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EPYC 7763 Linux 5.16

2 x AMD EPYC 7763 64-Core testing with a AMD DAYTONA_X (RYM1001D BIOS) and ASPEED on Ubuntu 21.04 via the Phoronix Test Suite.

Automated Executive Summary

v5.15 had the most wins, coming in first place for 55% of the tests.

Based on the geometric mean of all complete results, the fastest (v5.15) was 1.016x the speed of the slowest (v5.16-rc1).

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

Redis Memtier / Redis Benchmark (Test: GET) at 1.395x

Redis Memtier / Redis Benchmark (Test: MIX) at 1.28x

MariaDB (Clients: 512) at 1.208x

Nginx (Test: Short Connection - Connections: 1000) at 1.207x

Redis Memtier / Redis Benchmark (Test: SET) at 1.164x

OSBench (Test: Create Processes) at 1.152x

Apache HTTP Server (Concurrent Requests: 100) at 1.136x

Apache HTTP Server (Concurrent Requests: 200) at 1.116x

Stress-NG (Test: NUMA) at 1.103x

Nginx (Test: Short Connection - Connections: 500) at 1.089x.

Test Systems:

v5.15

Processor: 2 x AMD EPYC 7763 64-Core @ 2.45GHz (128 Cores / 256 Threads), Motherboard: AMD DAYTONA_X (RYM1001D BIOS), Chipset: AMD Starship/Matisse, Memory: 504GB, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: ASPEED, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 21.04, Kernel: 5.15.0-051500-generic (x86_64), Desktop: GNOME Shell 3.38.4, Display Server: X Server 1.20.11, Vulkan: 1.0.2, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-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
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0xa001119
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 retrpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbs: Not affected + tsx_async_abort: Not affected

v5.16-rc1

Processor: 2 x AMD EPYC 7763 64-Core @ 2.45GHz (128 Cores / 256 Threads), Motherboard: AMD DAYTONA_X (RYM1001D BIOS), Chipset: AMD Starship/Matisse, Memory: 504GB, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: ASPEED, Monitor: VE228, Network: 2 x Mellanox MT27710

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Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0xa001119
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 + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retrpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbs: Not affected + tsx_async_abort: Not affected

Redis Memtier / Redis Benchmark - GET	181293	129984
Normalized	100%	71.7%
Standard Deviation	0.4%	0.8%
Redis Memtier / Redis Benchmark - MIX	170022	132876
Normalized	100%	78.15%
Standard Deviation	2.4%	1.4%
MariaDB - 512 (Queries/sec)	384	318
Normalized	100%	82.81%
Standard Deviation	1.2%	0.2%
Nginx - Short Connection - 1000 (Reqs/sec)	17134	14199
Normalized	100%	82.87%
Standard Deviation	1%	1.9%
Redis Memtier / Redis Benchmark - SET	129963	151238
Normalized	85.93%	100%
Standard Deviation	1.5%	1%
OSBench - Create Processes (us/Event)	46.530565	53.589344
Normalized	100%	86.83%
Standard Deviation	1.2%	1.2%
Apache HTTP Server - 100 (Reqs/sec)	72966	82904
Normalized	88.01%	100%
Standard Deviation	0.3%	1.6%
Apache HTTP Server - 200 (Reqs/sec)	98924	110375
Normalized	89.63%	100%
Standard Deviation	1.2%	0.3%
Stress-NG - NUMA (Bogo Ops/s)	110.30	99.98
Normalized	100%	90.64%
Standard Deviation	0.2%	0.8%
Nginx - Short Connection - 500 (Reqs/sec)	40631	37295
Normalized	100%	91.79%
Standard Deviation	0.2%	0.3%
Stress-NG - IO_uiring (Bogo Ops/s)	817842	883063
Normalized	92.61%	100%
Standard Deviation	2%	3.1%
OSBench - Launch Programs (us/Event)	61.081250	64.628919
Normalized	100%	94.51%
Standard Deviation	1.3%	2.4%
Stress-NG - Socket Activity (Bogo Ops/s)	18156	17169
Normalized	100%	94.56%
Standard Deviation	1.2%	2.3%
Embree - Pathtracer - Asian Dragon (FPS)	69.8112	73.7894
Normalized	94.61%	100%
Standard Deviation	3.1%	0.4%
OSBench - Create Threads (us/Event)	27.283827	28.469562
Normalized	100%	95.84%
Standard Deviation	2.2%	1%
OSBench - Memory Allocations (Ns/Event)	72.833300	69.953124
Normalized	96.05%	100%
Standard Deviation	0.5%	0.5%
rav1e - 10 (FPS)	5.277	5.493
Normalized	96.07%	100%
Standard Deviation	1.3%	2.4%
nginx - 200 (Reqs/sec)	81636	78570
Normalized	100%	96.24%
Standard Deviation	1%	0.2%
ONNX Runtime - yolov4 - CPU (Inferences/min)	323	311

	Normalized	100%	96.28%
	Standard Deviation	0.2%	2.3%
rav1e - 5 (FPS)	1.727	1.792	
	Normalized	96.37%	100%
	Standard Deviation	2.5%	1.6%
nginx - 100 (Req/sec)	88819	85643	
	Normalized	100%	96.42%
	Standard Deviation	2.5%	0.3%
Embree - Pathtracer ISPC - Asian Dragon (FPS)	70.6112	68.3400	
	Normalized	100%	96.78%
	Standard Deviation	1.9%	2.1%
Timed Godot Game Engine Compilation - Time To Compile (sec)	51.110	52.719	
	Normalized	100%	96.95%
	Standard Deviation	0.5%	0.7%
Apache HTTP Server - 500 (Req/sec)	88955	91667	
	Normalized	97.04%	100%
	Standard Deviation	0.4%	1.1%
Intel Open Image Denoise -	2.53	2.46	
RT.hdr_alb_nrm.3840x2160 (Images / Sec)			
	Normalized	100%	97.23%
	Standard Deviation	0.6%	1.6%
Nginx - Long Connection - 500 (Req/sec)	186113	181104	
	Normalized	100%	97.31%
	Standard Deviation	0.4%	1.1%
nginx - 1000 (Req/sec)	88467	86416	
	Normalized	100%	97.68%
	Standard Deviation	0.2%	0.4%
Embree - Pathtracer ISPC - Crown (FPS)	101.2927	99.0628	
	Normalized	100%	97.8%
	Standard Deviation	0%	0.5%
Embree - Pathtracer - Crown (FPS)	110.8625	108.5465	
	Normalized	100%	97.91%
	Standard Deviation	0.3%	0.2%
NAS Parallel Benchmarks - LU.C (Mop/s)	286850	292956	
	Normalized	97.92%	100%
	Standard Deviation	2.2%	0.5%
Stress-NG - Memory Copying (Bogo Ops/s)	10621	10843	
	Normalized	97.95%	100%
	Standard Deviation	2.1%	0.6%
rav1e - 6 (FPS)	2.282	2.327	
	Normalized	98.07%	100%
	Standard Deviation	1.5%	0.6%
rav1e - 1 (FPS)	0.424	0.432	
	Normalized	98.15%	100%
	Standard Deviation	0.4%	0.5%
NAS Parallel Benchmarks - SP.C (Mop/s)	116224	114214	
	Normalized	100%	98.27%
	Standard Deviation	0.1%	0.3%
nginx - 500 (Req/sec)	86599	85216	
	Normalized	100%	98.4%
	Standard Deviation	0.3%	0.1%

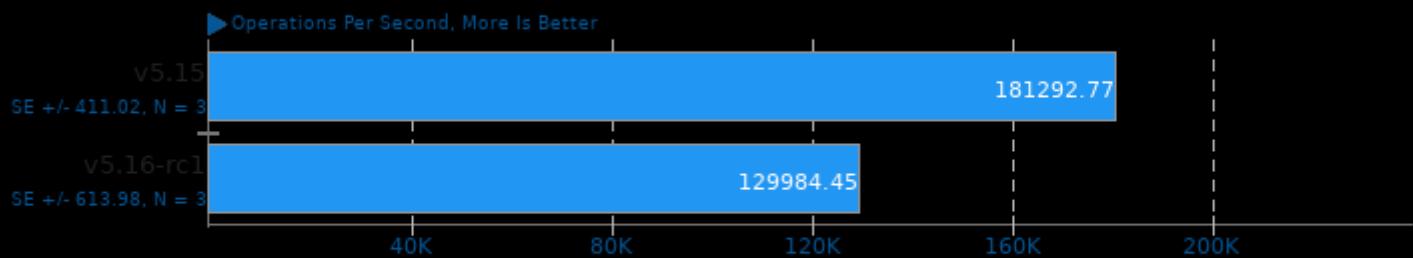
PostgreSQL pgbench - 1000 - 500 - Read Write -	49.125	49.904
Average Latency (ms)		
Normalized	100%	98.44%
Standard Deviation	1.7%	4.2%
PostgreSQL pgbench - 1000 - 500 - Read Write (TPS)		
Normalized	100%	98.58%
Standard Deviation	1.7%	4.2%
Redis Memtier / Redis Benchmark - L.a.L.I (Req/s)		
Normalized	98.85%	100%
Standard Deviation	3.4%	4.5%
NAS Parallel Benchmarks - FT.C (Mop/s)		
Normalized	98.9%	100%
Standard Deviation	1.8%	1.2%
Timed Mesa Compilation - Time To Compile (sec)		
Normalized	100%	98.91%
Standard Deviation	0.8%	0.1%
Blender - Barbershop - CPU-Only (sec)		
Normalized	98.96%	100%
Standard Deviation	2.3%	1%
NAS Parallel Benchmarks - CG.C (Mop/s)		
Normalized	98.97%	100%
Standard Deviation	4%	3.9%
Intel Open Image Denoise -		
1.25	1.24	
RTLightmap.hdr.4096x4096 (Images / Sec)		
Normalized	100%	99.2%
Standard Deviation	1.8%	0.9%
Timed Linux Kernel Compilation - Time To Compile		
17.705	17.617	
Normalized	99.5%	100%
Standard Deviation	2.6%	2.4%
NAS Parallel Benchmarks - IS.D (Mop/s)		
Normalized	99.51%	100%
Standard Deviation	2.4%	4.2%
Stress-NG - Context Switching (Bogo Ops/s)		
4209841	4230413	
Normalized	99.51%	100%
Standard Deviation	0.6%	1.8%
NAS Parallel Benchmarks - SP.B (Mop/s)		
Normalized	100%	99.55%
Standard Deviation	1.8%	0.9%
Stress-NG - Malloc (Bogo Ops/s)		
2910792259	2898520832	
Normalized	100%	99.58%
Standard Deviation	0.3%	0.6%
OSPray - San Miguel - Path Tracer (FPS)		
12.05	12.00	
Normalized	100%	99.59%
Standard Deviation	0%	0.7%
Timed Node.js Compilation - Time To Compile (sec)		
71.775	72.054	
Normalized	100%	99.61%
Standard Deviation	0.4%	0.5%
OSBench - Create Files (us/Event)		
16.301981	16.247459	
Normalized	99.67%	100%
Standard Deviation	0.7%	0.3%
ONNX Runtime - super-resolution-10 - CPU (Inferences/min)		
6455	6435	
Normalized	100%	99.69%
Standard Deviation	0.2%	0.2%

Redis Memtier / Redis Benchmark - L.a.L.I (Reqs/sec)	245897	246433
Normalized	99.78%	100%
Standard Deviation	0.7%	3.1%
Nginx - Long Connection - 1000 (Reqs/sec)	170773	170460
Normalized	100%	99.82%
Standard Deviation	0.4%	0.4%
NAS Parallel Benchmarks - BT.C (Mop/s)	257896	257584
Normalized	100%	99.88%
Standard Deviation	0.3%	0.2%
NAS Parallel Benchmarks - MG.C (Mop/s)	101909	102006
Normalized	99.9%	100%
Standard Deviation	0.5%	0.3%
Stress-NG - Semaphores (Bogo Ops/s)	12428900	12435830
Normalized	99.94%	100%
Standard Deviation	0.4%	0.6%
Blender - Pabellon Barcelona - CPU-Only (sec)	57.71	57.70
Normalized	99.98%	100%
Standard Deviation	0.5%	0.5%
ctx_clock - C.S.T (Clocks)	147	147
OSPRay - NASA Streamlines - Path Tracer (FPS)	38.46	38.46
Standard Deviation	0%	0%
OSPRay - NASA Streamlines - SciVis (FPS)	166.67	166.67
Standard Deviation	0%	0%
OSPRay - San Miguel - SciVis (FPS)	125	125
NAS Parallel Benchmarks - EP.D (Mop/s)	10057	10224
Normalized	98.36%	100%
Standard Deviation	6.5%	5.3%
Apache HTTP Server - 1000 (Reqs/sec)	103534	86758
Normalized	100%	83.8%
Standard Deviation	10.4%	0.3%
ONNX Runtime - shufflenet-v2-10 - CPU	6010	6414
Normalized	93.7%	100%
Standard Deviation	14.4%	0.6%
ONNX Runtime - fcn-resnet101-11 - CPU	221	229
(Inferences/min)		
Normalized	96.51%	100%
Standard Deviation	2.5%	6.2%
PostgreSQL pgbench - 1000 - 250 - Read Write -	21.904	20.838
Average Latency (ms)		
Normalized	95.13%	100%
Standard Deviation	14.8%	13.4%
PostgreSQL pgbench - 1000 - 250 - Read Write (TPS)	11770	12213
Normalized	96.37%	100%
Standard Deviation	22.7%	14.5%
PostgreSQL pgbench - 1000 - 500 - Read Only -	0.750	0.802
Average Latency (ms)		
Normalized	100%	93.52%
Standard Deviation	17.9%	13.5%
PostgreSQL pgbench - 1000 - 500 - Read Only (TPS)	688739	634584
Normalized	100%	92.14%
Standard Deviation	19.3%	15%
PostgreSQL pgbench - 1000 - 250 - Read Only -	0.294	0.291
Average Latency (ms)		
Normalized	98.98%	100%

	Standard Deviation	6.9%	10.8%
PostgreSQL pgbench - 1000 - 250 - Read Only (TPS)	854179	868463	
	Normalized	98.36%	100%
	Standard Deviation	7%	11.5%
OpenVKL - vklBenchmark ISPC (Items / Sec)	270		
	Standard Deviation	17.8%	

Redis Memtier / Redis Benchmark

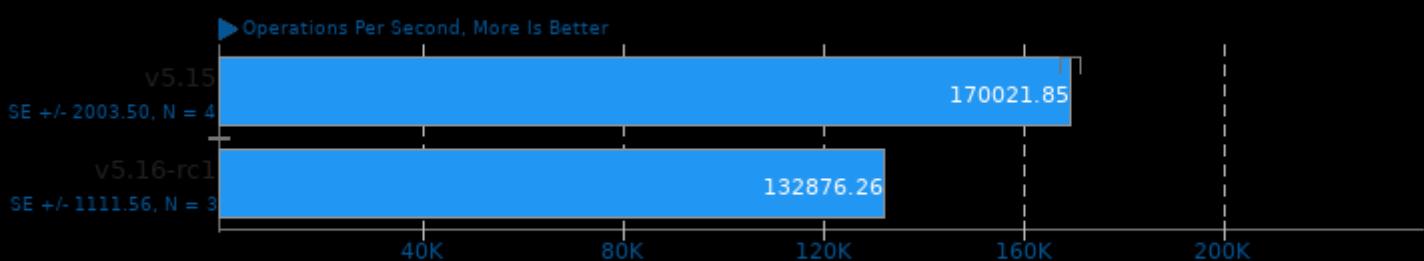
Test: GET



1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcre
 2. Redis server v=6.0.11 sha=00000000:0 malloc=jemalloc-5.2.1 bits=64 build=83fe9b039c768864

Redis Memtier / Redis Benchmark

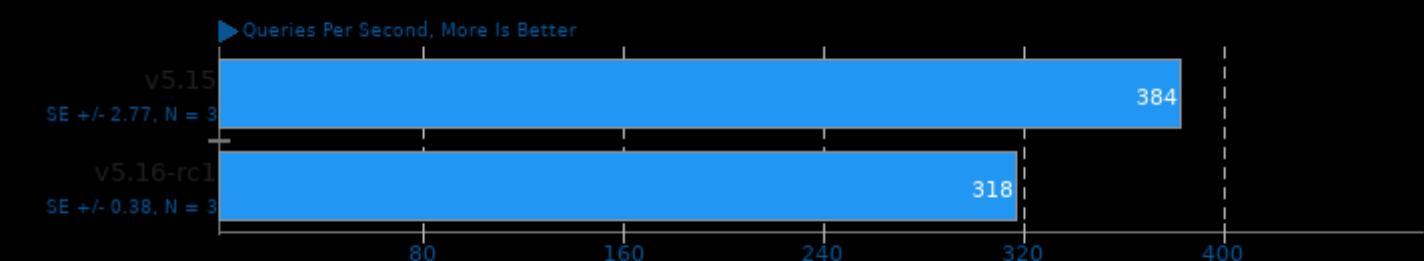
Test: MIX



1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcre
 2. Redis server v=6.0.11 sha=00000000:0 malloc=jemalloc-5.2.1 bits=64 build=83fe9b039c768864

