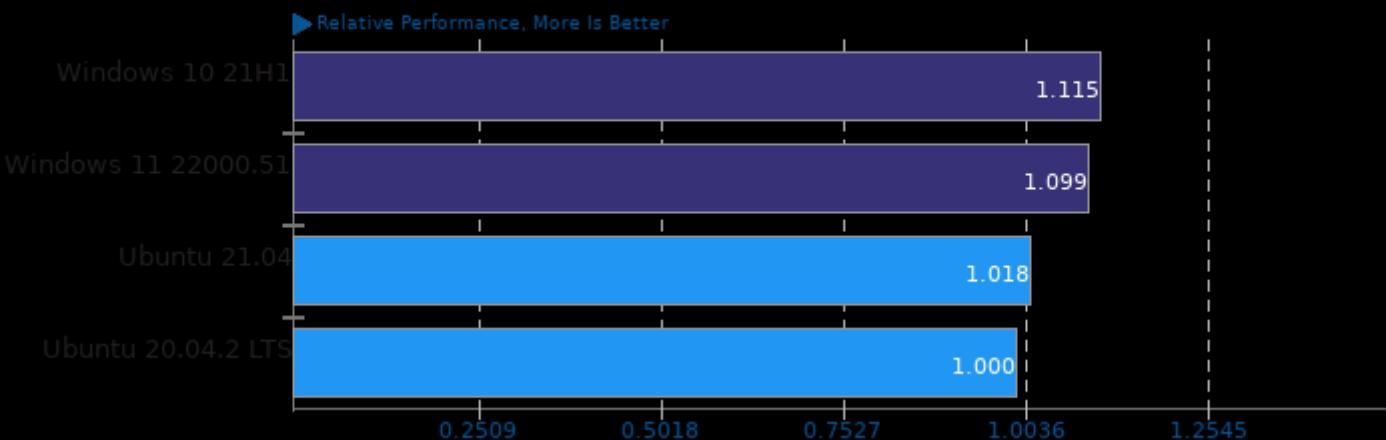


Geometric mean based upon tests: pts/vpxenc, pts/aom-av1, pts/svt-av1, pts/embree, pts/toktx, pts/draco and pts/build-godot

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

Geometric Mean Of Cryptography Tests

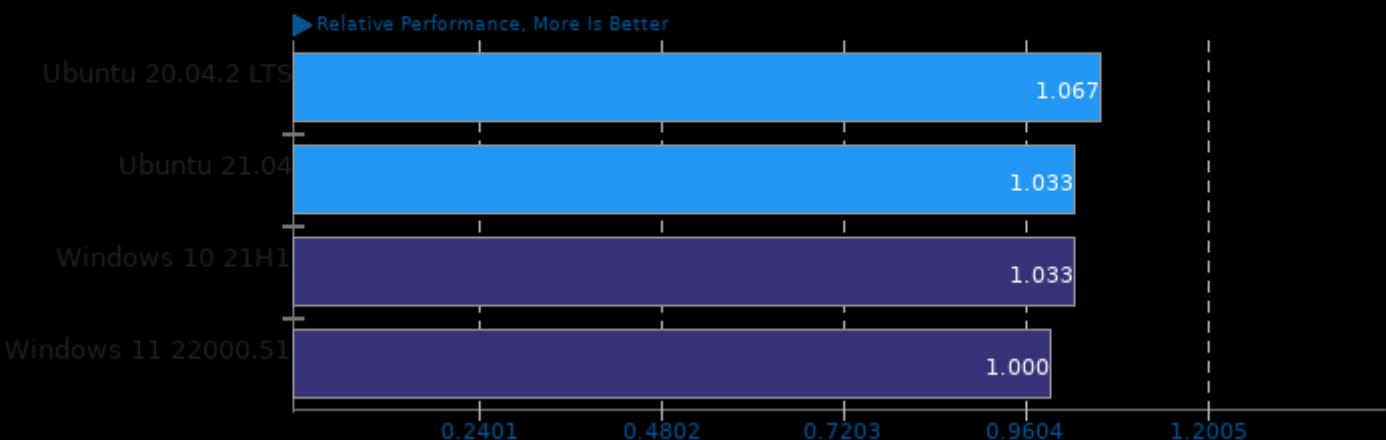
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/securemark and pts/chia-vdf

