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Intel Core i7-1065G7 testing with a Dell 06CDVY (1.0.9 BIOS) and Intel Iris Plus ICL GT2 3GB on Ubuntu 21.04 via the Phoronix Test Suite.

Automated Executive Summary

4 had the most wins, coming in first place for 52% of the tests.

Based on the geometric mean of all complete results, the fastest (4) was 1.049x the speed of the slowest (2). 1 was 0.992x the speed of 4, 3 was 0.974x the speed of 1, 2 was 0.987x the speed of 3.

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

Stress-NG (Test: NUMA) at 1.115x
Stress-NG (Test: MEMFD) at 1.105x
Stress-NG (Test: CPU Cache) at 1.099x
Stress-NG (Test: SENDFILE) at 1.093x
Stress-NG (Test: Matrix Math) at 1.086x
Stress-NG (Test: Memory Copying) at 1.086x
Stress-NG (Test: Vector Math) at 1.078x
Stress-NG (Test: Glibc Qsort Data Sorting) at 1.076x
Stress-NG (Test: Forking) at 1.064x

Stress-NG (Test: Malloc) at 1.057x.

Test Systems:

1

2

3

4

Processor: Intel Core i7-1065G7 @ 3.90GHz (4 Cores / 8 Threads), Motherboard: Dell 06CDVY (1.0.9 BIOS), Chipset: Intel Ice Lake-LP DRAM, Memory: 16GB, Disk: Toshiba KBG40ZPZ512G NVMe 512GB, Graphics: Intel Iris Plus ICL GT2 3GB (1100MHz), Audio: Realtek ALC289, Network: Intel Killer Wi-Fi 6 AX1650i 160MHz

OS: Ubuntu 21.04, Kernel: 5.13.0-051300-generic (x86_64), Desktop: GNOME Shell 3.38.4, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.2.0-devel (git-4698755 2021-07-03 hirsute-oibaf-ppa), Vulkan: 1.2.182, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 1920x1200

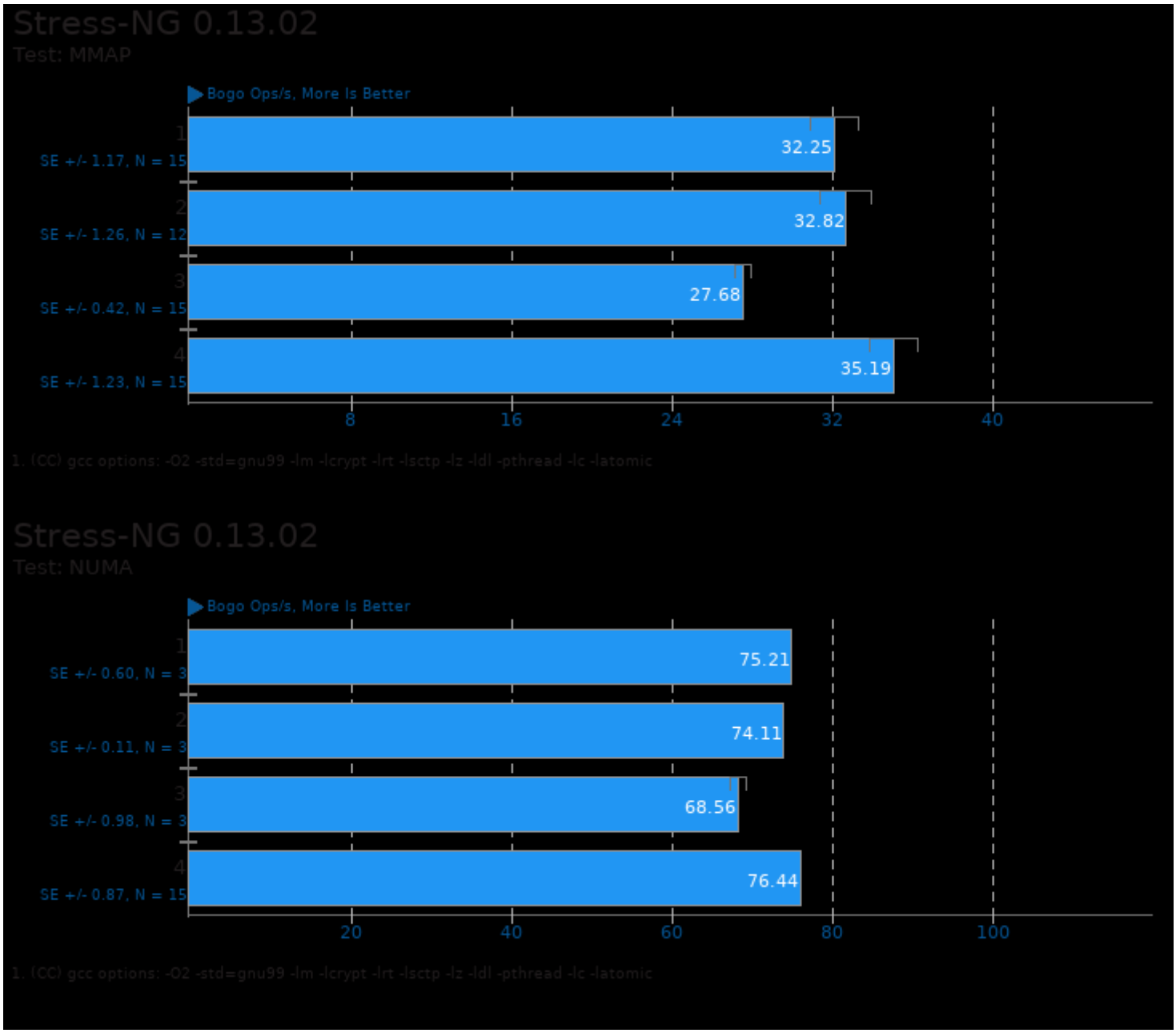
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --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,amdgcn-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: intel_pstate powersave - CPU Microcode: 0xa6 - Thermald 2.4.3
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	1	2	3	4
Stress-NG - MMAP (Bogo Ops/s)	32.25	32.82	**27.68**	**35.19**
Normalized	91.65%	93.27%	78.66%	100%
Standard Deviation	14.1%	13.3%	5.8%	13.5%
Stress-NG - NUMA (Bogo Ops/s)	75.21	74.11	**68.56**	**76.44**
Normalized	98.39%	96.95%	89.69%	100%
Standard Deviation	1.4%	0.3%	2.5%	4.4%
Stress-NG - MEMFD (Bogo Ops/s)	192.11	186.49	**176.08**	**194.58**
Normalized	98.73%	95.84%	90.49%	100%
Standard Deviation	2.5%	3.2%	2.3%	2.5%
Stress-NG - Atomic (Bogo Ops/s)	**187053**	183929	**178328**	186953
Normalized	100%	98.33%	95.34%	99.95%
Standard Deviation	4.9%	3.8%	2.4%	4.6%