MariaDB 10.6.4

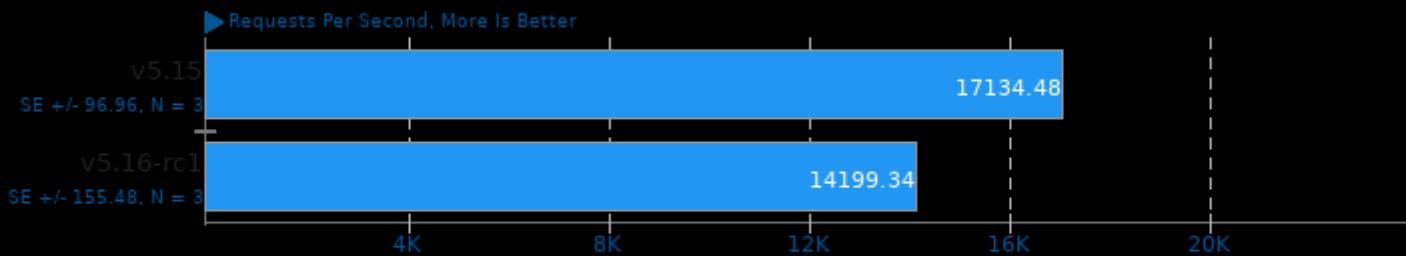
Clients: 512



1. (CXX) g++ options: -pie -fPIC -fstack-protector -O3 -pthread -lbz2 -lnuma -lpcre2-8 -lcrypt -laio -lz -lm -lssl -lcrypto -lpthread -ldl

Nginx

Test: Short Connection - Connections: 1000

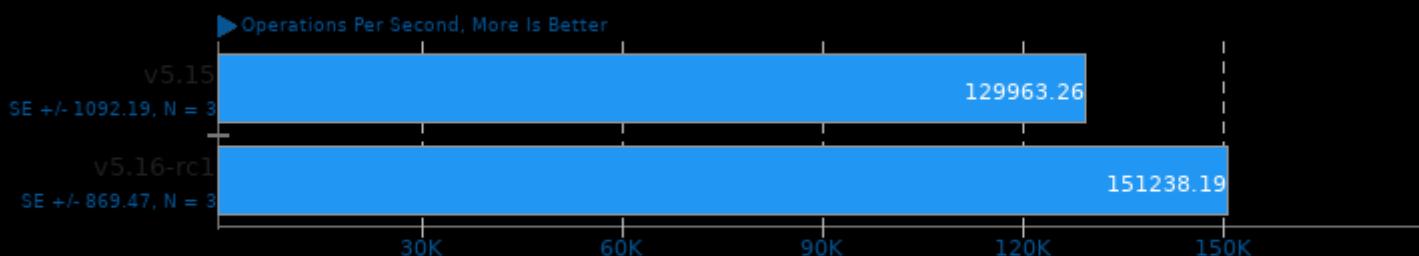


1. (CC) gcc options: -flluviajit-5.1 -fno-ssl -fcrypto -fthread -fabi -std=c99 -O2

2. nginx version: nginx/1.18.0 (Ubuntu)

Redis Memtier / Redis Benchmark

Test: SET

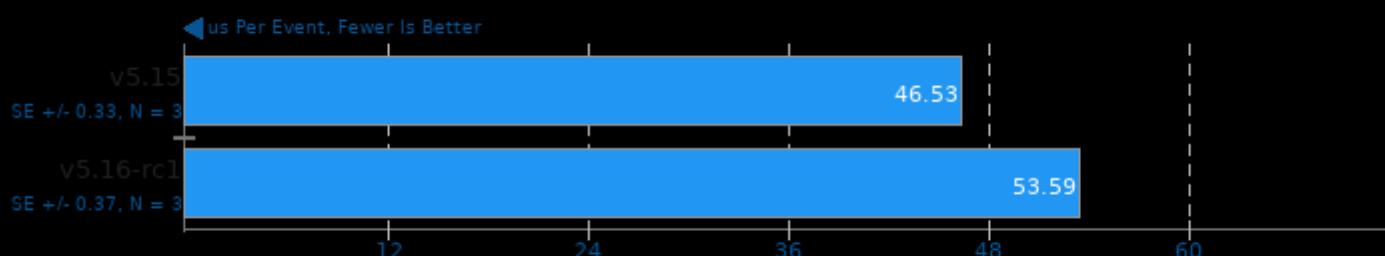


1. (CXX) g++ options: -O2 -fevent_openssl -fevent -fcrypto -fssl -fthread -fz -fpcr

2. Redis server v=6.0.11 sha=00000000:0 malloc=jemalloc-5.2.1 bits=64 build=83fe9b039c768864

OSBench

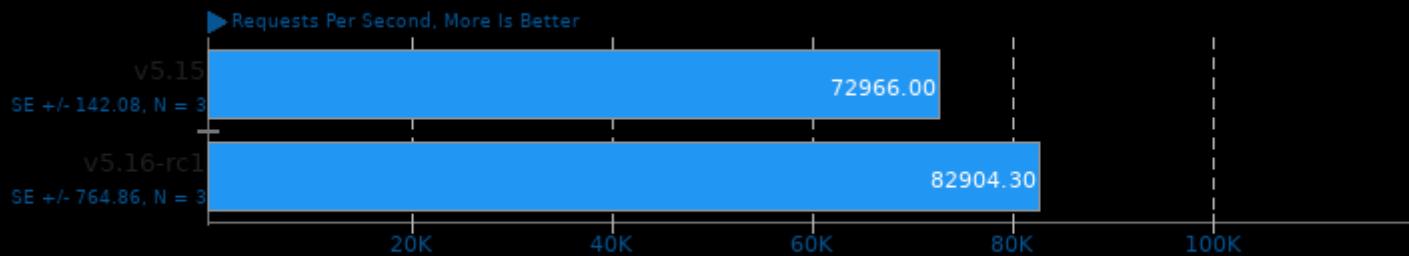
Test: Create Processes



1. (CC) gcc options: -fno-

Apache HTTP Server 2.4.48

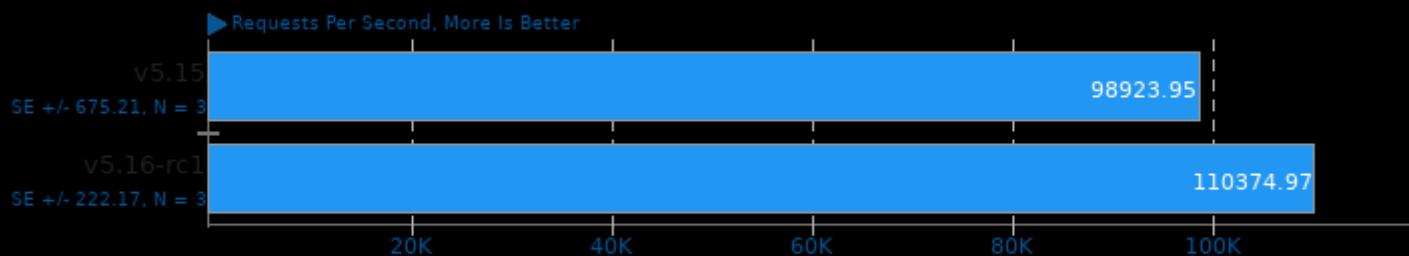
Concurrent Requests: 100



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

Apache HTTP Server 2.4.48

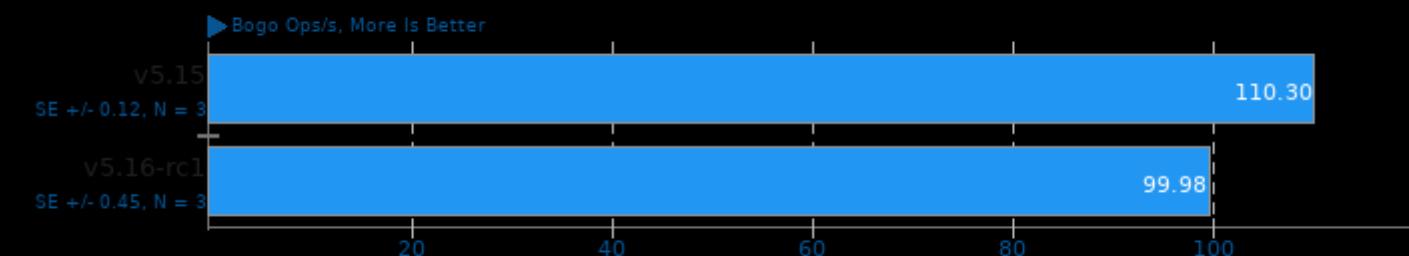
Concurrent Requests: 200



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

Stress-NG 0.13.02

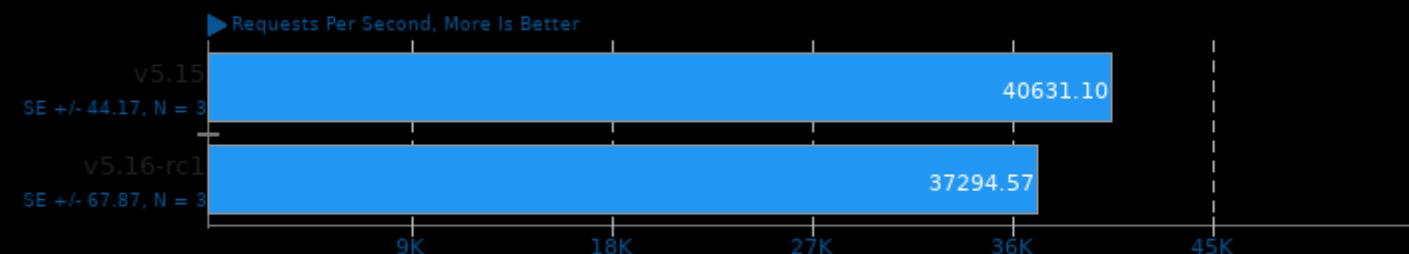
Test: NUMA



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

Nginx

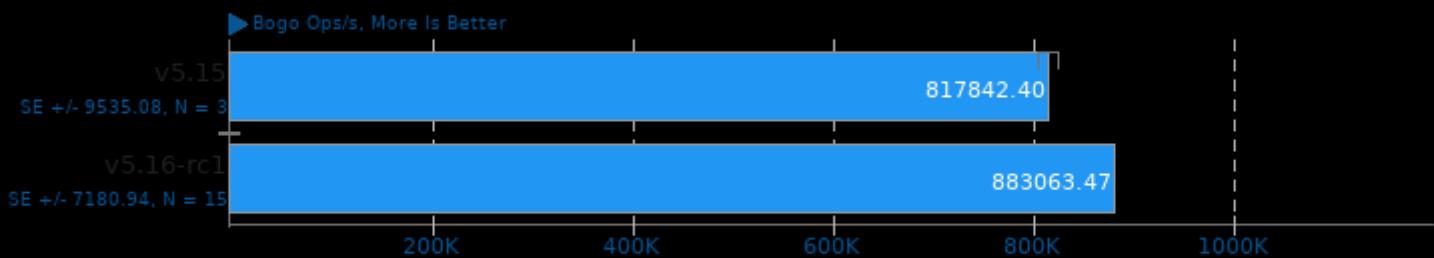
Test: Short Connection - Connections: 500



1. (CC) gcc options: -lluajit-5.1 -lm -lssl -lcrypto -pthread -ldl -std=c99 -O2
2. nginx version: nginx/1.18.0 (Ubuntu)