Geometric Mean Of Encoding Tests

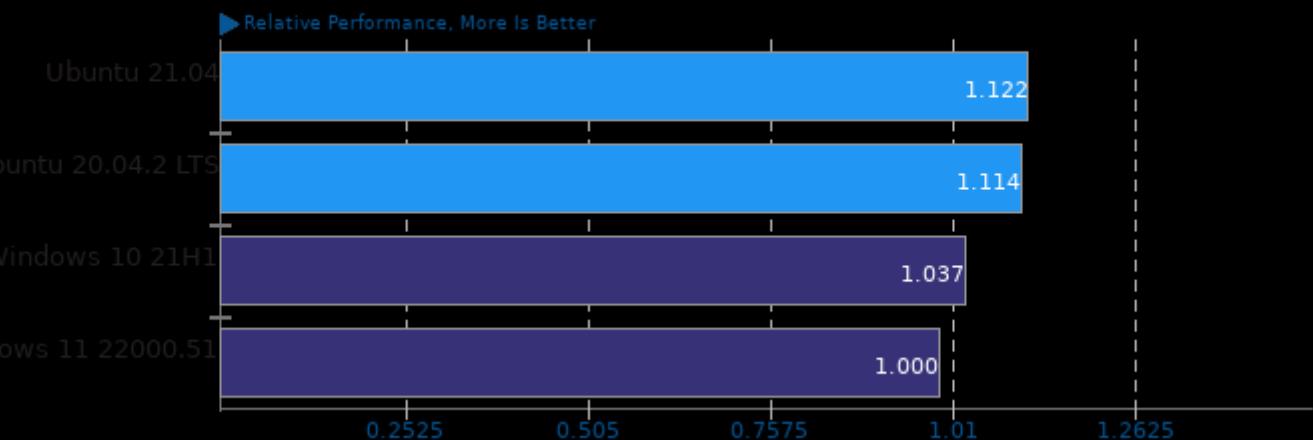
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/vpxenc, pts/aom-av1 and pts/svt-av1

Geometric Mean Of Game Development Tests

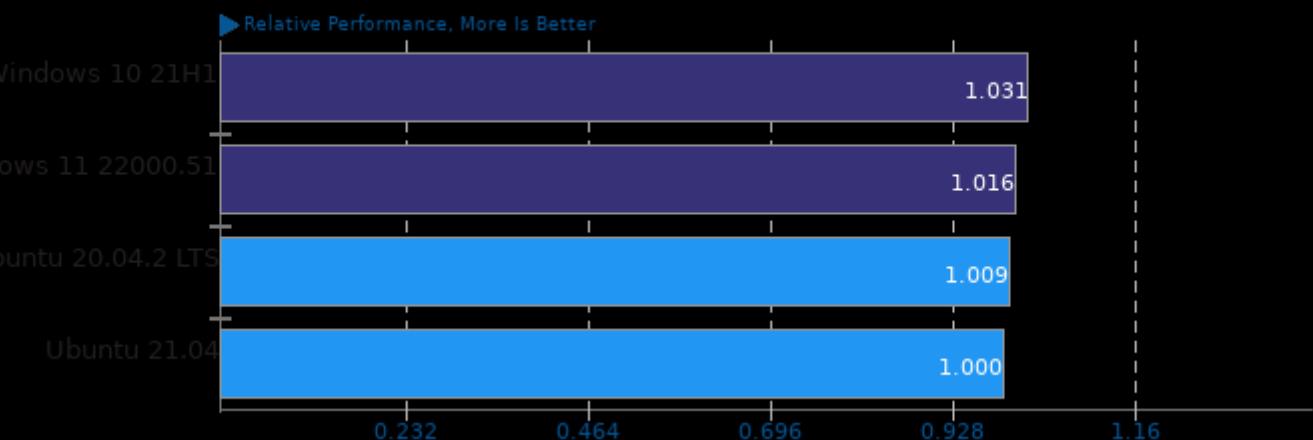
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/toktx, pts/draco and pts/build-godot

