



hv-gateway

KVM testing on Ubuntu 22.04 via the Phoronix Test Suite.

Automated Executive Summary

E3-1230v3 3.3GHz host had the most wins, coming in first place for 62% of the tests.

Based on the geometric mean of all complete results, the fastest (E3-1230v3 3.3GHz host) was 1.083x the speed of the slowest (E3-1230v3 3.3GHz).

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

Stress-NG (Test: NUMA) at 2.517x

Stress-NG (Test: Mutex) at 1.159x

Stress-NG (Test: Futex) at 1.133x

Stress-NG (Test: Malloc) at 1.109x

Stress-NG (Test: Vector Math) at 1.099x

Stress-NG (Test: Matrix Math) at 1.076x

Stress-NG (Test: Semaphores) at 1.06x

Stress-NG (Test: Forking) at 1.037x

Stress-NG (Test: MMAP) at 1.019x

Stress-NG (Test: IO_uring) at 1.013x.

Test Systems:

E3-1230v3 3.3GHz

Processor: Common KVM (8 Cores), Motherboard: QEMU Standard PC (i440FX + PIIX 1996) (rel-1.16.0-0-gd239552ce722-prebuilt.qemu.org BIOS), Chipset: Intel 440FX 82441FX PMC, Memory: 16GB, Disk: 17GB QEMU HDD, Graphics: bochs-drmdrmfb, Monitor: QEMU Monitor, Network: Red Hat Virtio device

OS: Ubuntu 22.04, Kernel: 5.15.0-43-generic (x86_64), Vulkan: 1.2.204, Compiler: GCC 11.3.0, File-System: ext4, Screen Resolution: 1280x800, System Layer: KVM

Kernel Notes: Transparent Huge Pages: madvise

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --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-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-nvptx/usr,amdgc-n-amdhsa=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-gcn/usr --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: CPU Microcode: 0x1

Security Notes: itlb_multihit: KVM: Mitigation of VMX unsupported + I1tf: Mitigation of PTE Inversion + mds: Vulnerable: Clear buffers attempted no microcode; SMT Host state unknown + meltdown: Mitigation of PTI + mmio_stale_data: Not affected + spec_store_bypass: Vulnerable + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

E3-1230v3 3.3GHz host

Processor: Intel Xeon E3-1230 v3 (8 Cores), Motherboard: QEMU Standard PC (i440FX + PIIX 1996) (rel-1.16.0-0-gd239552ce722-prebuilt.qemu.org BIOS), Chipset: Intel 440FX 82441FX PMC, Memory: 16GB, Disk: 17GB QEMU HDD, Graphics: bochs-drmdrmfb, Monitor: QEMU Monitor, Network: Red Hat Virtio device

OS: Ubuntu 22.04, Kernel: 5.15.0-43-generic (x86_64), Vulkan: 1.2.204, Compiler: GCC 11.3.0, File-System: ext4, Screen Resolution: 1280x800, System Layer: KVM

Kernel Notes: Transparent Huge Pages: madvise

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --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-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-nvptx/usr,amdgc-n-amdhsa=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-gcn/usr --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: CPU Microcode: 0x28

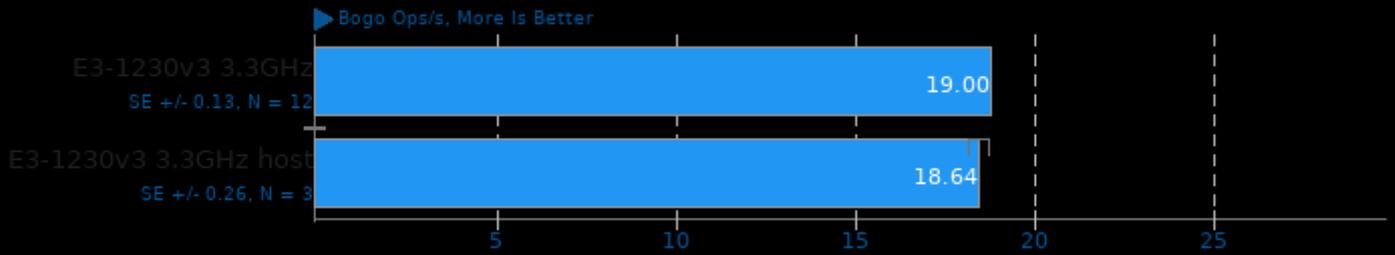
Security Notes: itlb_multihit: Not affected + I1tf: Mitigation of PTE Inversion; VMX: flush not necessary SMT disabled + mds: Mitigation of Clear buffers; SMT Host state unknown + meltdown: Mitigation of PTI + mmio_stale_data: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Unknown: Dependent on hypervisor status + tsx_async_abort: Not affected