Stress-NG 0.13.02

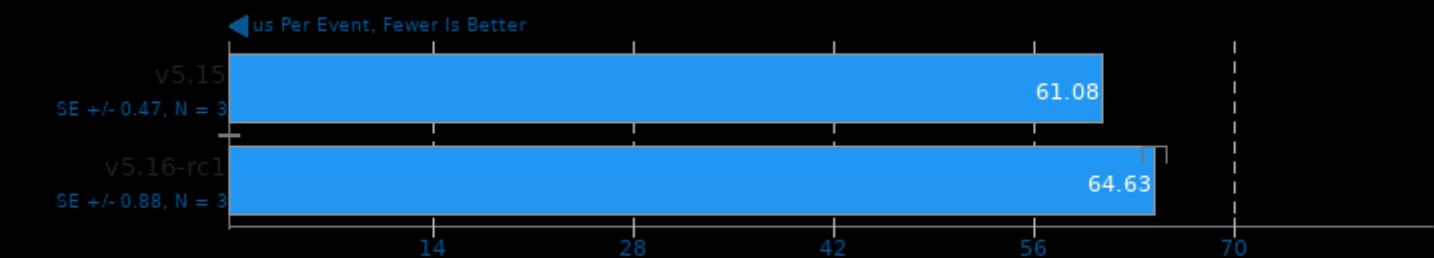
Test: IO_uring



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

OSBench

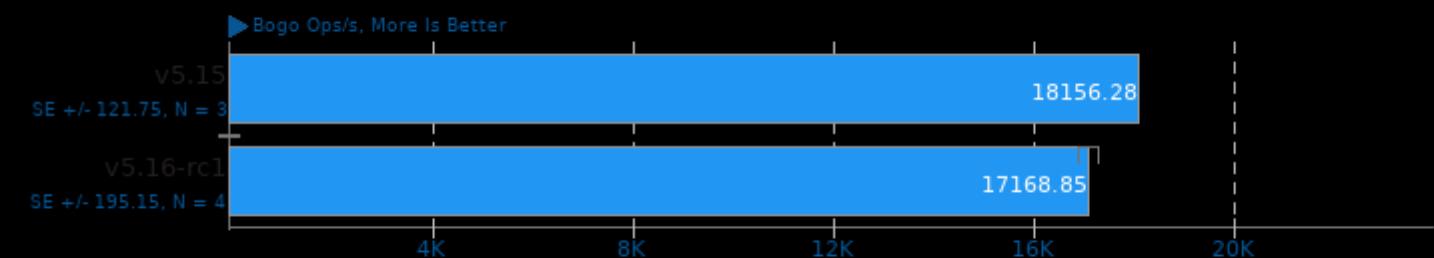
Test: Launch Programs



1. (CC) gcc options: -lm

Stress-NG 0.13.02

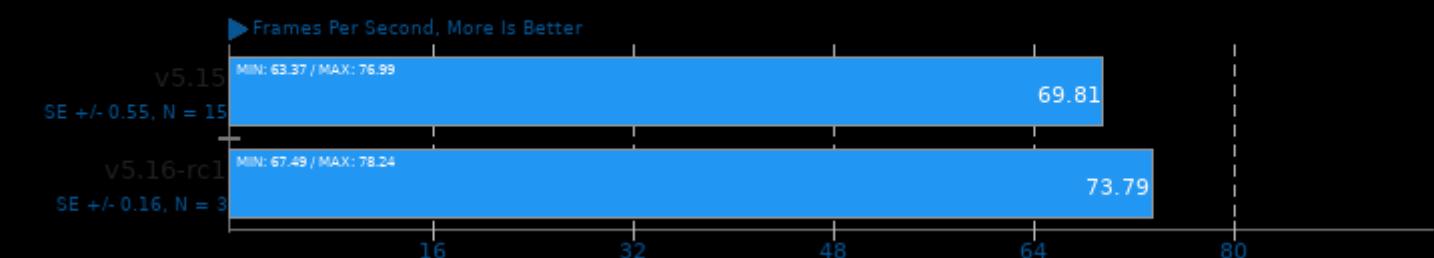
Test: Socket Activity



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

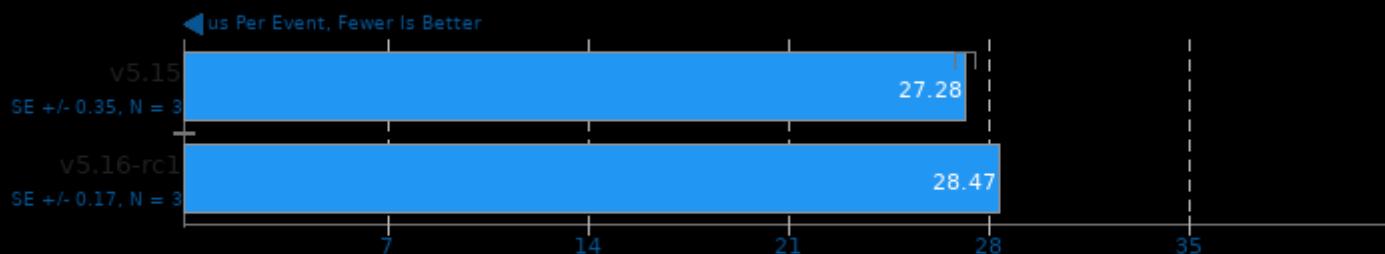
Embree 3.13

Binary: Pathtracer - Model: Asian Dragon



OSBench

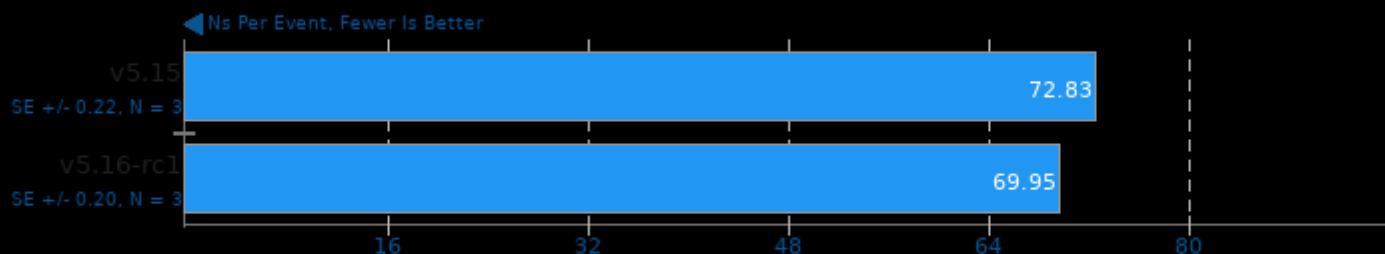
Test: Create Threads



1. (CC) gcc options: -lm

OSBench

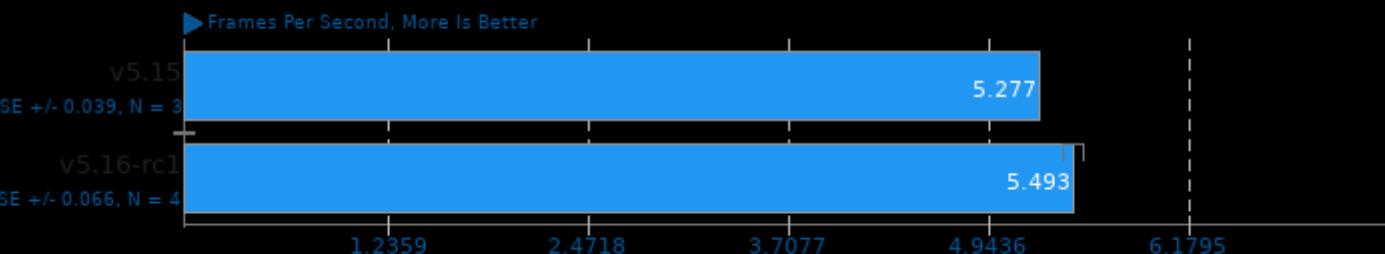
Test: Memory Allocations



1. (CC) gcc options: -lm

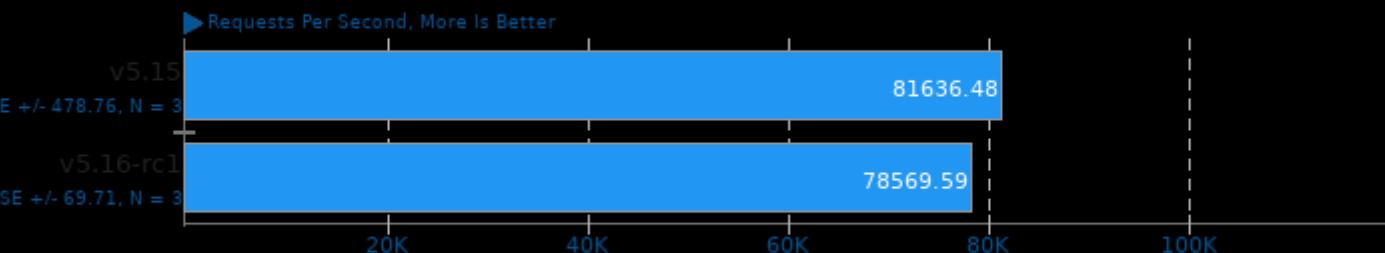
rav1e 0.5

Speed: 10



nginx 1.21.1

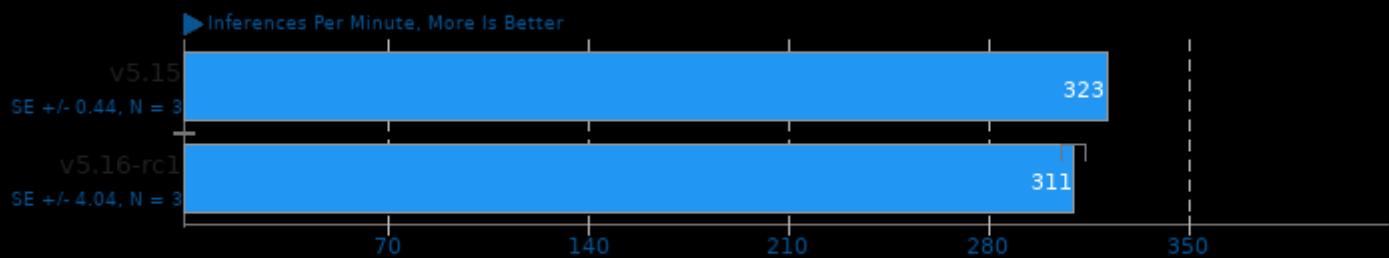
Concurrent Requests: 200



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

ONNX Runtime 1.9.1

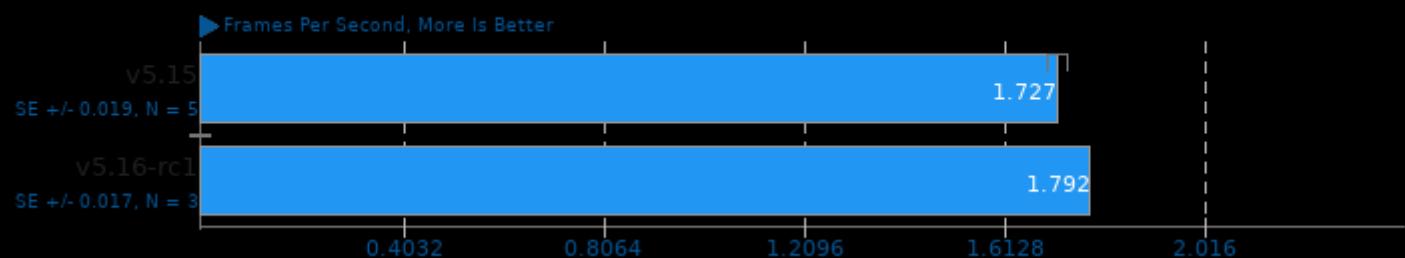
Model: yolov4 - Device: CPU



1. (CXX) g++ options: -ffunction-sections -fdata-sections -march=native -mtune=native -O3 -flto -fno-fat-lto-objects -ldl -lrt -pthread -lpthread

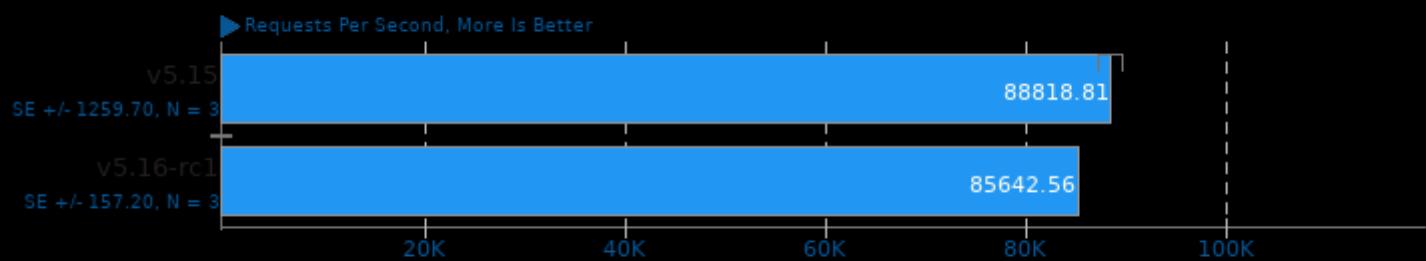
rav1e 0.5

Speed: 5



nginx 1.21.1

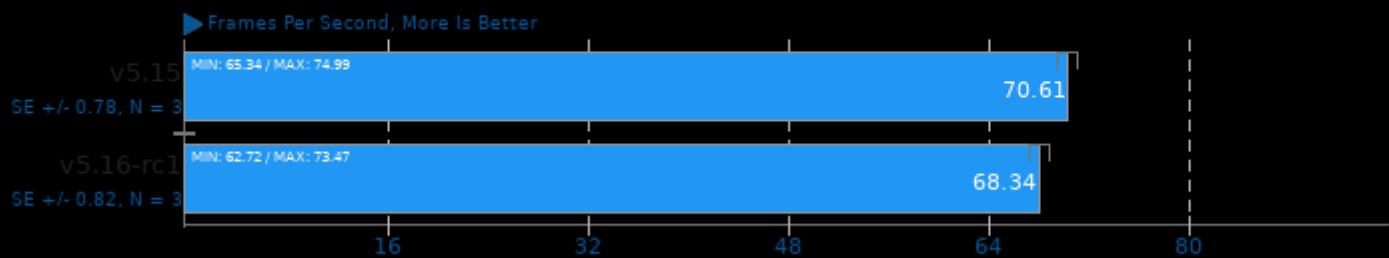
Concurrent Requests: 100



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

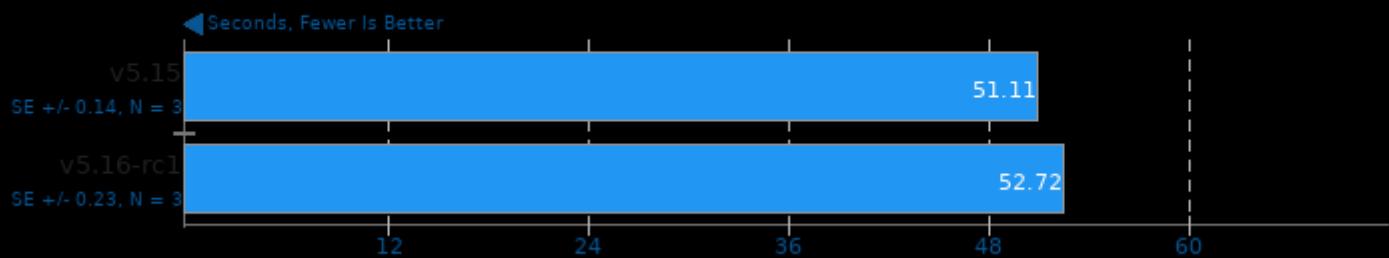
Embree 3.13

Binary: Pathtracer ISPC - Model: Asian Dragon



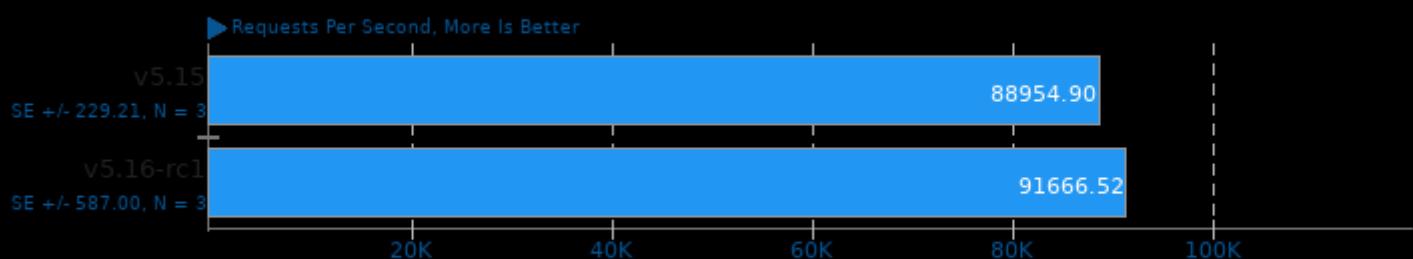
Timed Godot Game Engine Compilation 3.2.3

Time To Compile



Apache HTTP Server 2.4.48

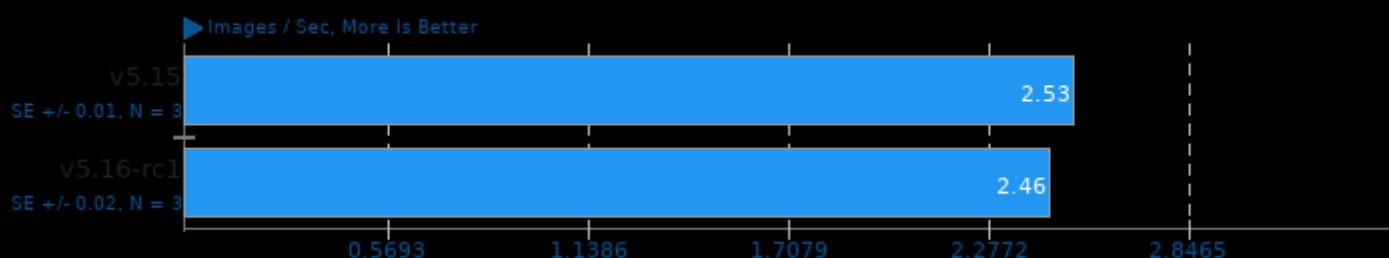
Concurrent Requests: 500



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

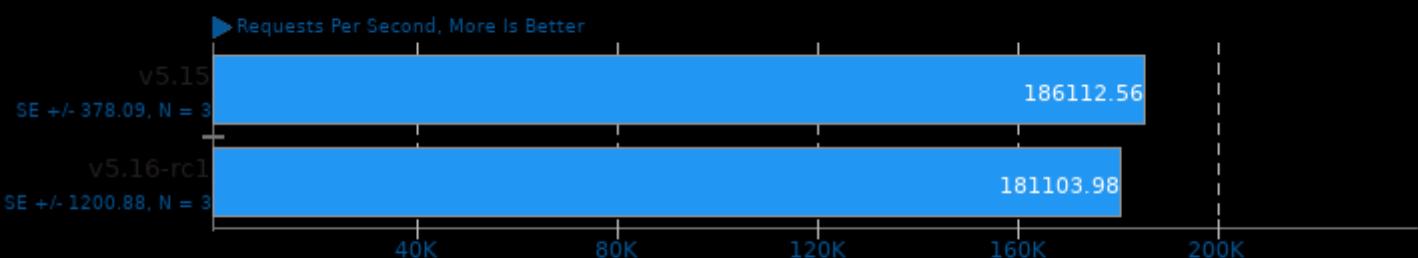
Intel Open Image Denoise 1.4.0

Run: RT.hdr_alb_nrm.3840x2160



Nginx

Test: Long Connection - Connections: 500

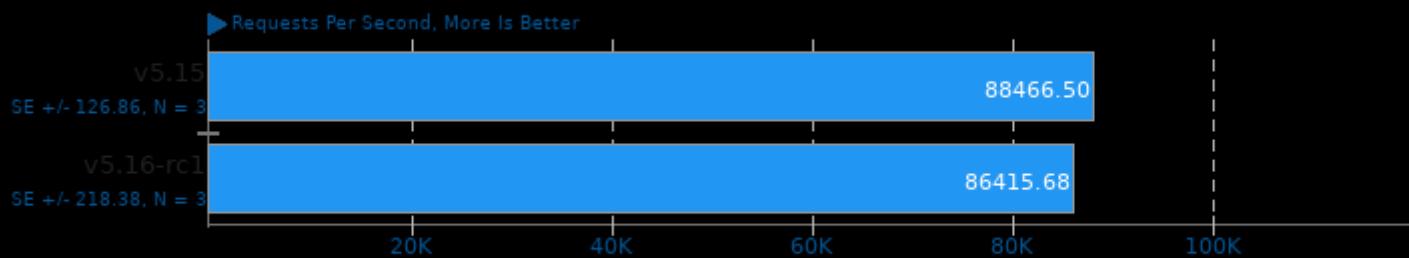


1. (CC) gcc options: -fluajit-5.1 -lm -lssl -lcrypto -lpthread -ldl -std=c99 -O2

2. nginx version: nginx/1.18.0 (Ubuntu)