Geometric Mean Of HPC - High Performance Computing Tests

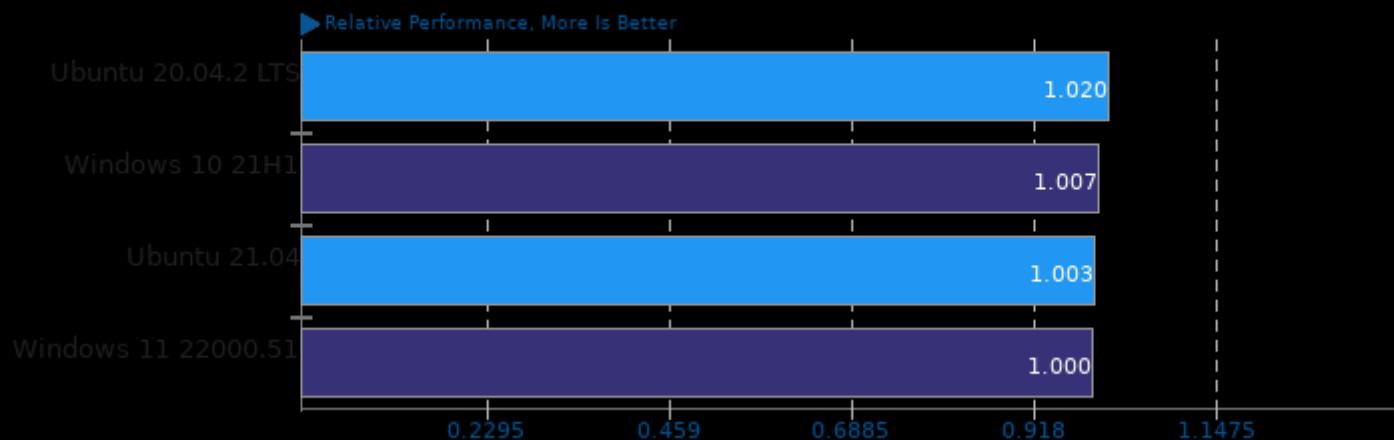
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



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

Geometric Mean Of Molecular Dynamics Tests

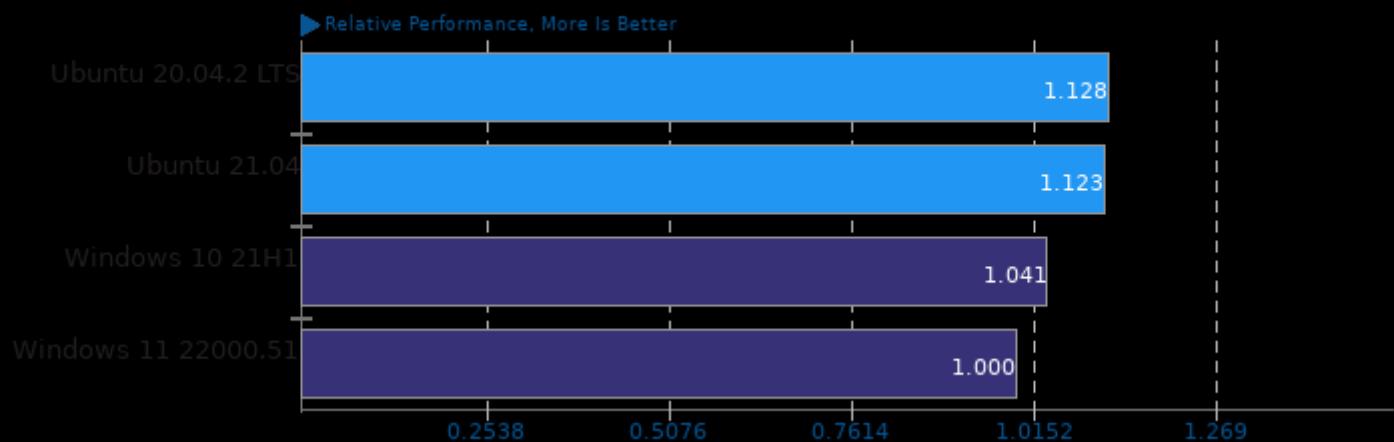
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