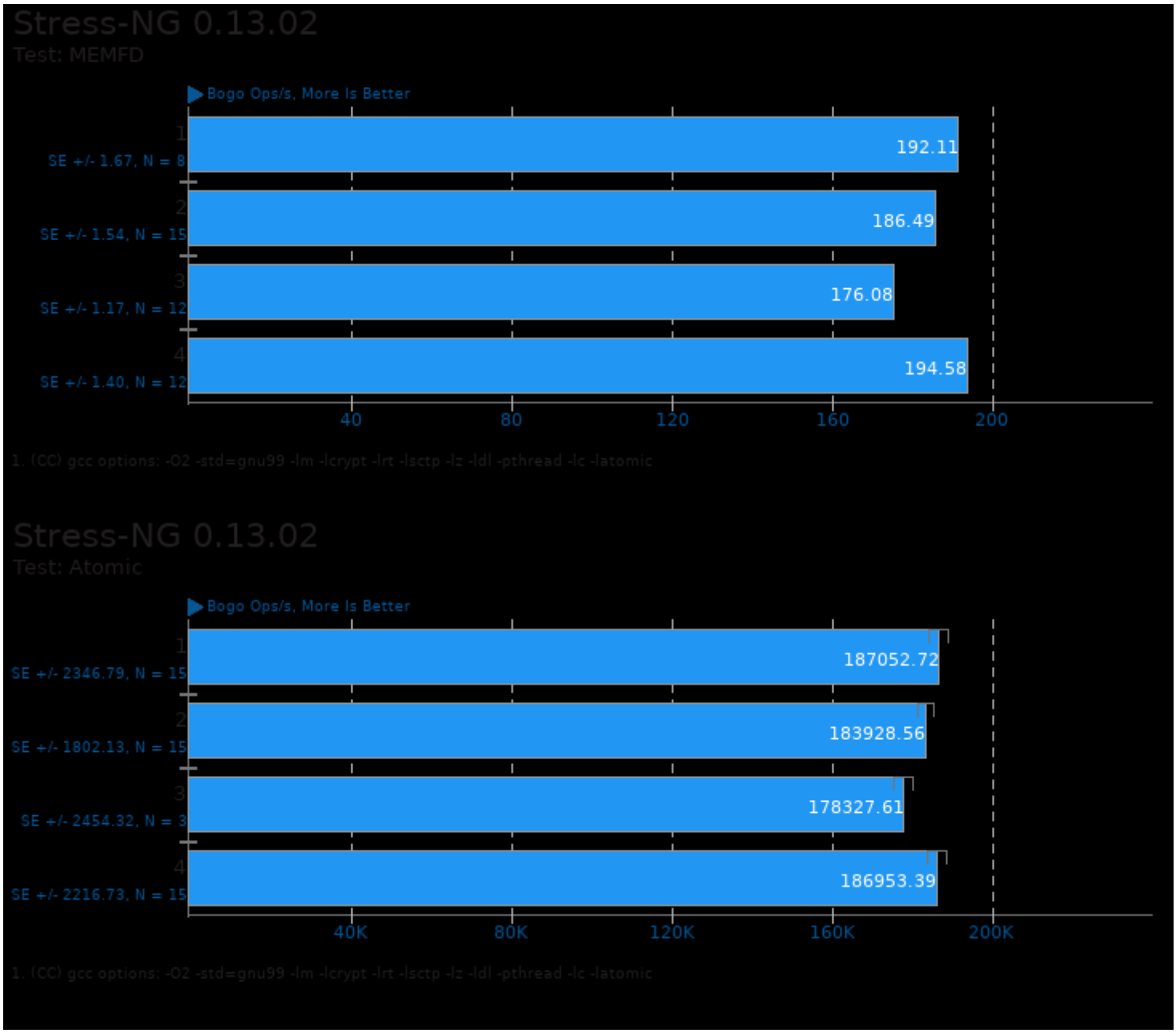
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Stress-NG - Crypto (Bogo Ops/s)	555.30	543.27	**534.98**	**556.50**
Normalized	99.78%	97.62%	96.13%	100%
Standard Deviation	2.2%	1.2%	2.1%	2.2%
Stress-NG - Malloc (Bogo Ops/s)	20585238	**20568055**	20595307	**21737365**
Normalized	94.7%	94.62%	94.75%	100%
Standard Deviation	2.4%	2.5%	2.5%	0.9%
Stress-NG - RdRand (Bogo Ops/s)	67175	67112	**67090**	**67215**
Normalized	99.94%	99.85%	99.81%	100%
Standard Deviation	0.1%	0.2%	0.3%	0.2%
Stress-NG - Forking (Bogo Ops/s)	20778	**20196**	20710	**21481**
Normalized	96.73%	94.02%	96.41%	100%
Standard Deviation	2.1%	1%	2.5%	1.4%
Stress-NG - IO_uring (Bogo Ops/s)	20541	**19797**	**21103**	20546
Normalized	97.34%	93.81%	100%	97.36%
Standard Deviation	12.1%	8.2%	9.2%	10.1%
Stress-NG - SENDFILE (Bogo Ops/s)	**52671**	**48201**	51873	52538
Normalized	100%	91.51%	98.49%	99.75%
Standard Deviation	2.3%	3.9%	2.4%	2.3%
Stress-NG - CPU Cache (Bogo Ops/s)	143.34	**135.03**	140.86	**148.42**
Normalized	96.58%	90.98%	94.91%	100%
Standard Deviation	2.4%	2.8%	3.8%	1.7%
Stress-NG - CPU Stress (Bogo Ops/s)	**5754**	**5484**	5650	5737
Normalized	100%	95.32%	98.2%	99.7%
Standard Deviation	2.5%	2.4%	2.4%	2.3%