nginx 1.21.1

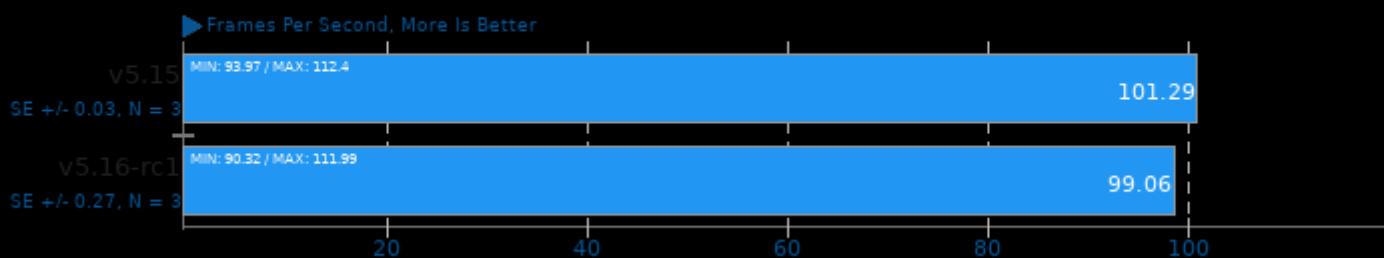
Concurrent Requests: 1000



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

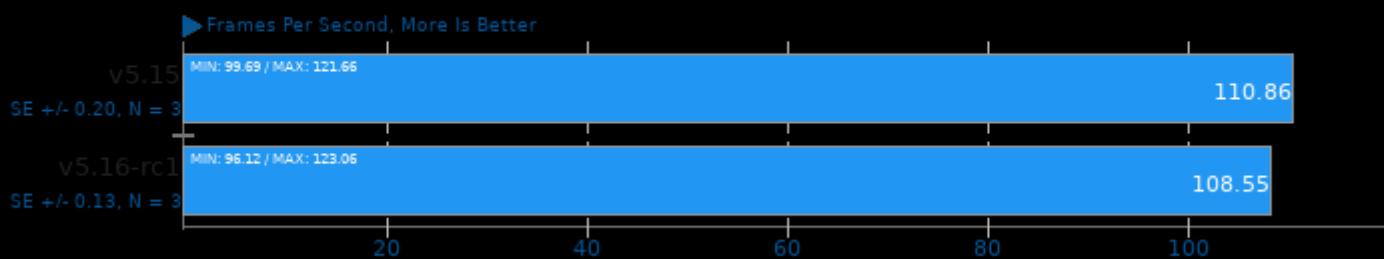
Embree 3.13

Binary: Pathtracer ISPC - Model: Crown



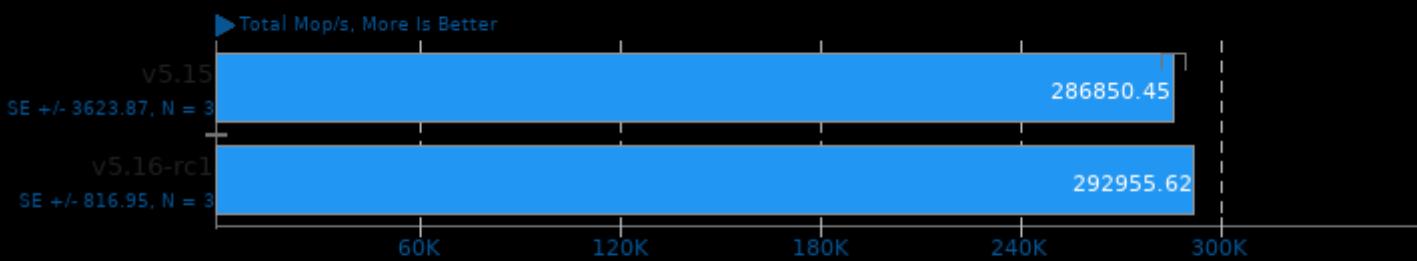
Embree 3.13

Binary: Pathtracer - Model: Crown



NAS Parallel Benchmarks 3.4

Test / Class: LU.C

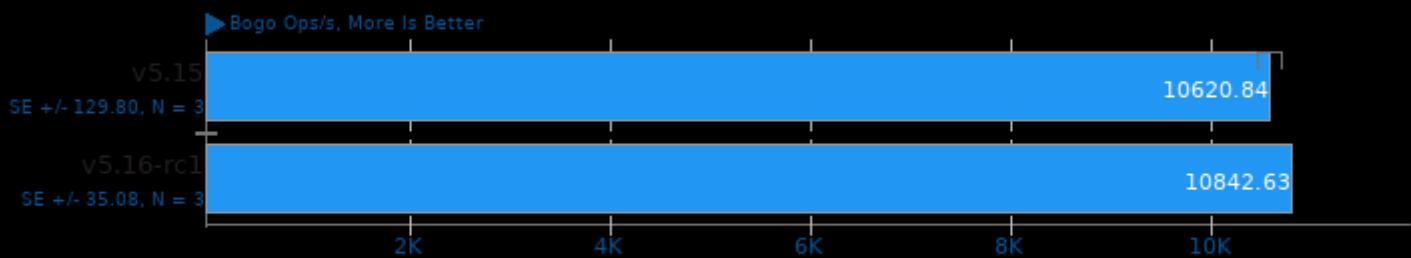


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwloc -ldl -levent_core -levent_pthread

2. Open MPI 4.1.0

Stress-NG 0.13.02

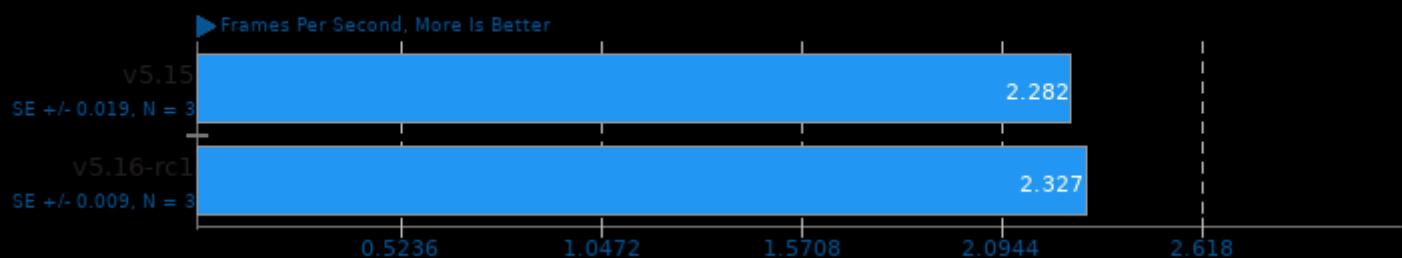
Test: Memory Copying



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

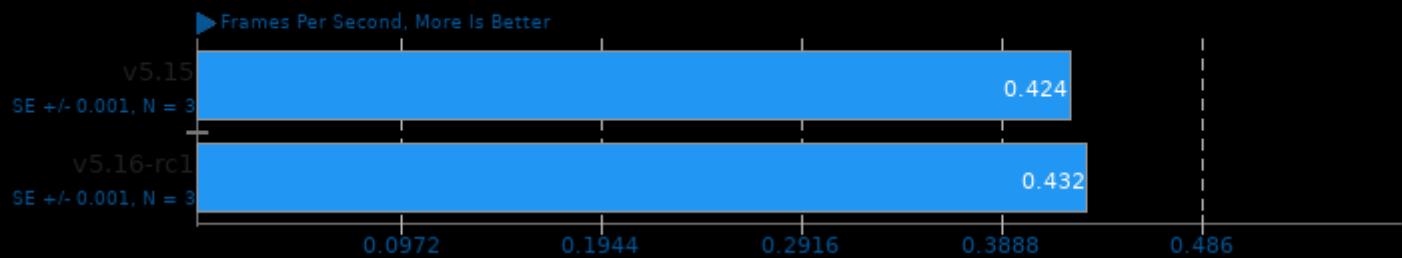
rav1e 0.5

Speed: 6



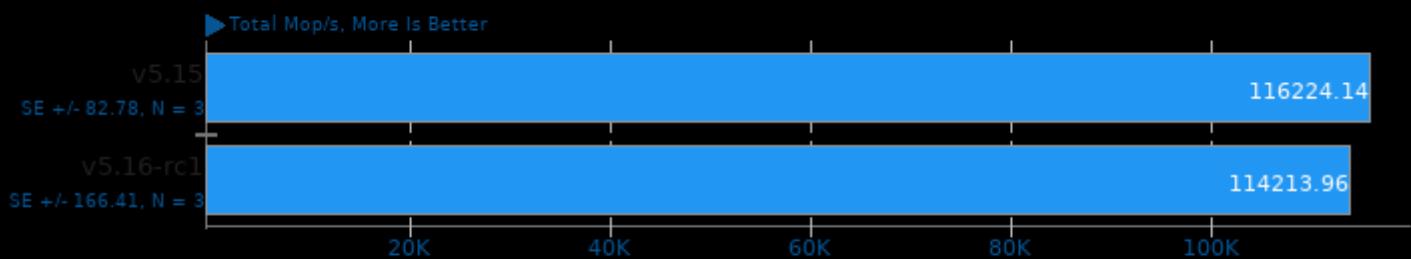
rav1e 0.5

Speed: 1



NAS Parallel Benchmarks 3.4

Test / Class: SP.C

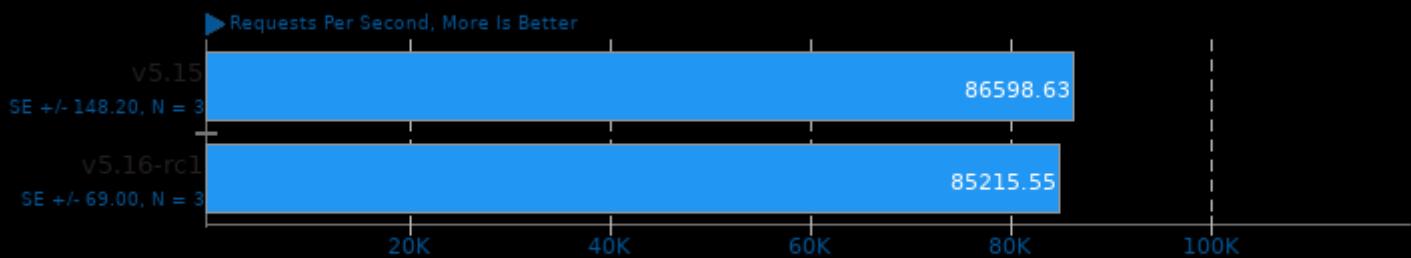


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwloc -ldl -levent_core -levent_pthread

2. Open MPI 4.1.0

nginx 1.21.1

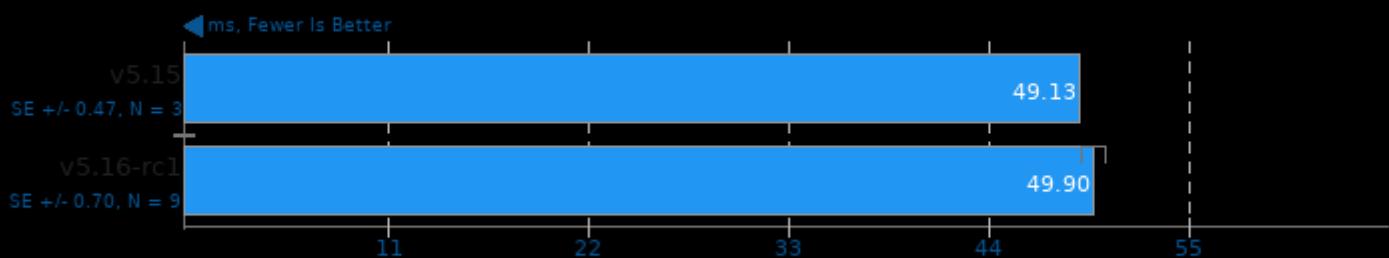
Concurrent Requests: 500



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

PostgreSQL pgbench 14.0

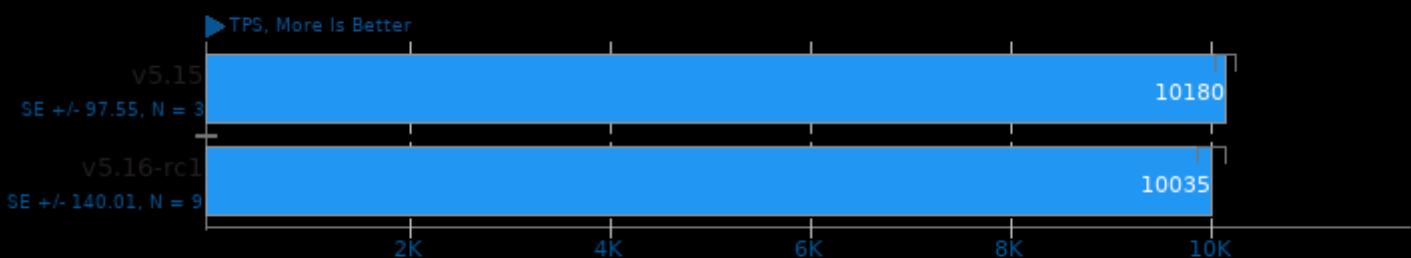
Scaling Factor: 1000 - Clients: 500 - Mode: Read Write - Average Latency



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

PostgreSQL pgbench 14.0

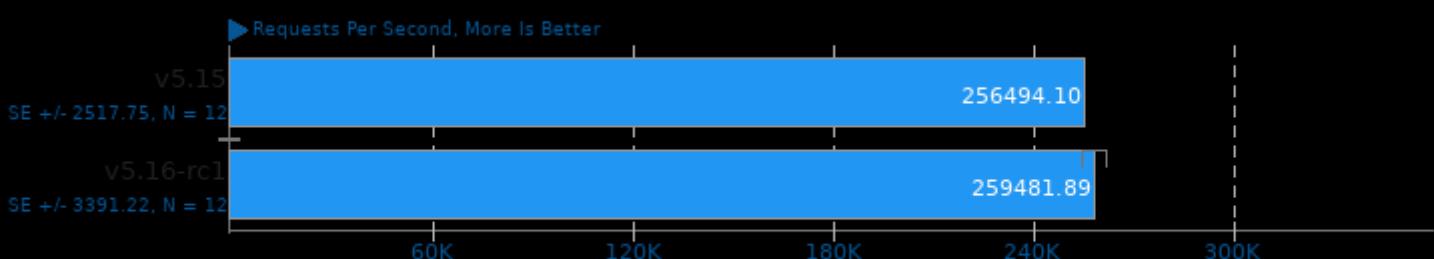
Scaling Factor: 1000 - Clients: 500 - Mode: Read Write



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

Redis Memtier / Redis Benchmark

Test: LPUSH and LPOP: lpush

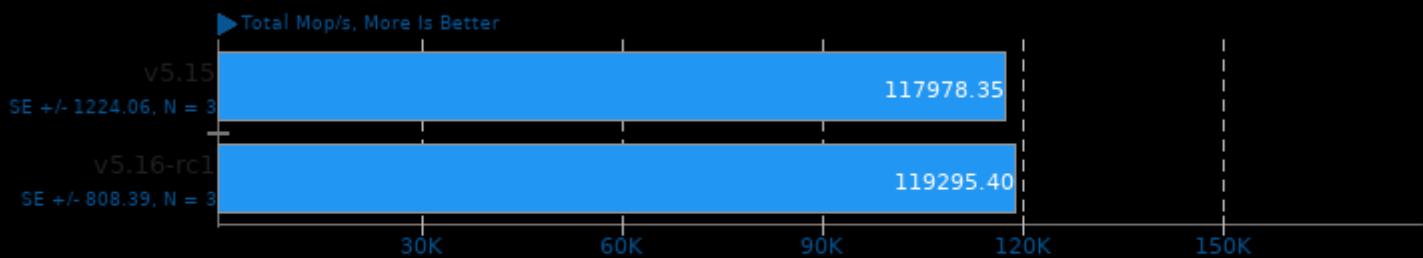


1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcres

2. Redis server v=6.0.11 sha=00000000:0 malloc=jemalloc-5.2.1 bits=64 build=83fe9b039c768864

NAS Parallel Benchmarks 3.4

Test / Class: FT.C

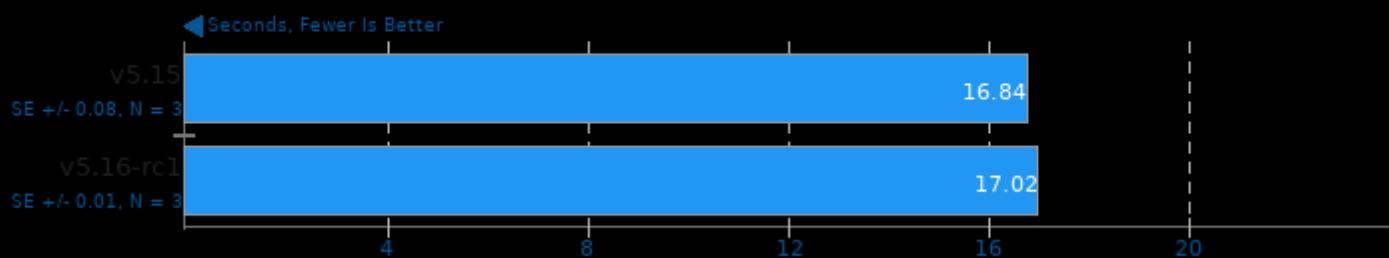


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwloc -ldl -levent_core -levent_pthread