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

Geometric Mean Of Multi-Core Tests

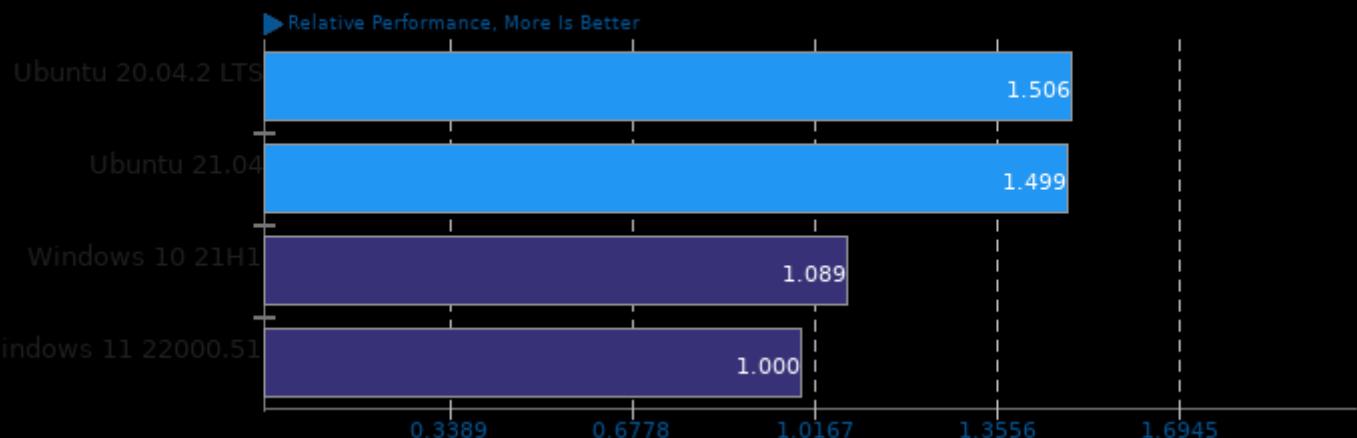
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/stockfish, pts/coremark, pts/vpxenc, pts/aom-av1, pts/svt-av1, pts/namd, pts/gromacs, pts/compress-zstd, pts/build-linux-kernel, pts/build-godot, pts/build-nodejs and pts/embree

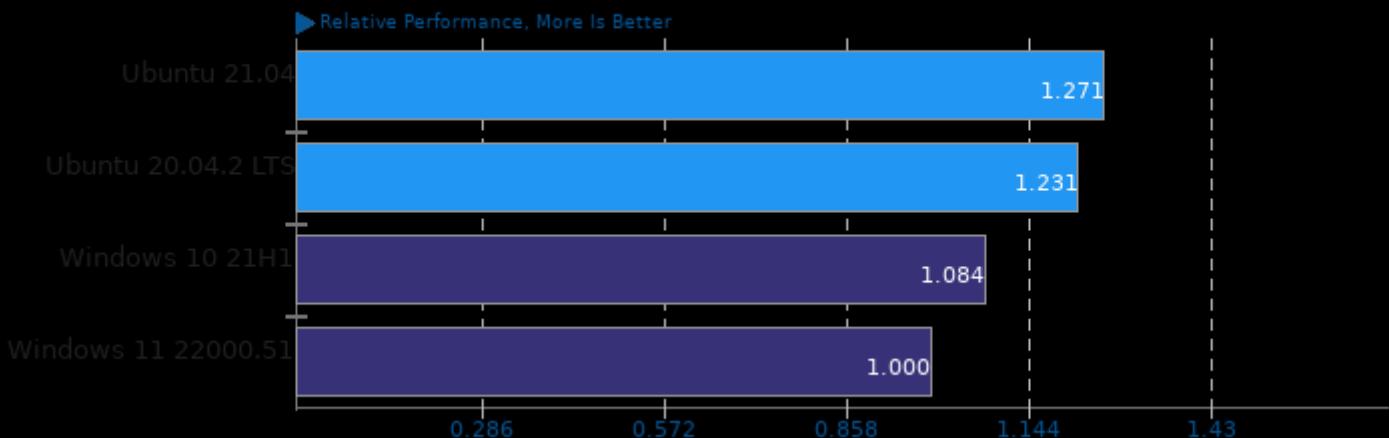
WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