Stress-NG - Semaphores (Bogo	608295	**607423**	608024	**608316**
Normalized	100%	99.85%	99.95%	100%
Standard Deviation	0%	0.1%	0.1%	0%
Stress-NG - Matrix Math (Bogo Ops/s)	**13294**	**12237**	13207	13214
Normalized	100%	92.05%	99.35%	99.39%
Standard Deviation	2.3%	1.9%	2.3%	2.3%
Stress-NG - Vector Math (Bogo Ops/s)	**10062**	**9335**	9852	9944
Normalized	100%	92.78%	97.91%	98.82%
Standard Deviation	2.2%	1.9%	2.3%	2.2%
Stress-NG - Memory Copying (Bogo Ops/s)	**1269**	**1169**	1170	1181
Normalized	100%	92.11%	92.18%	93.05%
Standard Deviation	2.2%	1.6%	3%	3.8%
Stress-NG - Socket Activity (Bogo	**3883**	**3675**	3832	3805
Normalized	100%	94.64%	98.68%	97.99%
Standard Deviation	3.7%	2.3%	2.5%	3.4%
Stress-NG - Context Switching (Bogo Ops/s)	1000341	**976483**	1006955	**1028306**
Normalized	97.28%	94.96%	97.92%	100%
Standard Deviation	2.1%	2.3%	2.3%	0.9%
Stress-NG - G.C.S.F (Bogo Ops/s)	361636	**334933**	**370034**	364833
Normalized	97.73%	90.51%	100%	98.59%
Standard Deviation	2.1%	6.5%	2%	2%
Stress-NG - G.Q.D.S (Bogo Ops/s)	**42.44**	**39.45**	41.83	42.13
Normalized	100%	92.95%	98.56%	99.27%
Standard Deviation	2.3%	1.9%	2.5%	2.3%
Stress-NG - S.V.M.P (Bogo Ops/s)	3872333	**3751883**	3889989	**3909527**
Normalized	99.05%	95.97%	99.5%	100%
Standard Deviation	2.4%	2%	2.3%	2.1%