2. Open MPI 4.1.0

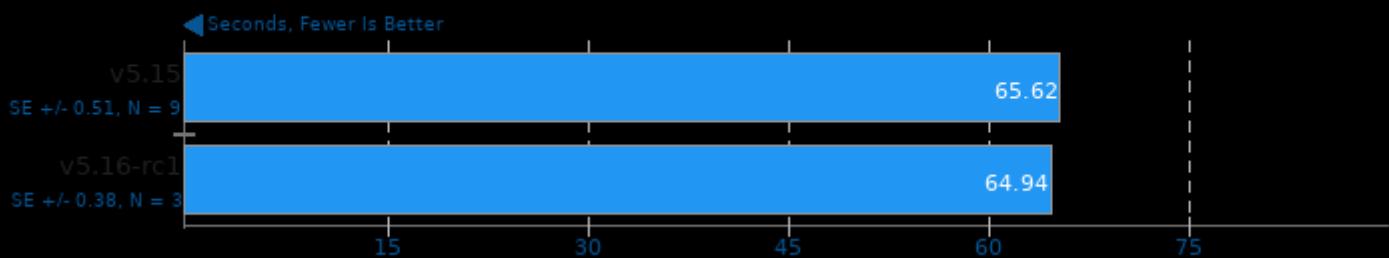
Timed Mesa Compilation 21.0

Time To Compile



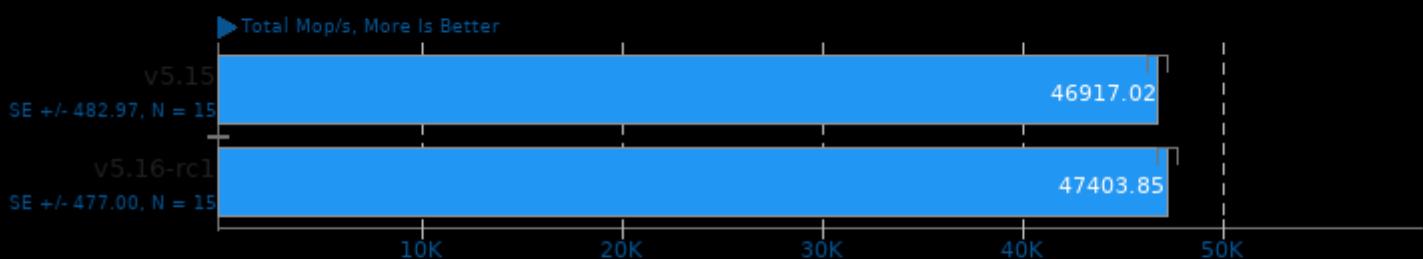
Blender 2.92

Blend File: Barbershop - Compute: CPU-Only



NAS Parallel Benchmarks 3.4

Test / Class: CG.C

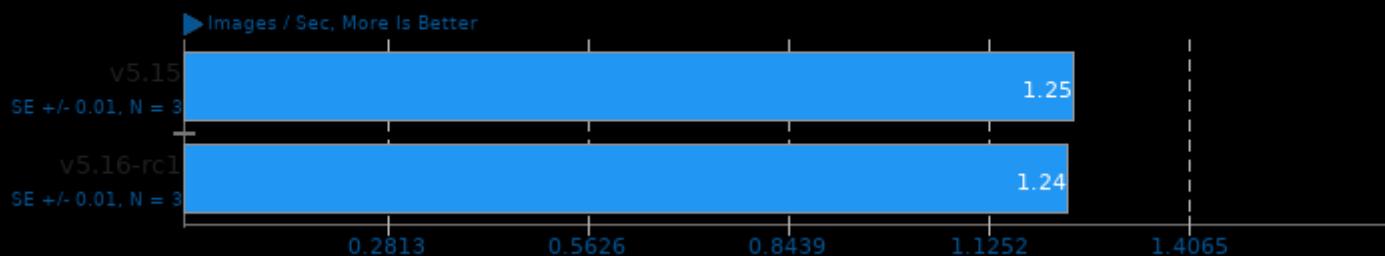


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwloc -ldl -levent_core -levent_pthread

2. Open MPI 4.1.0

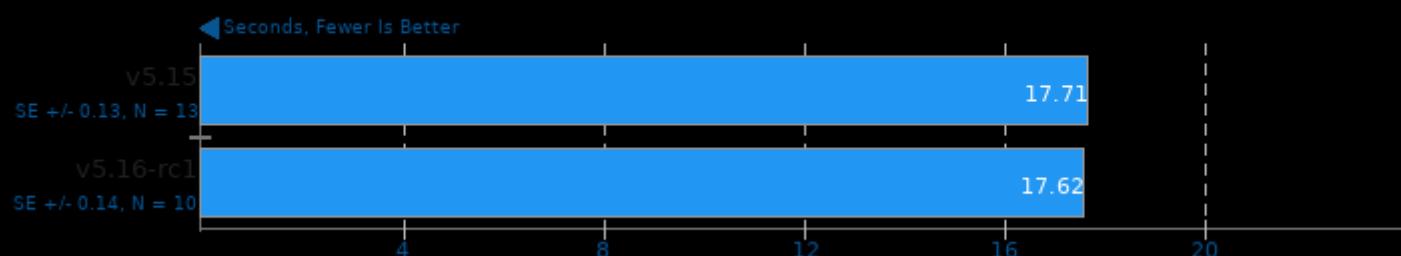
Intel Open Image Denoise 1.4.0

Run: RTLightmap.hdr.4096x4096



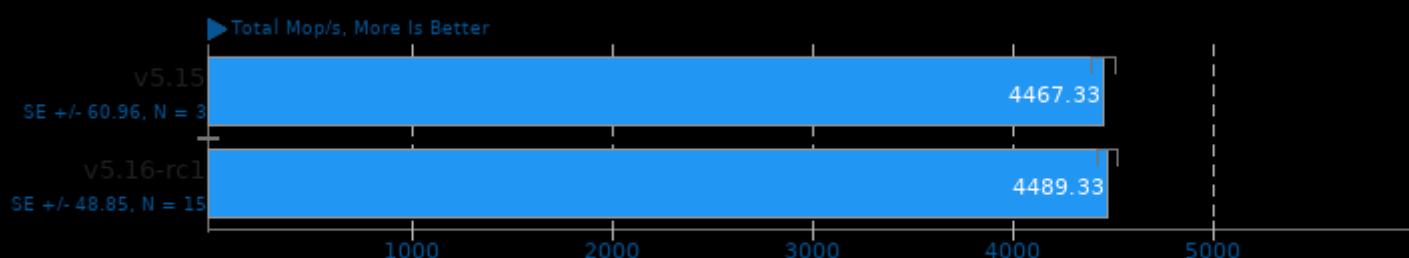
Timed Linux Kernel Compilation 5.14

Time To Compile



NAS Parallel Benchmarks 3.4

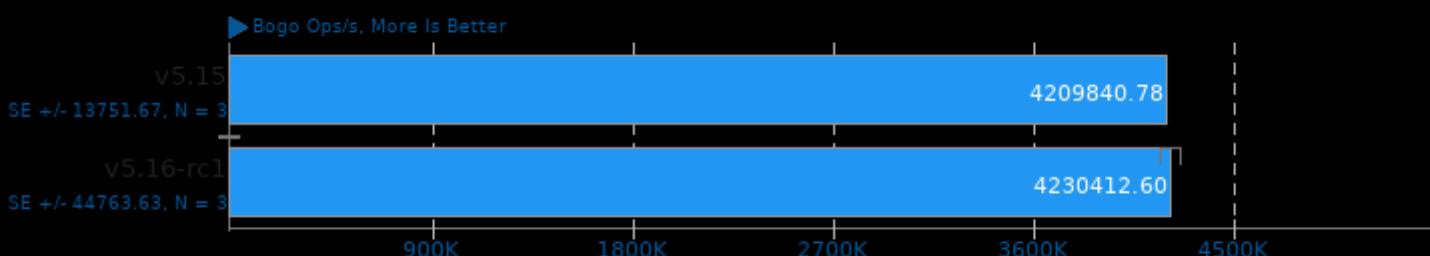
Test / Class: IS.D



1. (F90) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwloc -ldl -levent_core -levent_pthread
2. Open MPI 4.1.0

Stress-NG 0.13.02

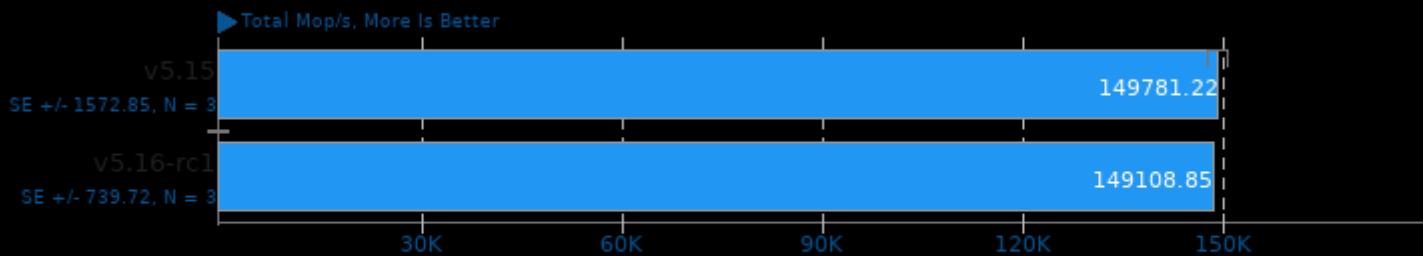
Test: Context Switching



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

NAS Parallel Benchmarks 3.4

Test / Class: SP.B

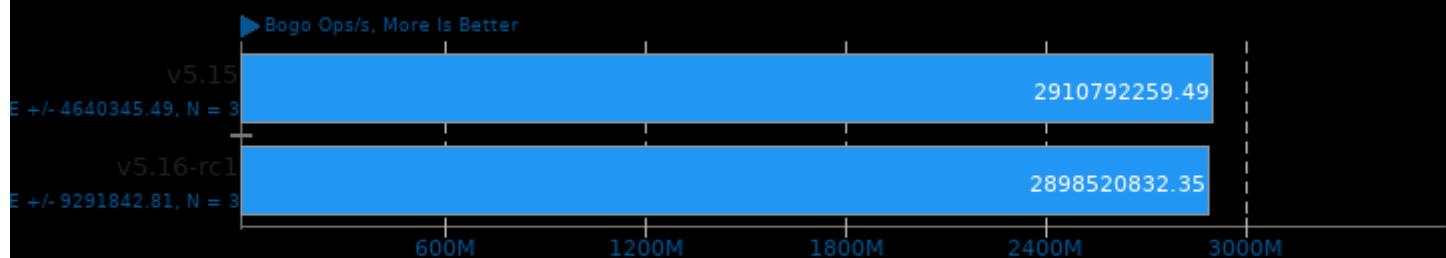


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwloc -ldl -levent_core -levent_pthread

2. Open MPI 4.1.0

Stress-NG 0.13.02

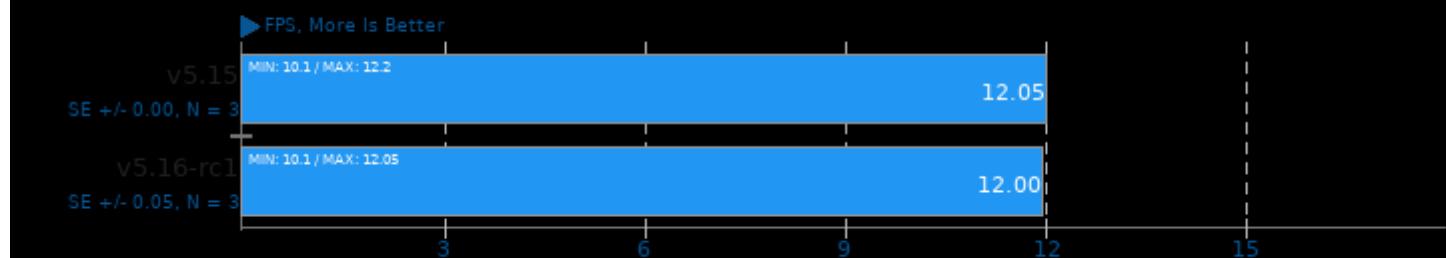
Test: Malloc



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

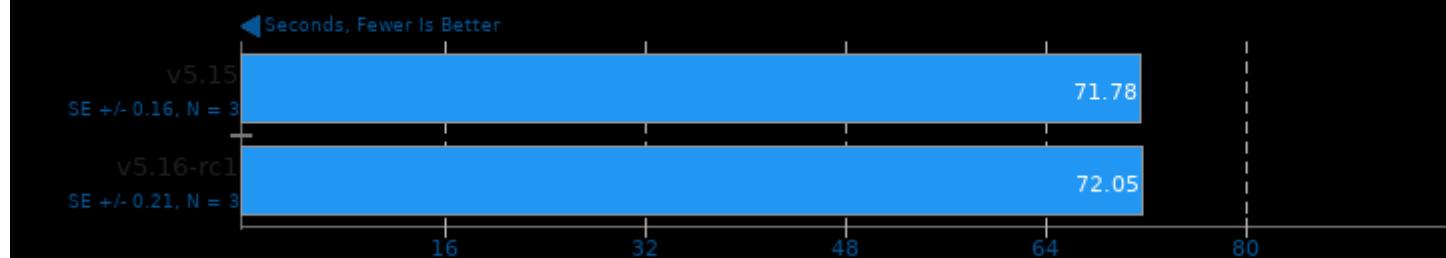
OSPray 1.8.5

Demo: San Miguel - Renderer: Path Tracer



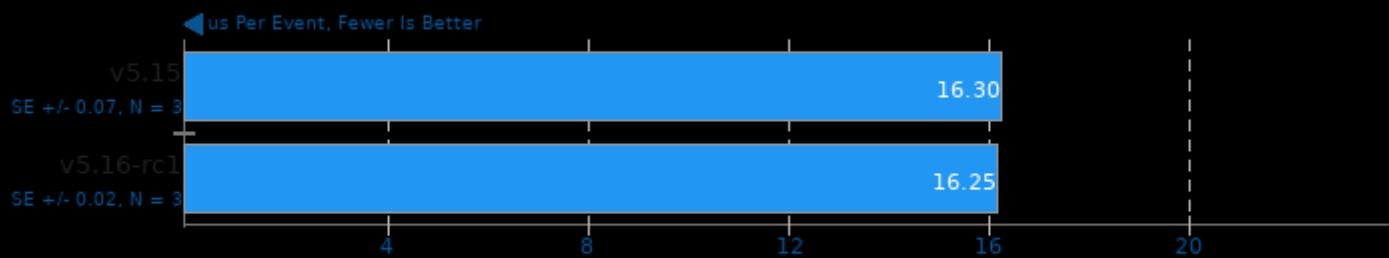
Timed Node.js Compilation 15.11

Time To Compile



OSBench

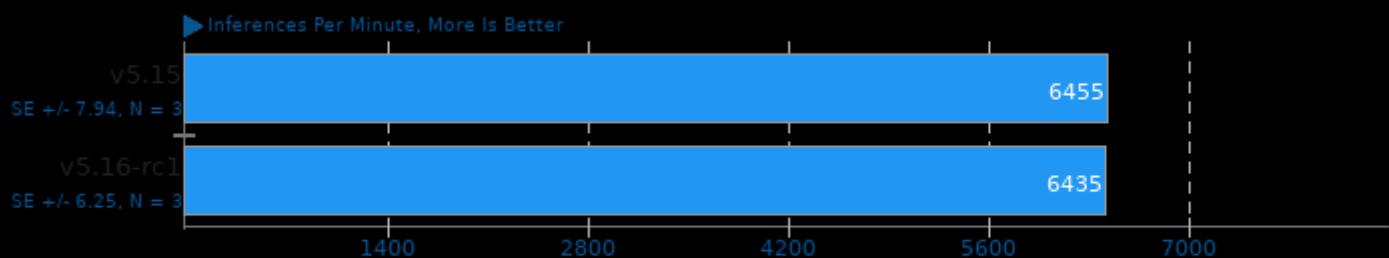
Test: Create Files



1. (CC) gcc options: -lm

ONNX Runtime 1.9.1

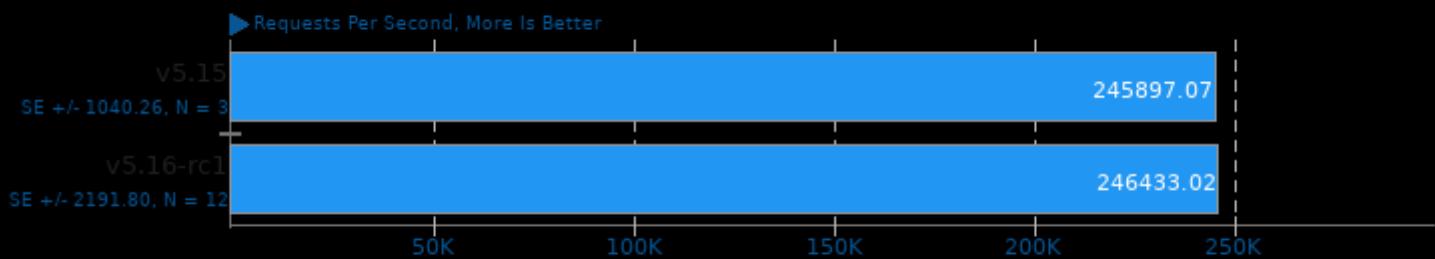
Model: super-resolution-10 - Device: CPU