	E3-1230v3 3.3GHz	E3-1230v3 3.3GHz host
Stress-NG - MMAP (Bogo Ops/s)	19.00	18.64
Normalized	100%	98.11%
Standard Deviation	2.4%	2.4%
Stress-NG - NUMA (Bogo Ops/s)	32.15	80.93
Normalized	39.73%	100%
Standard Deviation	0.2%	0.5%
Stress-NG - Futex (Bogo Ops/s)	561636	636061
Normalized	88.3%	100%

	Standard Deviation	0.4%	0.7%
Stress-NG - MEMFD (Bogo Ops/s)		84.14	84.41
	Normalized	99.68%	100%
	Standard Deviation	0.9%	2%
Stress-NG - Mutex (Bogo Ops/s)		810524	939326
	Normalized	86.29%	100%
	Standard Deviation	2.3%	0.2%
Stress-NG - Atomic (Bogo Ops/s)		151734	151312
	Normalized	100%	99.72%
	Standard Deviation	0.7%	0.5%
Stress-NG - Crypto (Bogo Ops/s)		4123	4167
	Normalized	98.95%	100%
	Standard Deviation	0.1%	0.3%
Stress-NG - Malloc (Bogo Ops/s)		575378	637891
	Normalized	90.2%	100%
	Standard Deviation	1.4%	0.2%
Stress-NG - Forking (Bogo Ops/s)		21320	20561
	Normalized	100%	96.44%
	Standard Deviation	0.6%	0.5%
Stress-NG - IO_uring (Bogo Ops/s)		2013	2039
	Normalized	98.72%	100%
	Standard Deviation	0.1%	1.1%
Stress-NG - SENDFILE (Bogo Ops/s)		51654	51910
	Normalized	99.51%	100%
	Standard Deviation	0.1%	0.1%
Stress-NG - CPU Cache (Bogo Ops/s)		44.33	41.64
	Normalized	100%	93.93%
	Standard Deviation	8.1%	10%
Stress-NG - CPU Stress (Bogo Ops/s)		7194	7130
	Normalized	100%	99.11%
	Standard Deviation	0.1%	0.1%
Stress-NG - Semaphores (Bogo Ops/s)		500852	530808
	Normalized	94.36%	100%
	Standard Deviation	0.1%	0.2%
Stress-NG - Matrix Math (Bogo Ops/s)		18338	17043
	Normalized	100%	92.93%
	Standard Deviation	1.1%	0.7%
Stress-NG - Vector Math (Bogo Ops/s)		11761	12920
	Normalized	91.03%	100%
	Standard Deviation	0.4%	0.1%
Stress-NG - x86_64 RdRand (Bogo Ops/s)			5721
	Standard Deviation		0.7%
Stress-NG - Memory Copying (Bogo Ops/s)			843.92
	Standard Deviation		0.2%
Stress-NG - Socket Activity (Bogo Ops/s)			3045
	Standard Deviation		0.3%
Stress-NG - Context Switching (Bogo Ops/s)			1011754
	Standard Deviation		0.8%
Stress-NG - G.C.S.F (Bogo Ops/s)			485236
	Standard Deviation		0.6%
Stress-NG - G.Q.D.S (Bogo Ops/s)			54.52
	Standard Deviation		0.7%
Stress-NG - S.V.M.P (Bogo Ops/s)			3346565
	Standard Deviation		0.3%