Geometric Mean Of Programmer / Developer System Benchmarks Tests Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/sqlite-speedtest, pts/node-web-tooling, pts/git, pts/blosc, pts/compress-zstd, pts/build-linux-kernel, pts/build-godot and pts/build-nodejs

Geometric Mean Of Python Tests Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

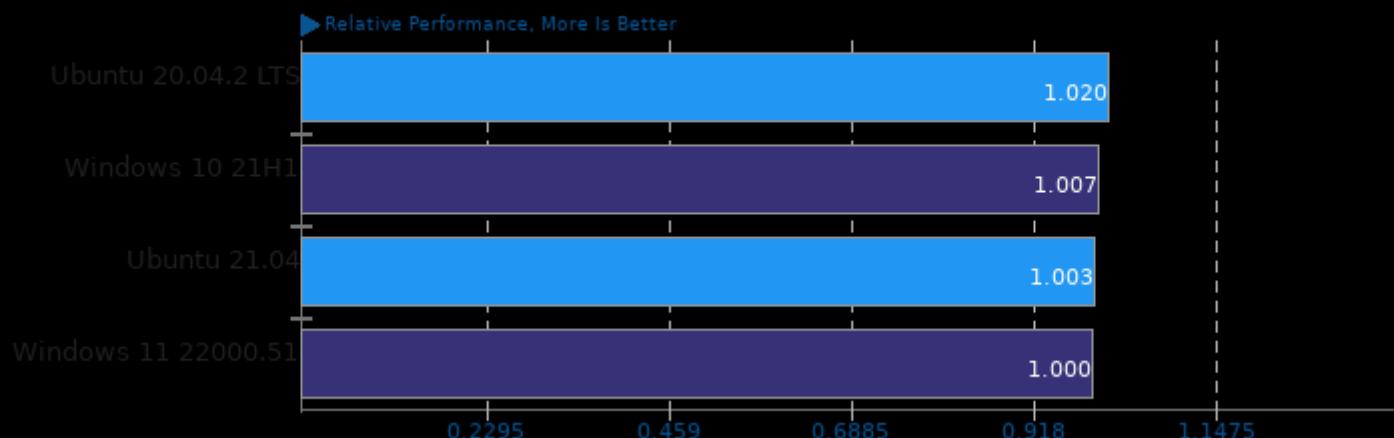


Geometric mean based upon tests: pts/chia-vdf, pts/build-godot and pts/build-nodejs