1. (CXX) g++ options: -ffunction-sections -fdata-sections -march=native -mtune=native -O3 -flto -fno-fat-lto-objects -ldl -lrt -pthread -lpthread

Redis Memtier / Redis Benchmark

Test: LPUSH and LPOP: lpop

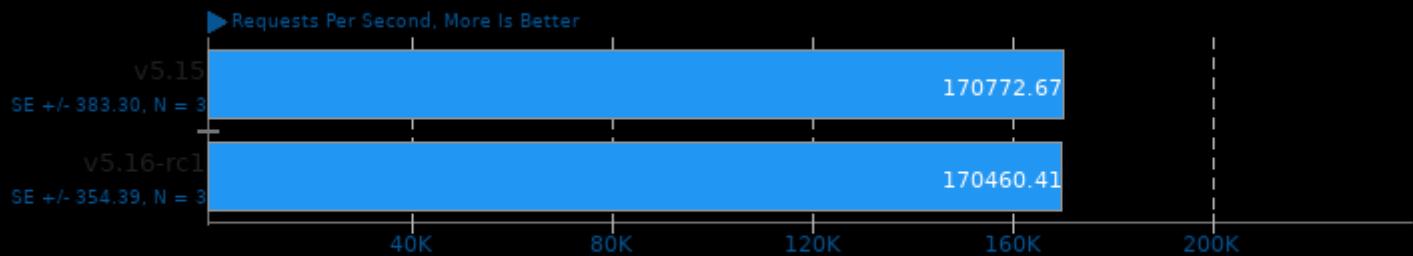


1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcres

2. Redis server v=6.0.11 sha=00000000:0 malloc=jemalloc-5.2.1 bits=64 build=83fe9b039c768864

Nginx

Test: Long Connection - Connections: 1000

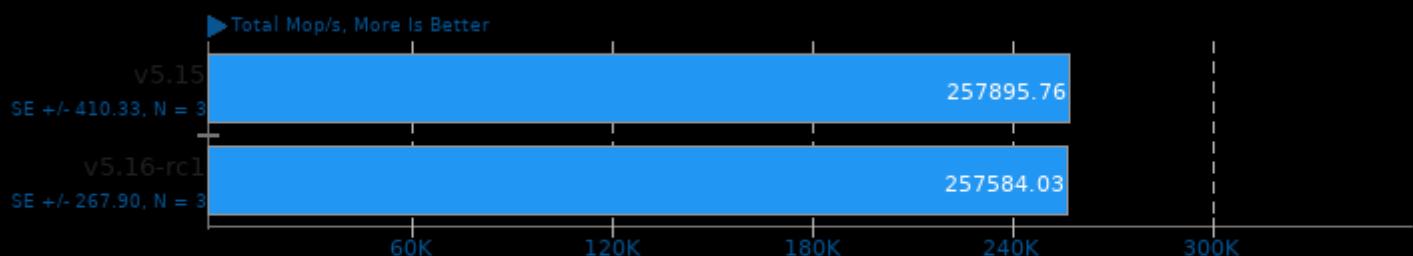


1. (CC) gcc options: -fno-ajit-5.1 -fno-ssl -fno-crypto -fno-thread -fno-std=c99 -O2

2. nginx version: nginx/1.18.0 (Ubuntu)

NAS Parallel Benchmarks 3.4

Test / Class: BT.C

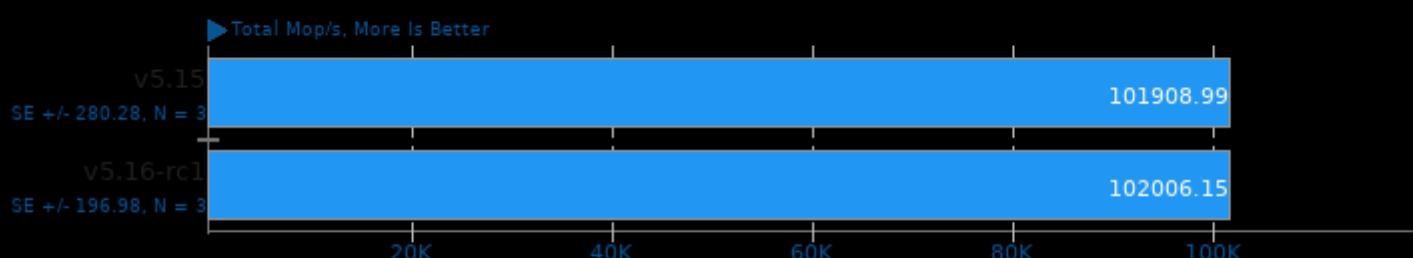


1. (F9X) gfortran options: -O3 -march=native -fthread -fmpif08 -fmpifh -fmpi -fopen-rte -fopen-pal -fhwloc -fll -fevent_core -fevent_pthread

2. Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

Test / Class: MG.C

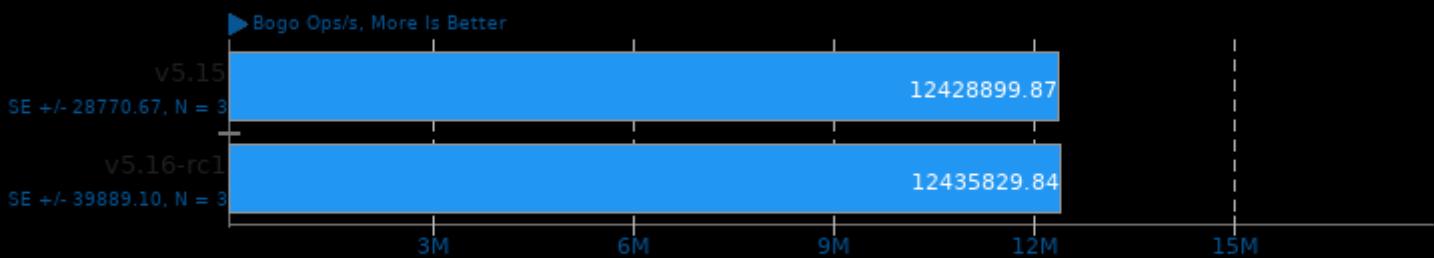


1. (F9X) gfortran options: -O3 -march=native -fthread -fmpif08 -fmpifh -fmpi -fopen-rte -fopen-pal -fhwloc -fll -fevent_core -fevent_pthread

2. Open MPI 4.1.0

Stress-NG 0.13.02

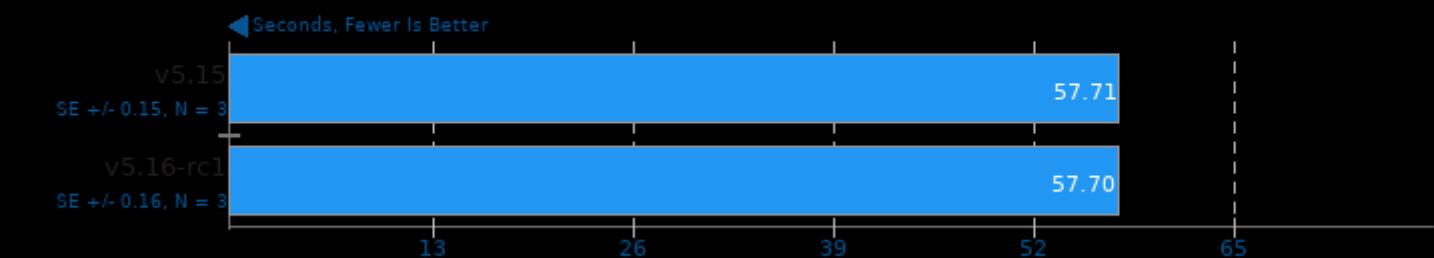
Test: Semaphores



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

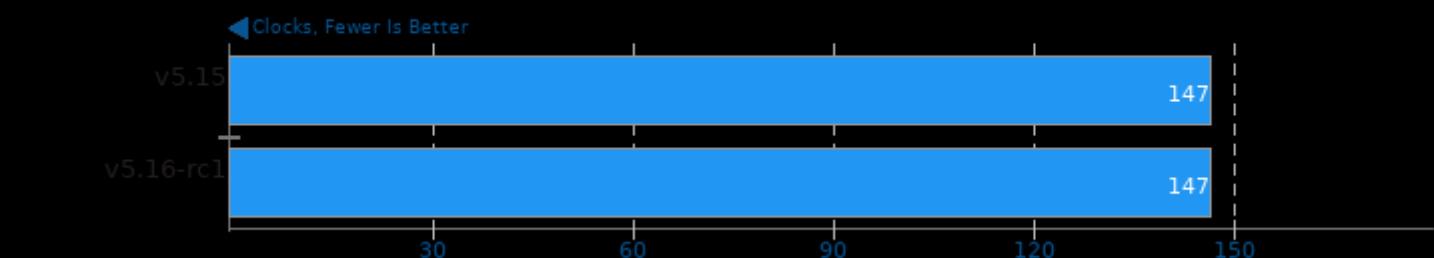
Blender 2.92

Blend File: Pabellon Barcelona - Compute: CPU-Only



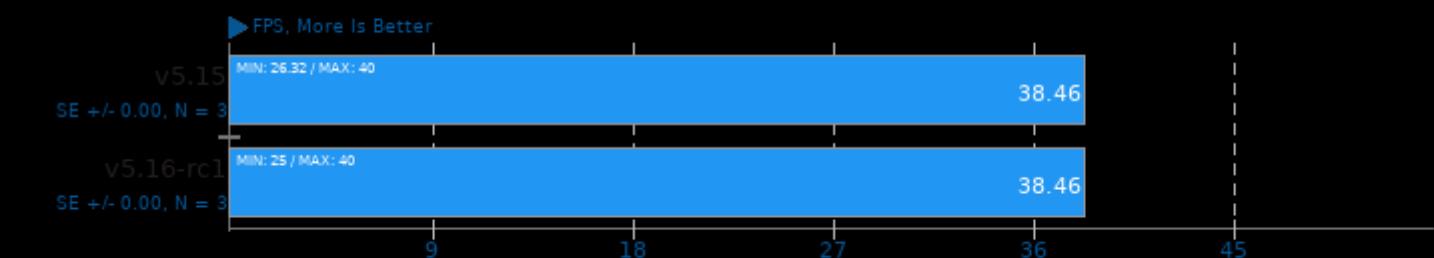
ctx_clock

Context Switch Time



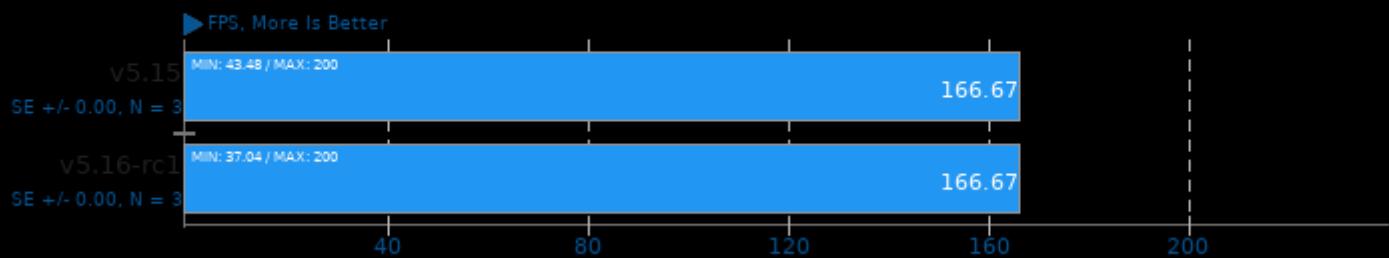
OSPray 1.8.5

Demo: NASA Streamlines - Renderer: Path Tracer



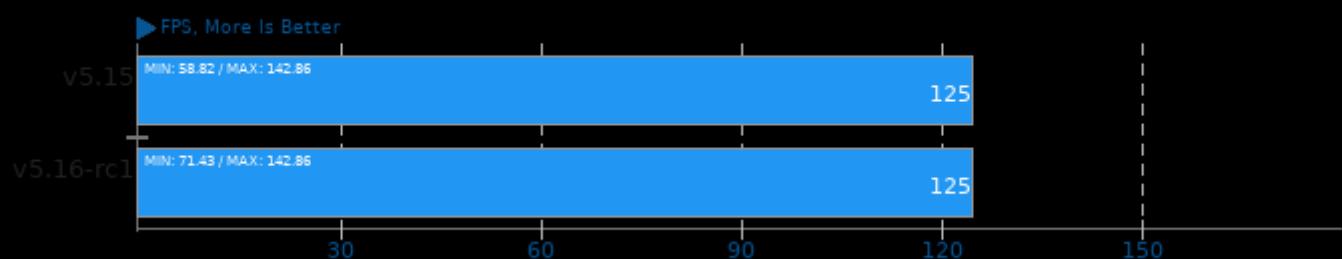
OSPray 1.8.5

Demo: NASA Streamlines - Renderer: SciVis



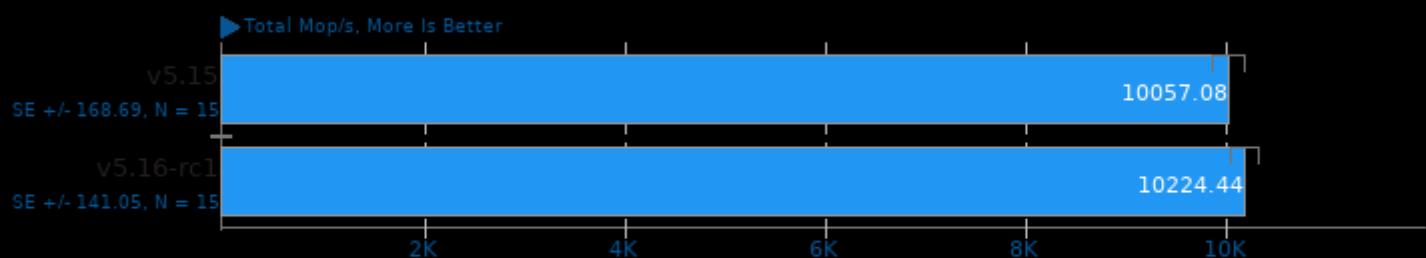
OSPray 1.8.5

Demo: San Miguel - Renderer: SciVis



NAS Parallel Benchmarks 3.4

Test / Class: EP.D

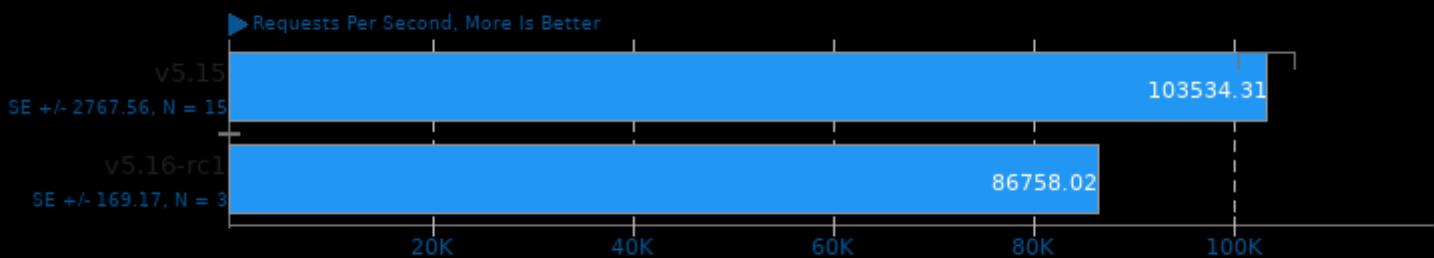


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwloc -ldl -levent_core -levent_pthread.