Stress-NG 0.14.06

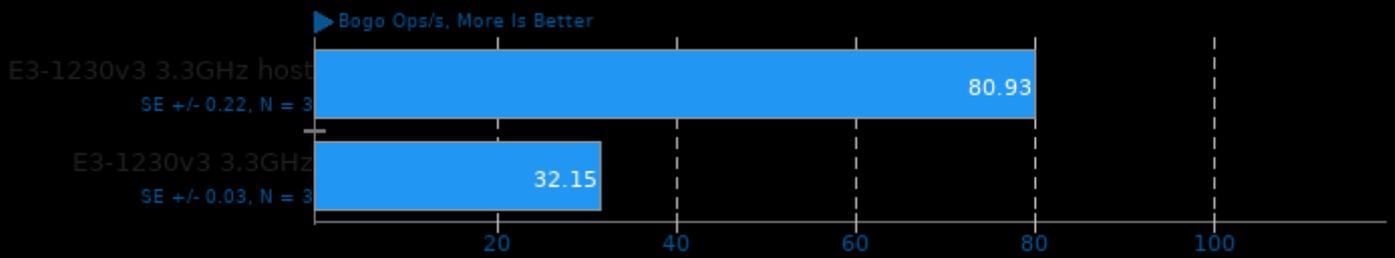
Test: MMAP



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

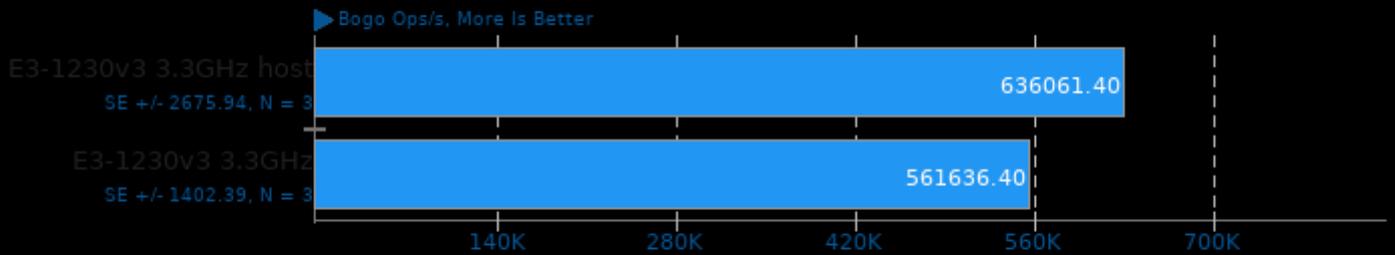
Test: NUMA



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

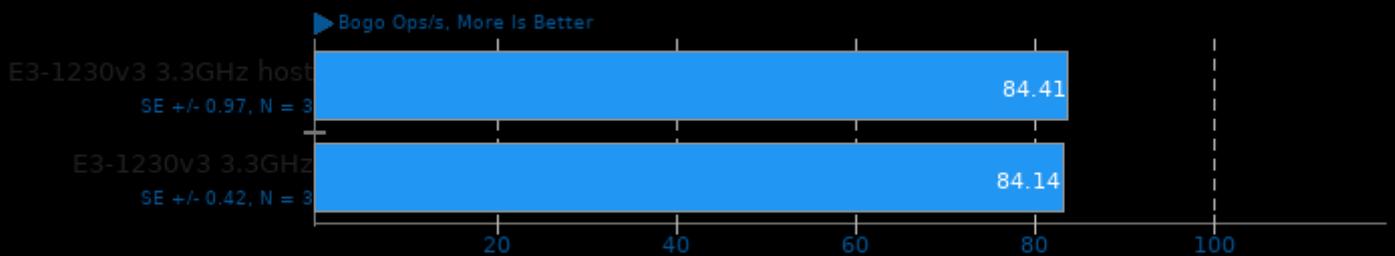
Test: Futex



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

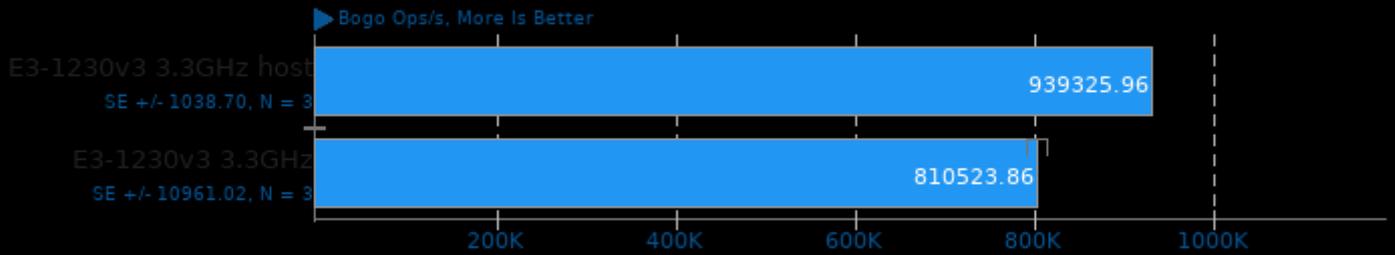
Test: MEMFD



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