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

Geometric Mean Of Scientific Computing Tests

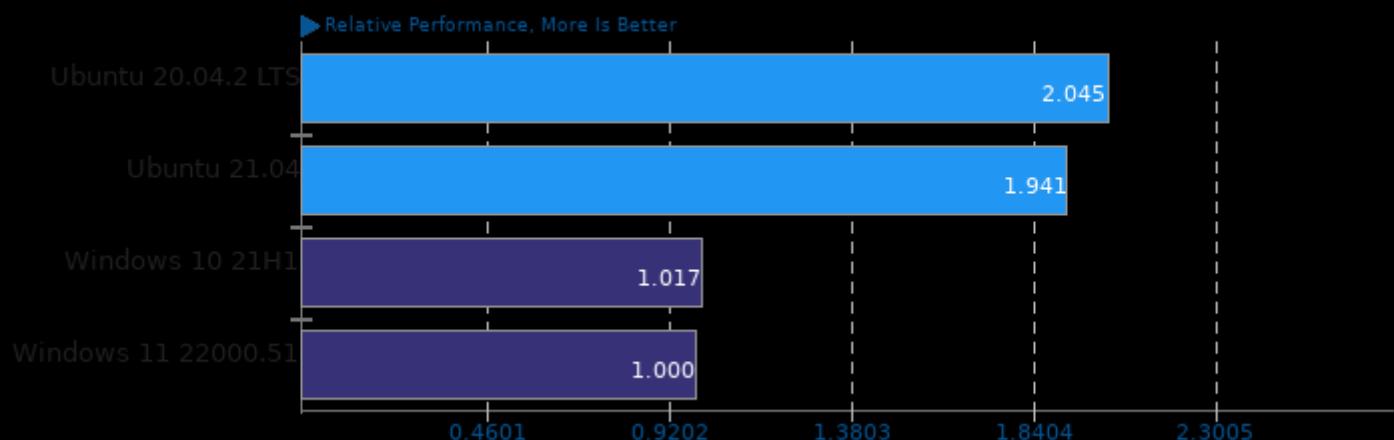
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