2. Open MPI 4.1.0

Apache HTTP Server 2.4.48

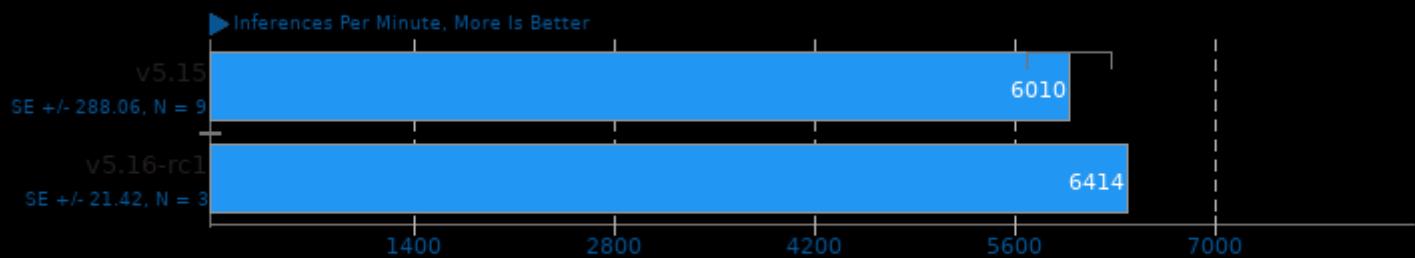
Concurrent Requests: 1000



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

ONNX Runtime 1.9.1

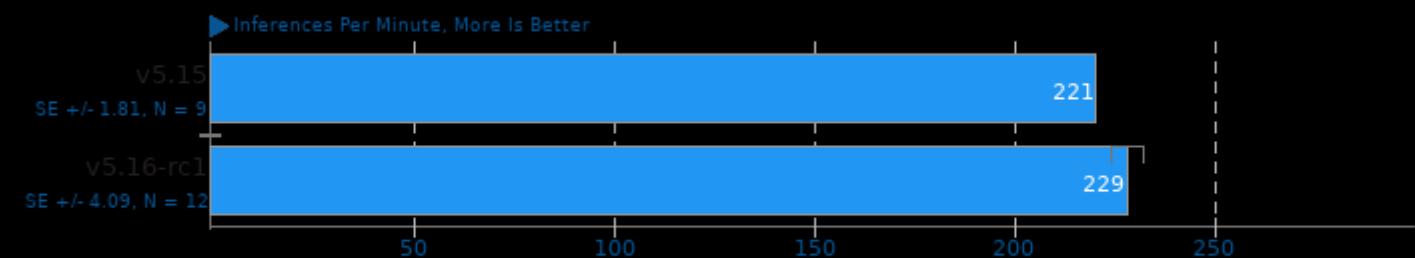
Model: shufflenet-v2-10 - Device: CPU



1. (CXX) g++ options: -ffunction-sections -fdata-sections -march=native -mtune=native -O3 -fno-fat-lto-objects -ldl -lrt -pthread -lpthread

ONNX Runtime 1.9.1

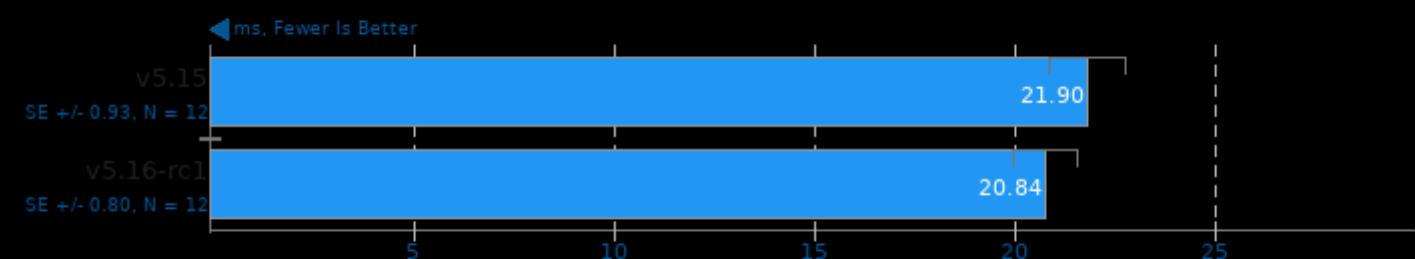
Model: fcn-resnet101-11 - Device: CPU



1. (CXX) g++ options: -ffunction-sections -fdata-sections -march=native -mtune=native -O3 -fno-fat-lto-objects -ldl -lrt -pthread -lpthread

PostgreSQL pgbench 14.0

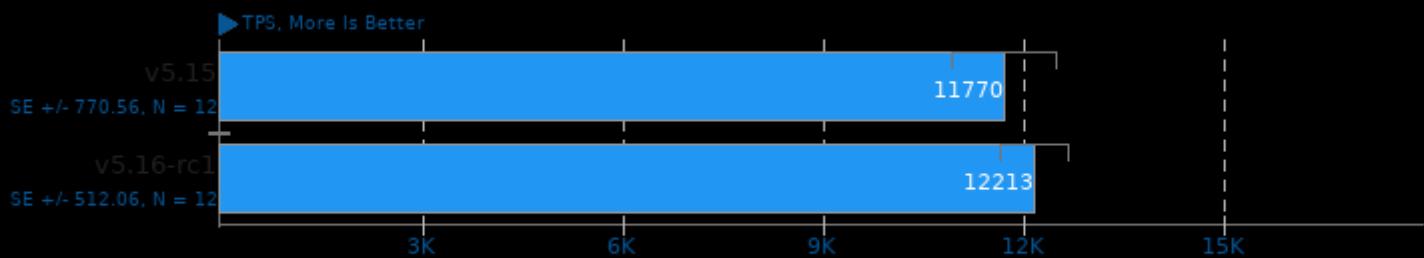
Scaling Factor: 1000 - Clients: 250 - Mode: Read Write - Average Latency



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

PostgreSQL pgbench 14.0

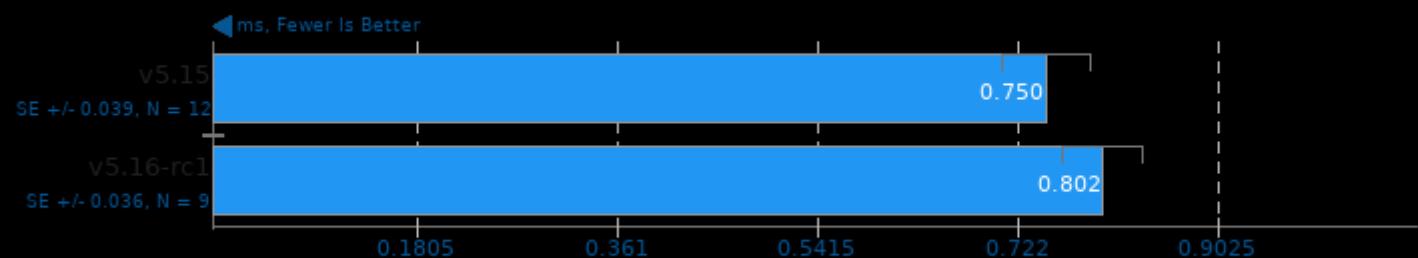
Scaling Factor: 1000 - Clients: 250 - Mode: Read Write



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

PostgreSQL pgbench 14.0

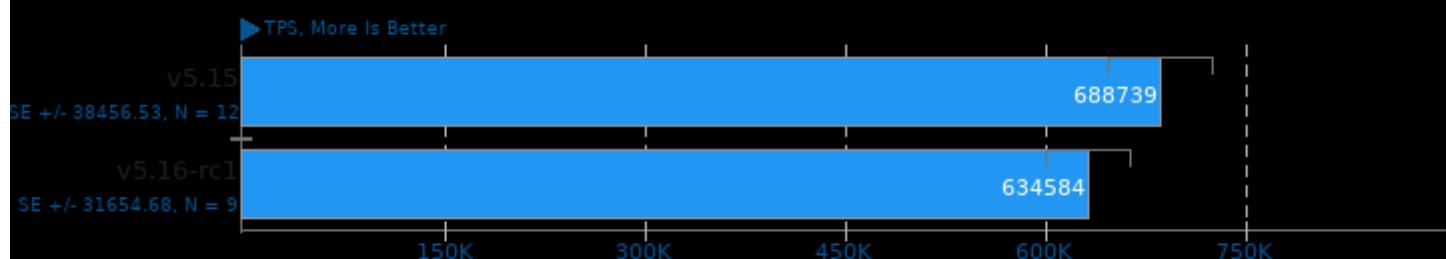
Scaling Factor: 1000 - Clients: 500 - Mode: Read Only - Average Latency



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

PostgreSQL pgbench 14.0

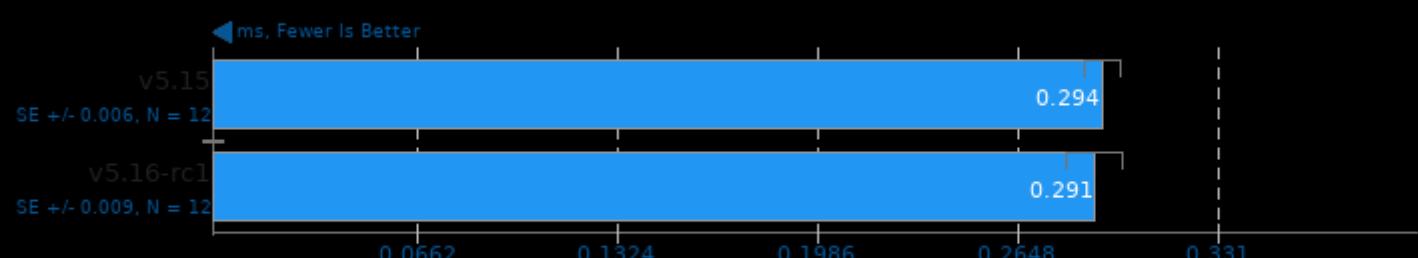
Scaling Factor: 1000 - Clients: 500 - Mode: Read Only



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

PostgreSQL pgbench 14.0

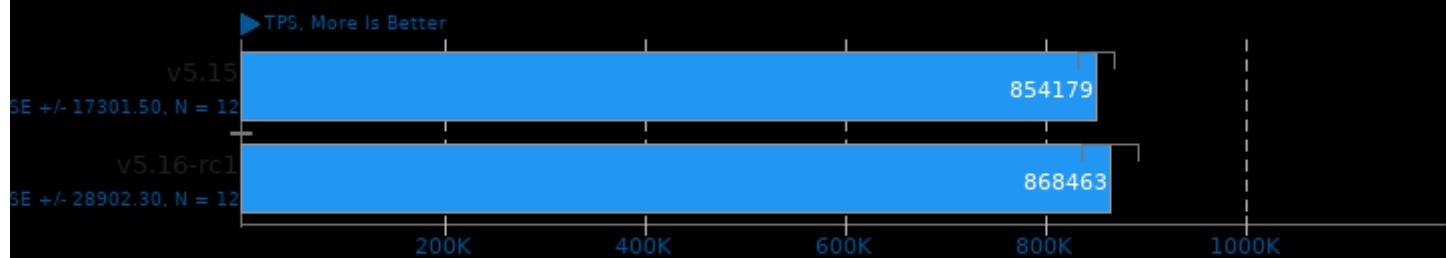
Scaling Factor: 1000 - Clients: 250 - Mode: Read Only - Average Latency



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

PostgreSQL pgbench 14.0

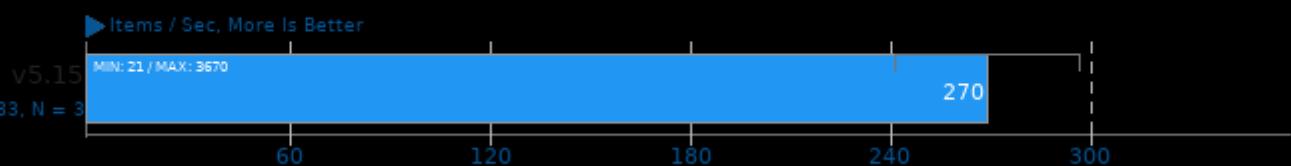
Scaling Factor: 1000 - Clients: 250 - Mode: Read Only



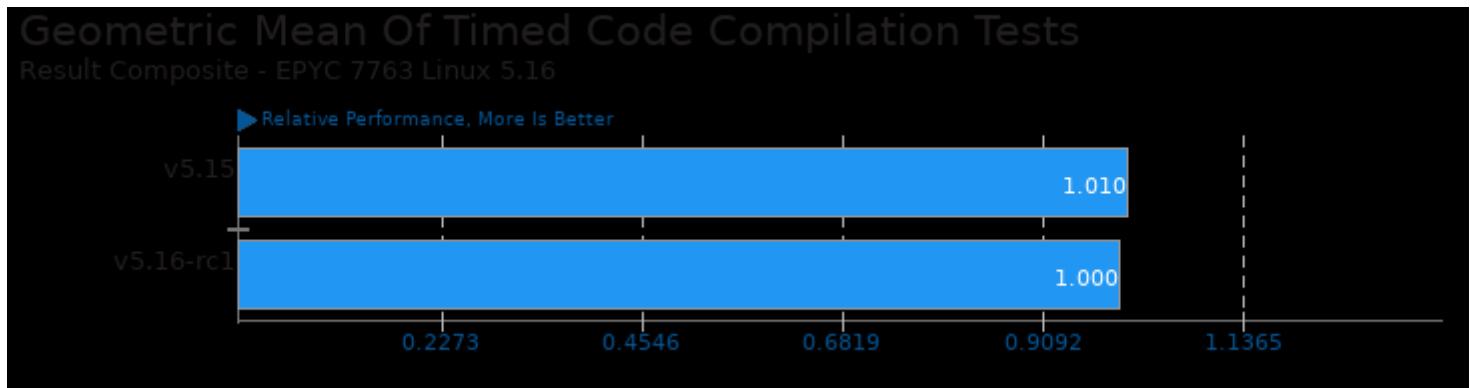
1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lpthread -lrt -ldl -lm

OpenVKL 1.0

Benchmark: vkIBenchmark ISPC



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



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



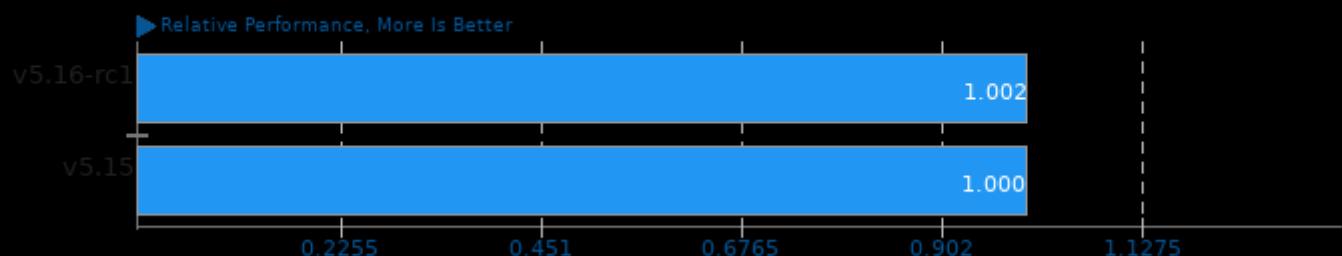
Geometric mean based upon tests: pts/pgbench, pts/apache and pts/nginx



Geometric mean based upon tests: pts/apache, pts/mysqlslap, pts/build-linux-kernel, pts/ctx-clock, pts/nginx, pts/npb, pts/pgbench, pts/stress-ng and pts/blender

Geometric Mean Of Creator Workloads Tests

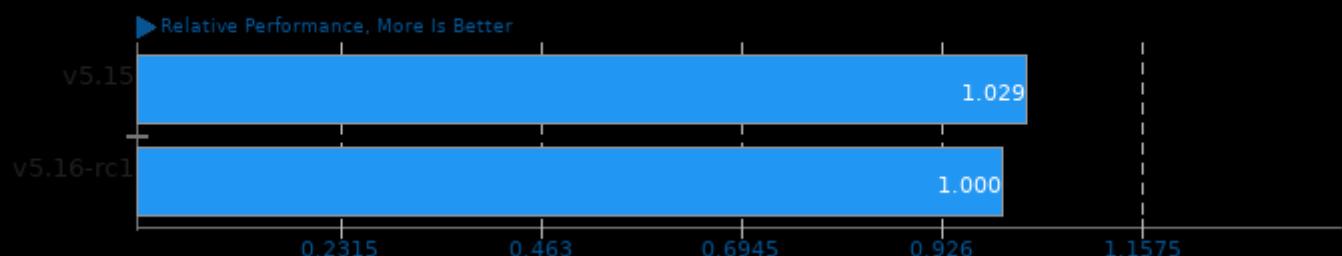
Result Composite - EPYC 7763 Linux 5.16



Geometric mean based upon tests: pts/ospray, pts/blender, pts/rav1e, pts/embree, pts/oidn, pts/openvkl and pts/build-godot