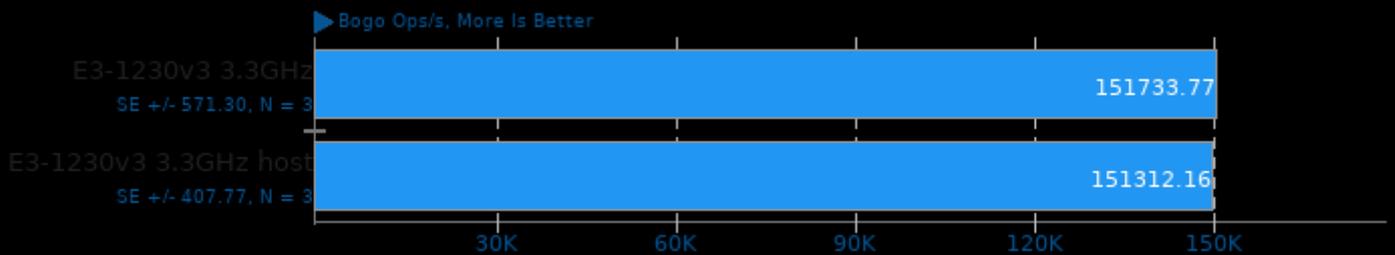
Test: Mutex



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

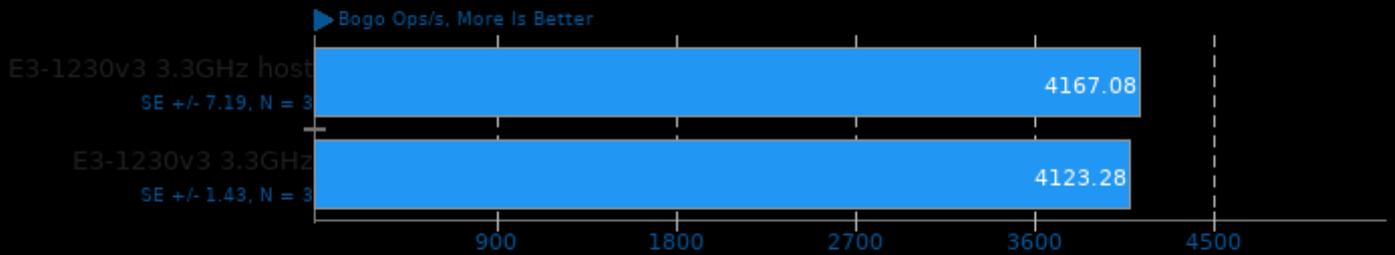
Test: Atomic



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

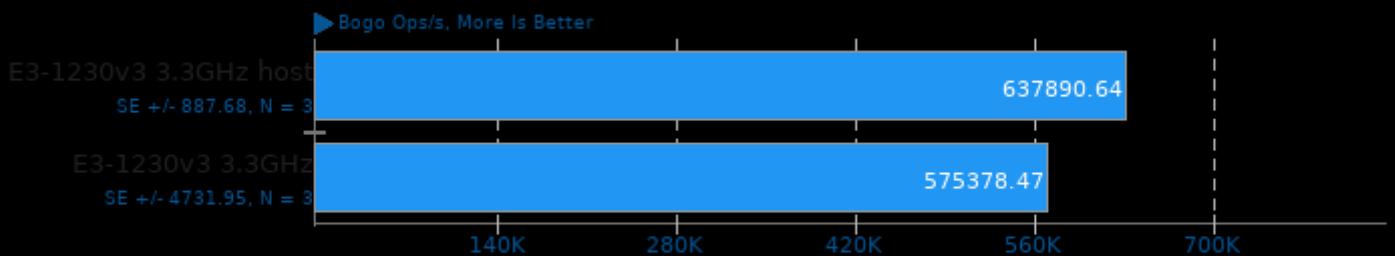
Test: Crypto



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

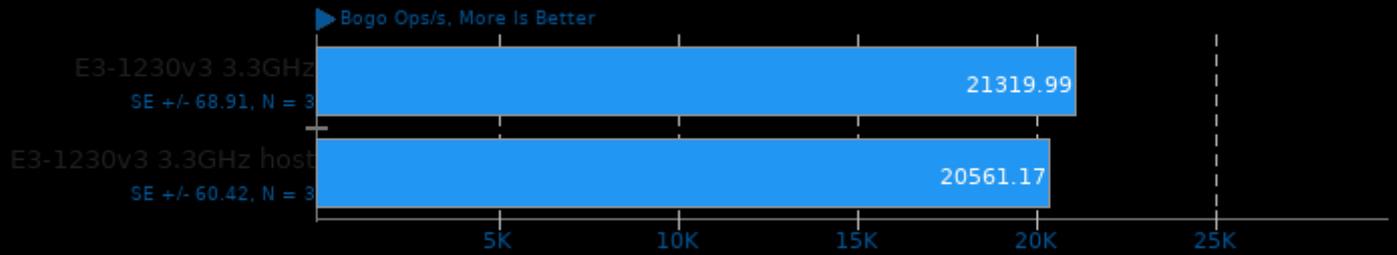
Test: Malloc



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