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

Geometric Mean Of Server Tests

Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

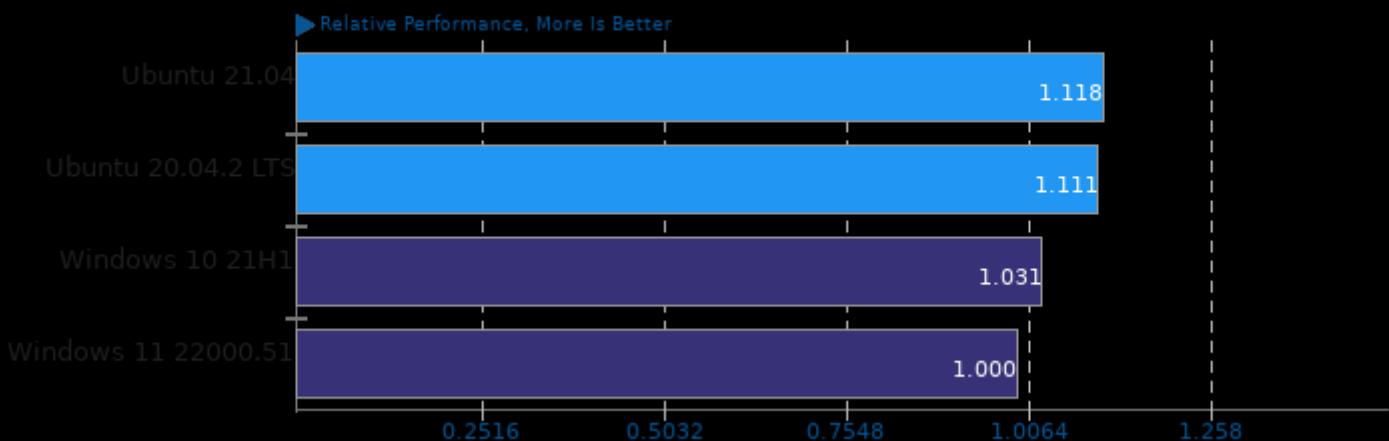


Geometric mean based upon tests: pts/node-web-tooling and pts/sqlite-speedtest

WSL2 Windows 11 vs. Ubuntu Linux Benchmarks

Geometric Mean Of Server CPU Tests

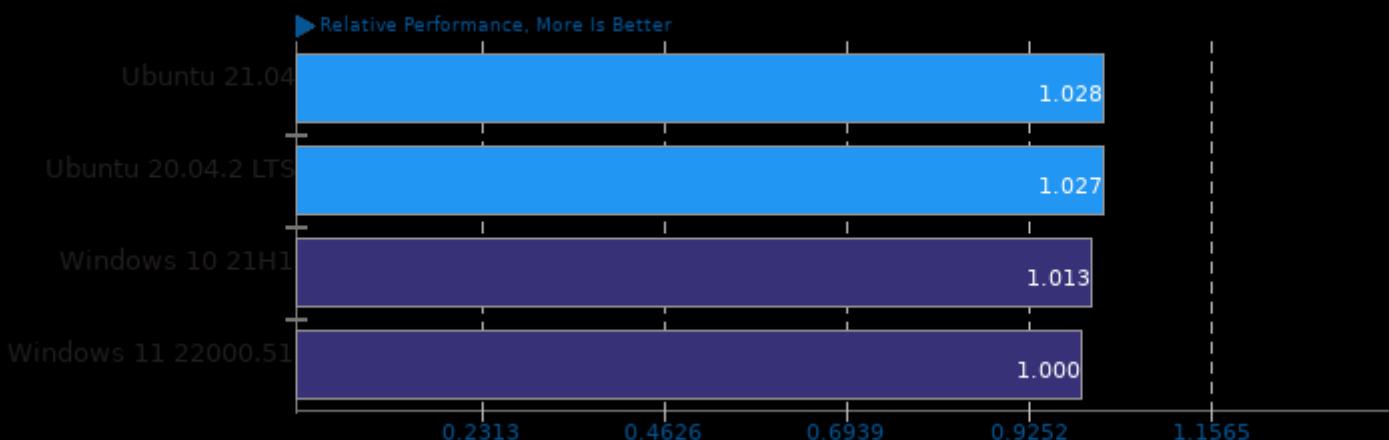
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/namd, pts/svt-av1, pts/stockfish, pts/build-linux-kernel and pts/compress-zstd

Geometric Mean Of Texture Compression Tests

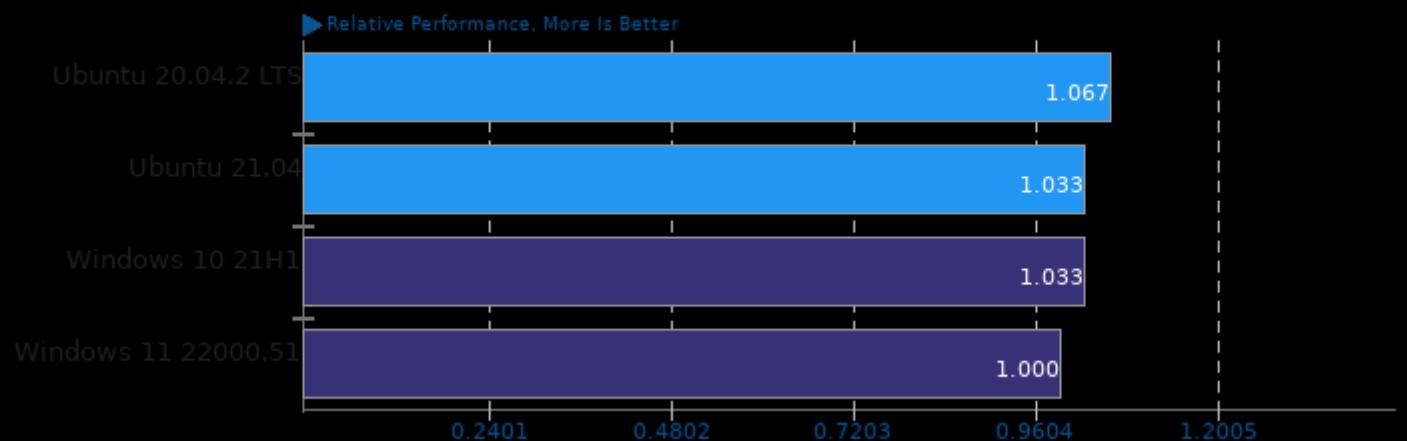
Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/toktx and pts/draco

Geometric Mean Of Video Encoding Tests

Result Composite - WSL2 Windows 11 vs. Ubuntu Linux Benchmarks



Geometric mean based upon tests: pts/vpxenc, pts/aom-av1 and pts/svt-av1

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 09:38.