Geometric Mean Of Database Test Suite

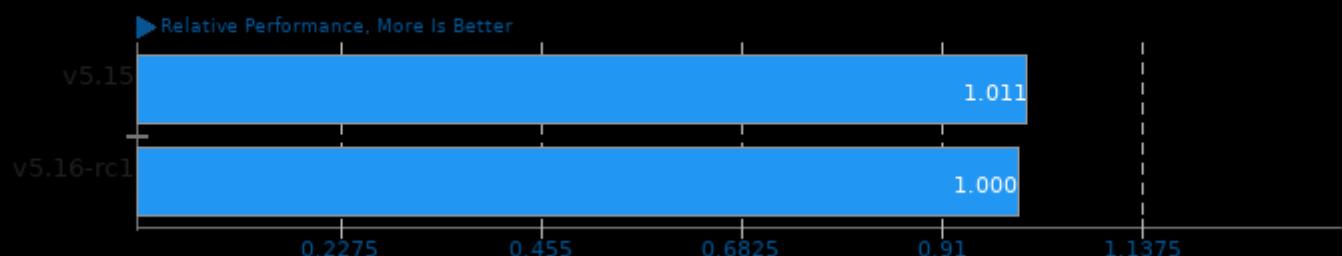
Result Composite - EPYC 7763 Linux 5.16



Geometric mean based upon tests: pts/pgbench and pts/mysqlslap

Geometric Mean Of Game Development Tests

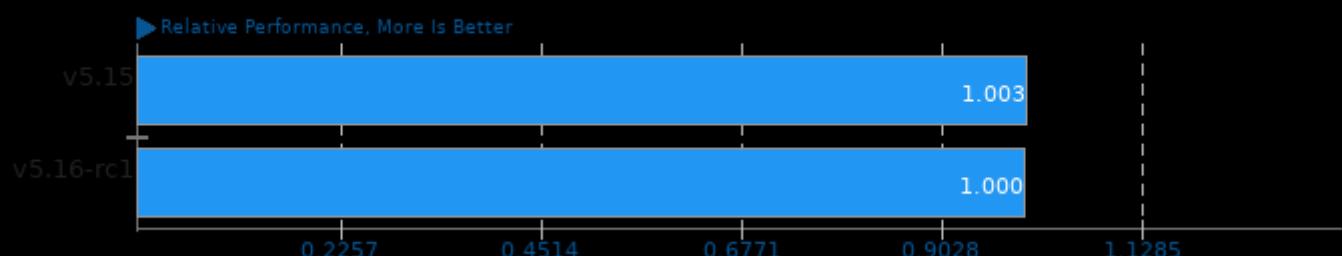
Result Composite - EPYC 7763 Linux 5.16



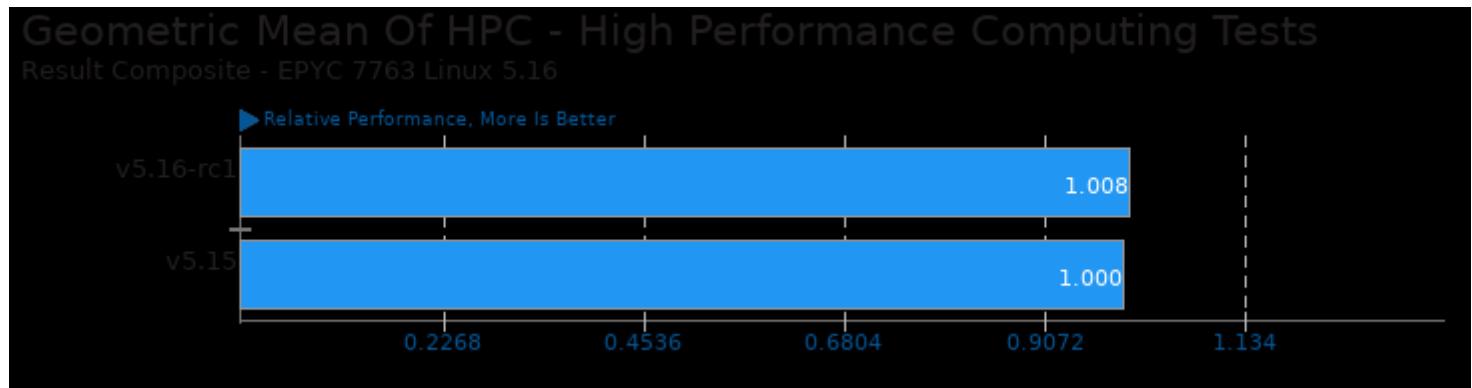
Geometric mean based upon tests: pts/build-godot, pts/blender, pts/oidn and pts/openvkl

Geometric Mean Of Go Language Tests

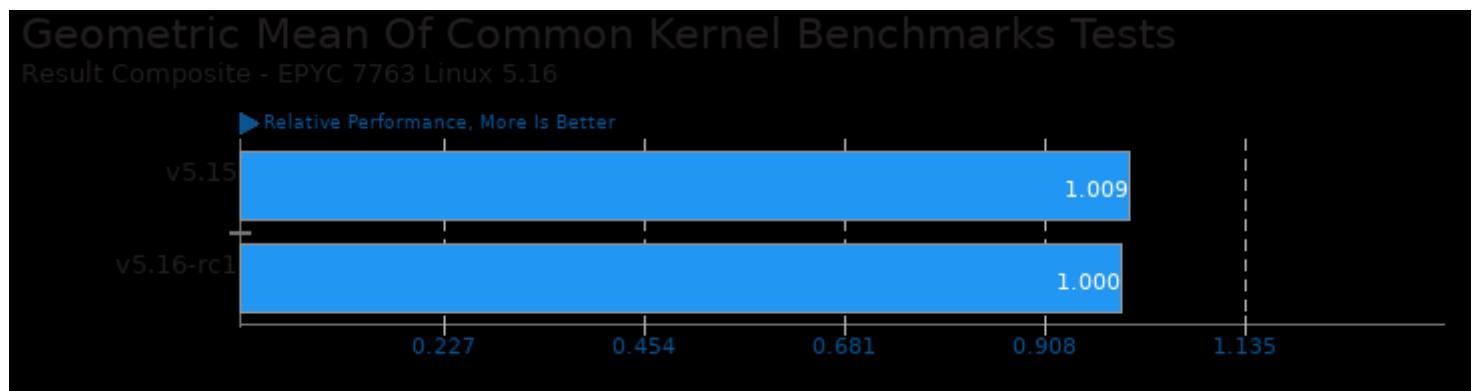
Result Composite - EPYC 7763 Linux 5.16



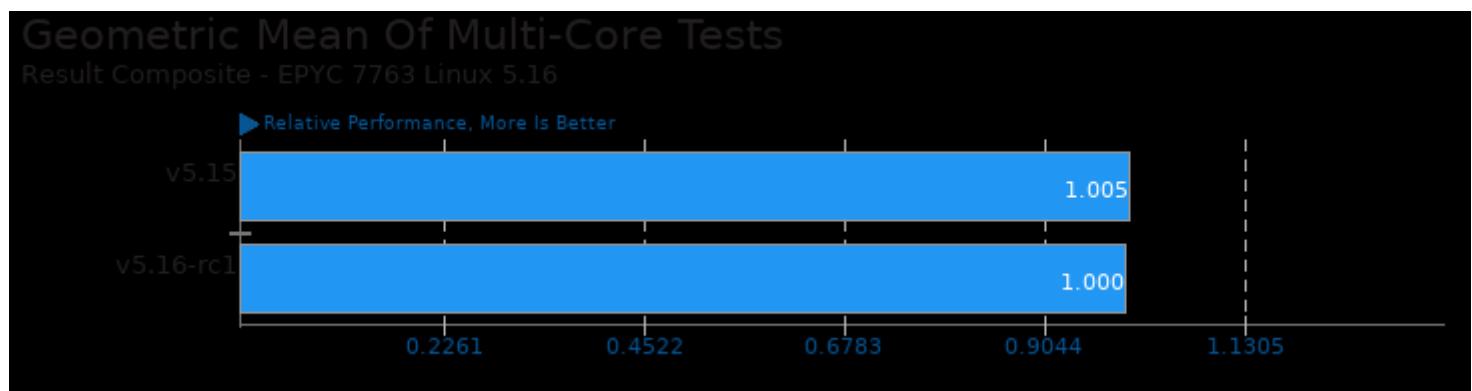
Geometric mean based upon tests: pts/apache and pts/nginx



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



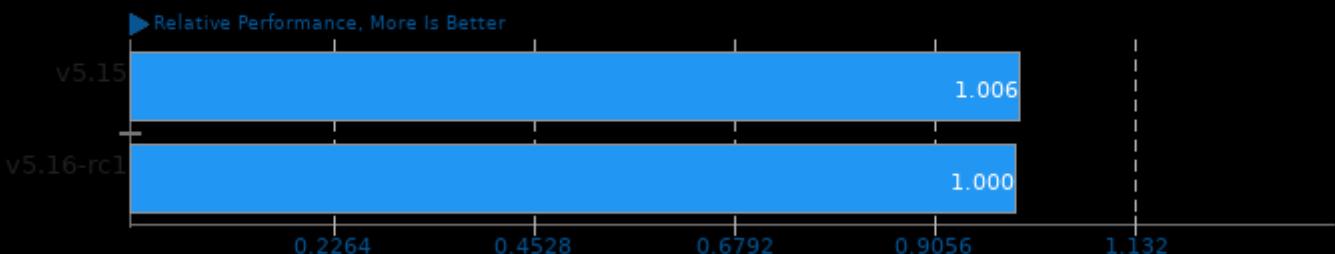
Geometric mean based upon tests: pts/apache, pts/pgbench, pts/ctx-clock, pts/stress-ng and pts/osbench



Geometric mean based upon tests: pts/blender, pts/ospray, pts/rav1e, pts/npb, pts/mysqlslap, pts/build-linux-kernel, pts/build-godot, pts/build-nodejs, pts/build-mesa, pts/embree, pts/oidn, pts/openvkl and pts/pgbench

Geometric Mean Of Intel oneAPI Tests

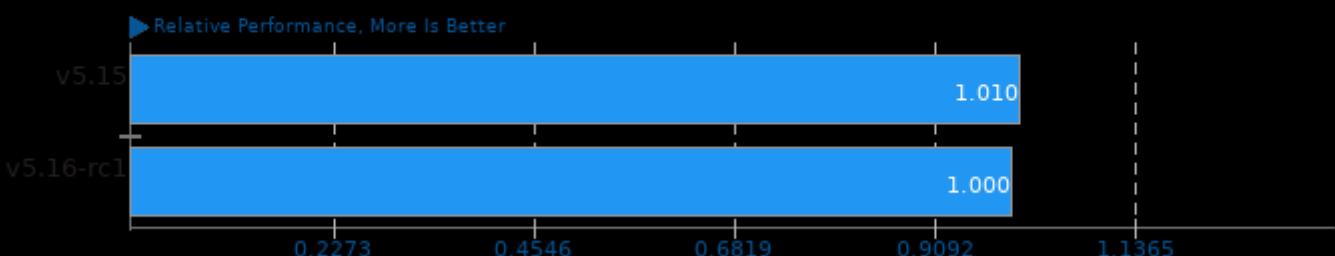
Result Composite - EPYC 7763 Linux 5.16



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

Geometric Mean Of Programmer / Developer System Benchmarks Tests

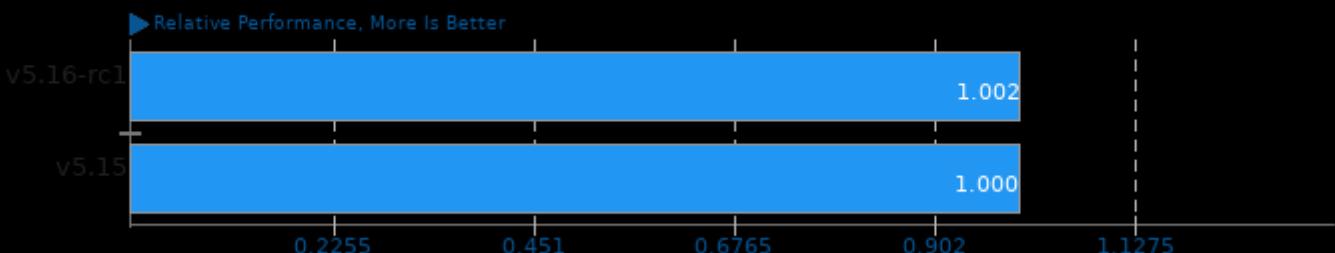
Result Composite - EPYC 7763 Linux 5.16



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

Geometric Mean Of Python Tests

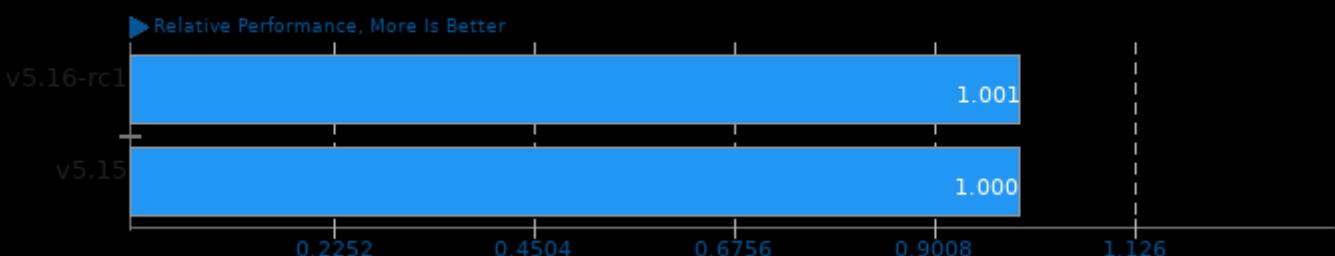
Result Composite - EPYC 7763 Linux 5.16



Geometric mean based upon tests: pts/onnx, pts/build-godot, pts/build-mesa and pts/build-nodejs

Geometric Mean Of Renderers Tests

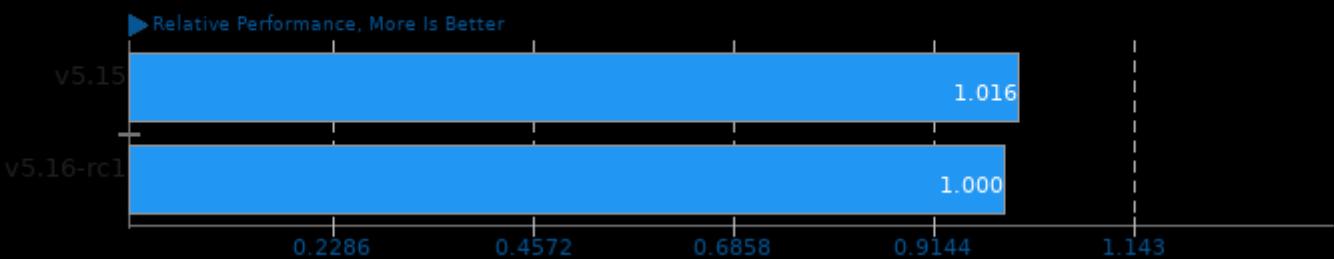
Result Composite - EPYC 7763 Linux 5.16



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

Geometric Mean Of Server Tests

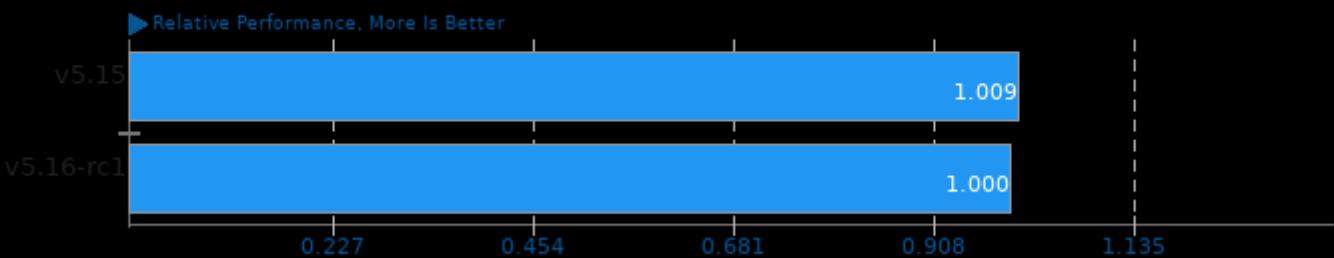
Result Composite - EPYC 7763 Linux 5.16



Geometric mean based upon tests: pts/apache, pts/nginx, pts/mysqlslap and pts/pgbench

Geometric Mean Of Server CPU Tests

Result Composite - EPYC 7763 Linux 5.16



Geometric mean based upon tests: pts/npb, pts/build-linux-kernel, pts/mysqlslap, pts/stress-ng, pts/ctx-clock and pts/blender

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 11:06.