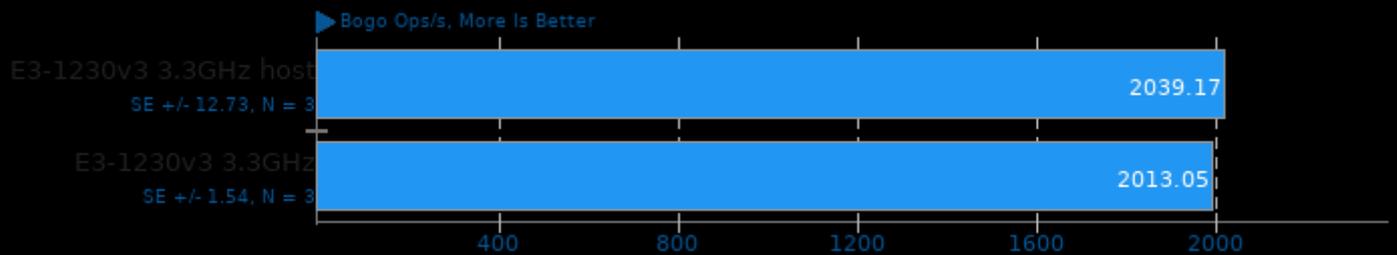
Test: Forking



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

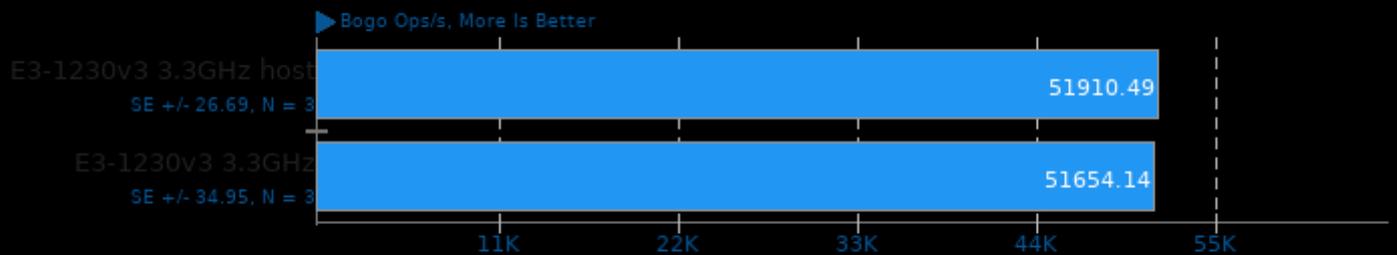
Test: IO_uring



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

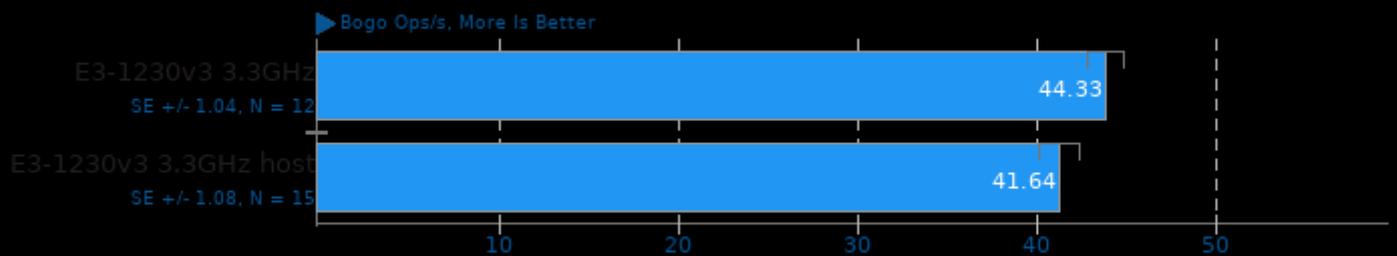
Test: SENDFILE



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

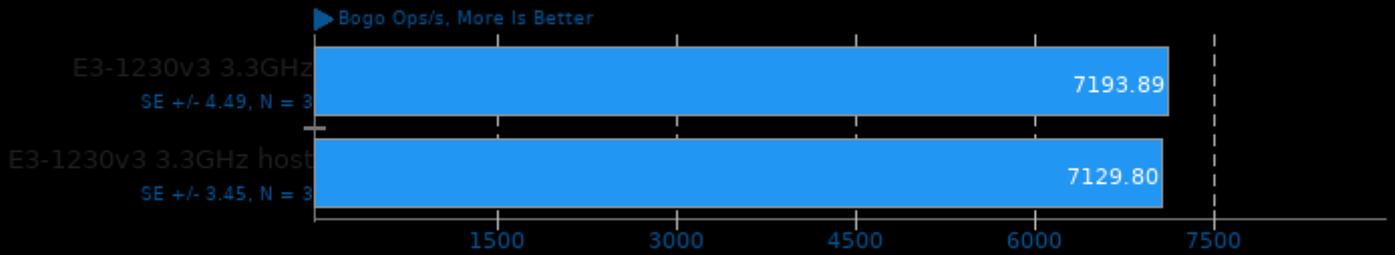
Test: CPU Cache



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

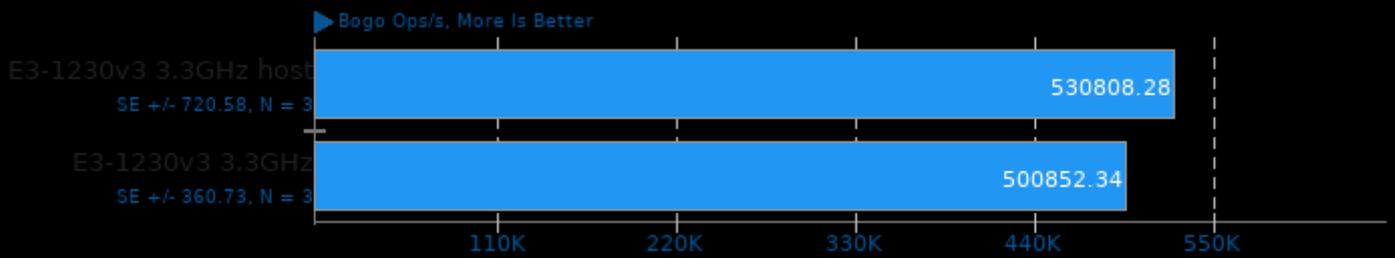
Test: CPU Stress



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

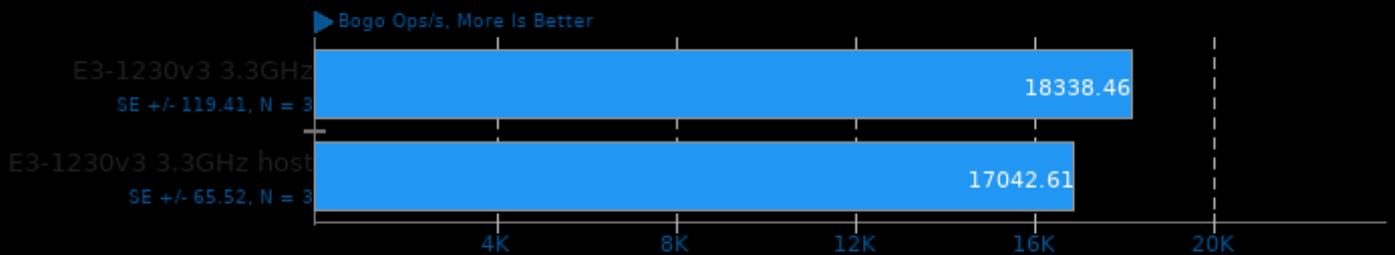
Test: Semaphores



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

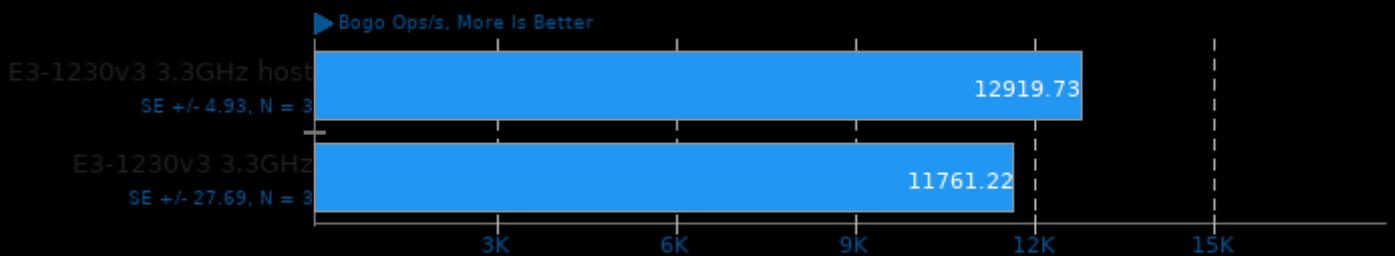
Test: Matrix Math



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

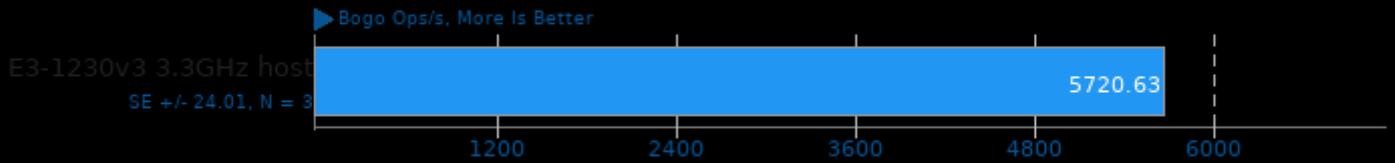
Test: Vector Math



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

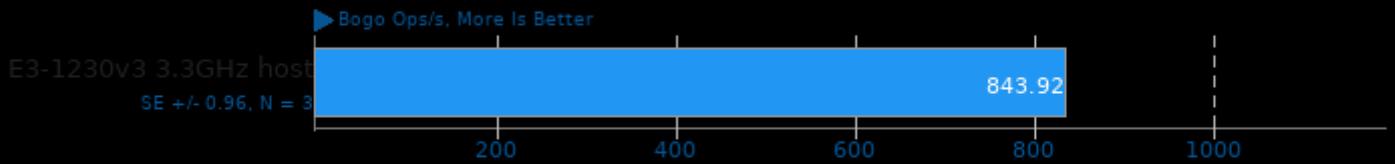
Test: x86_64 RdRand



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

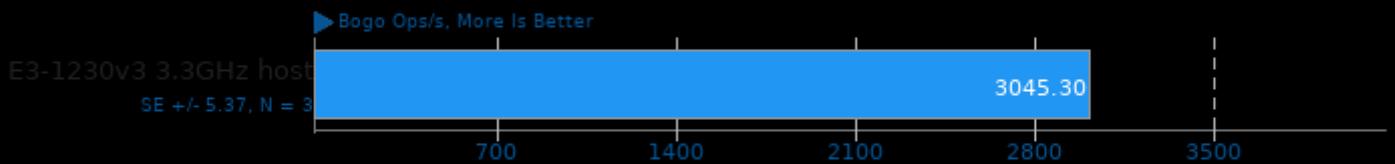
Test: Memory Copying



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

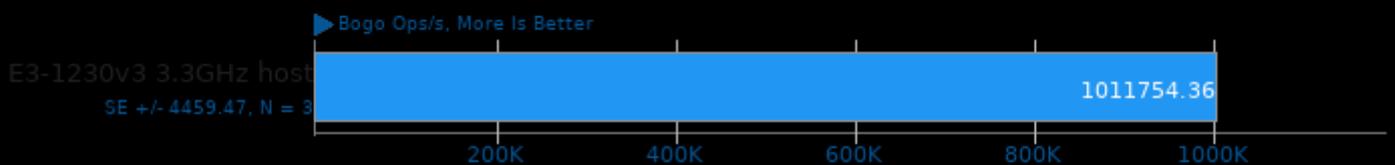
Test: Socket Activity



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

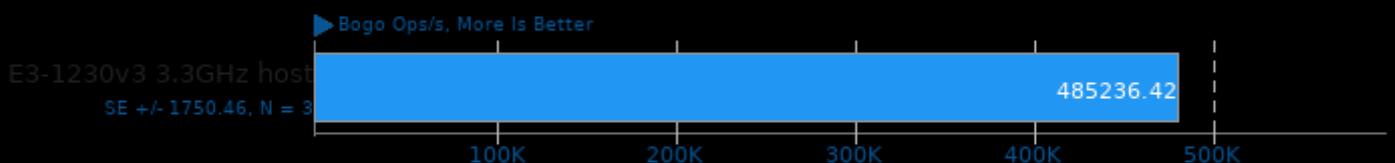
Test: Context Switching



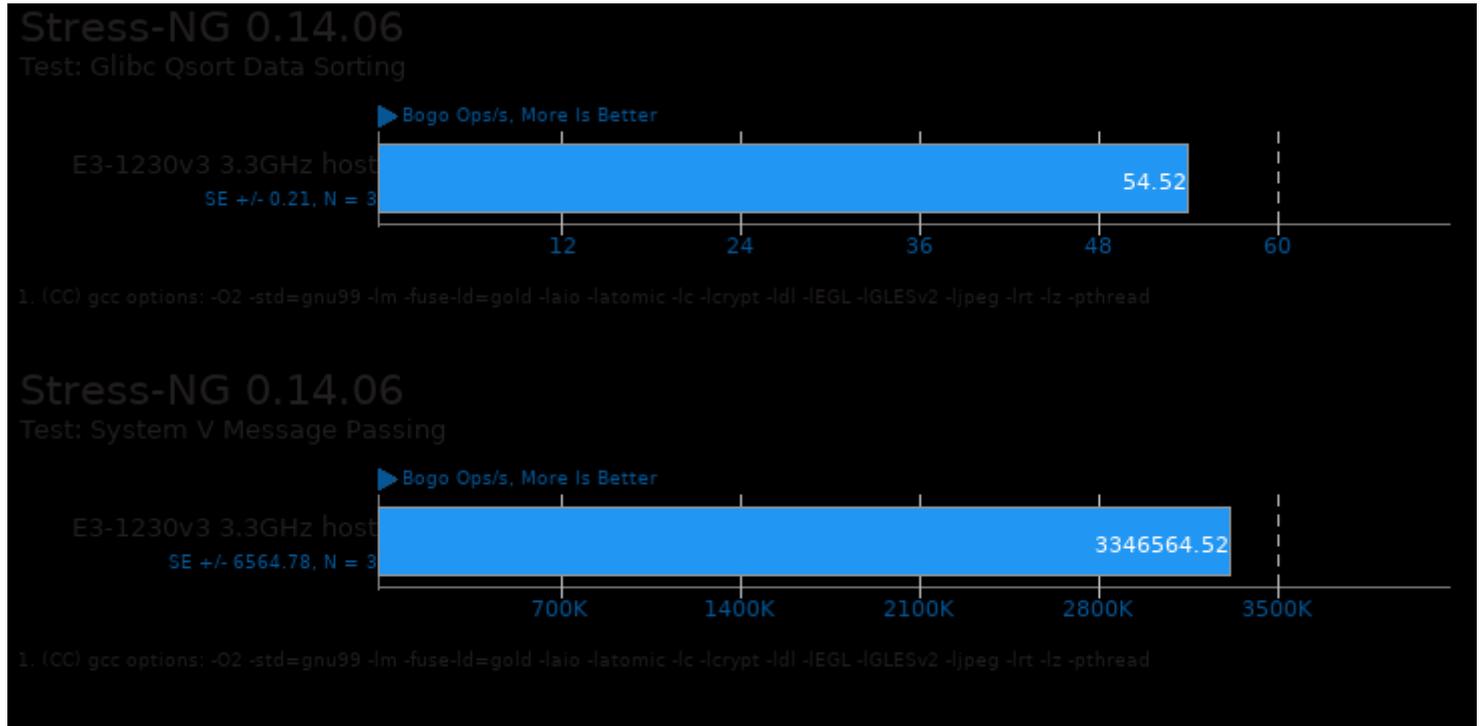
1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread

Stress-NG 0.14.06

Test: Glibc C String Functions



1. (CC) gcc options: -O2 -std=gnu99 -lm -fuse-id=gold -laio -latomic -lc -lcrypt -ldl -IEGL -IGLESv2 -ljpeg -lrt -lz -pthread



This file was automatically generated via the Phoronix Test Suite benchmarking software on Saturday, 10 June 2023 13:22.