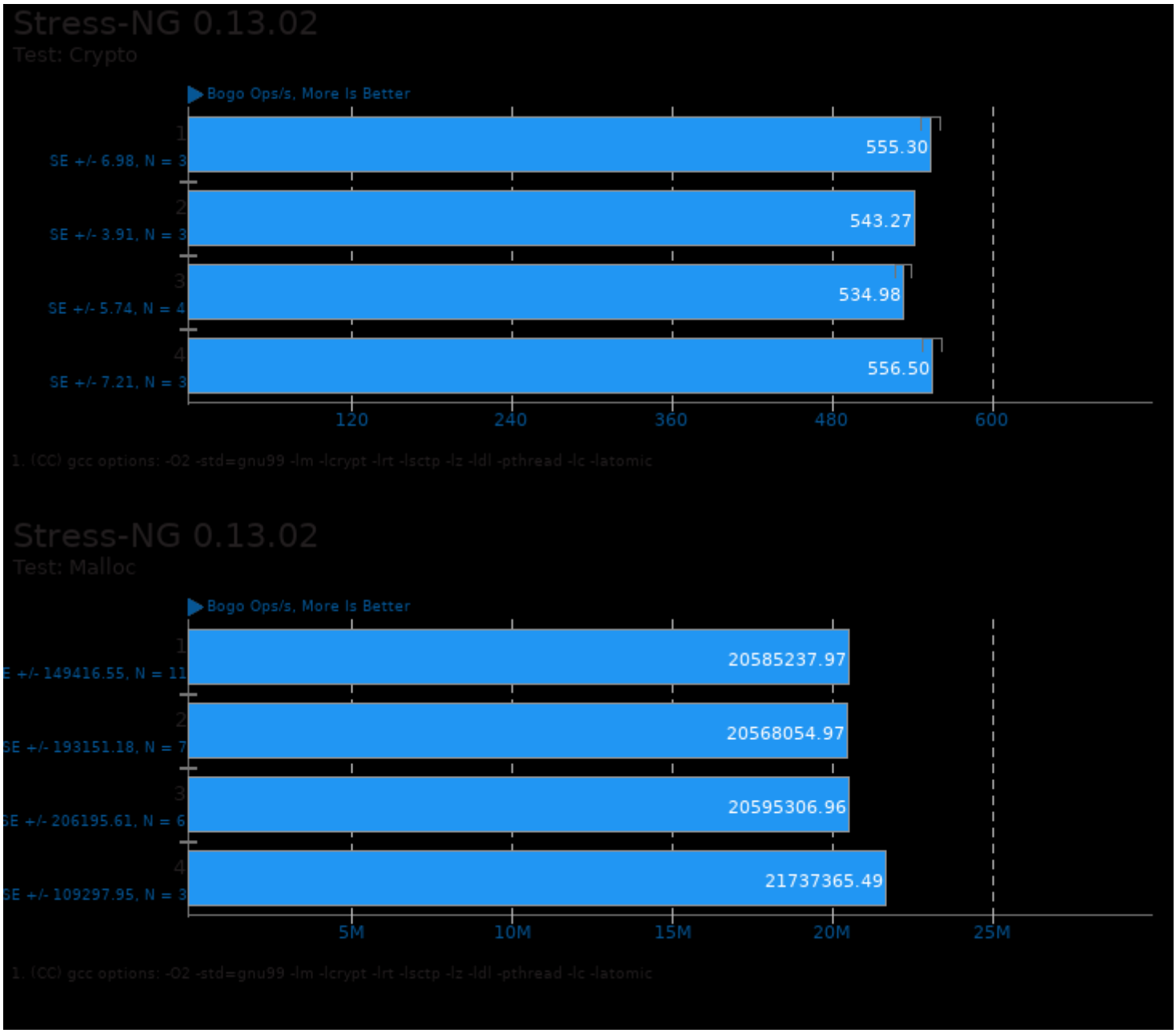
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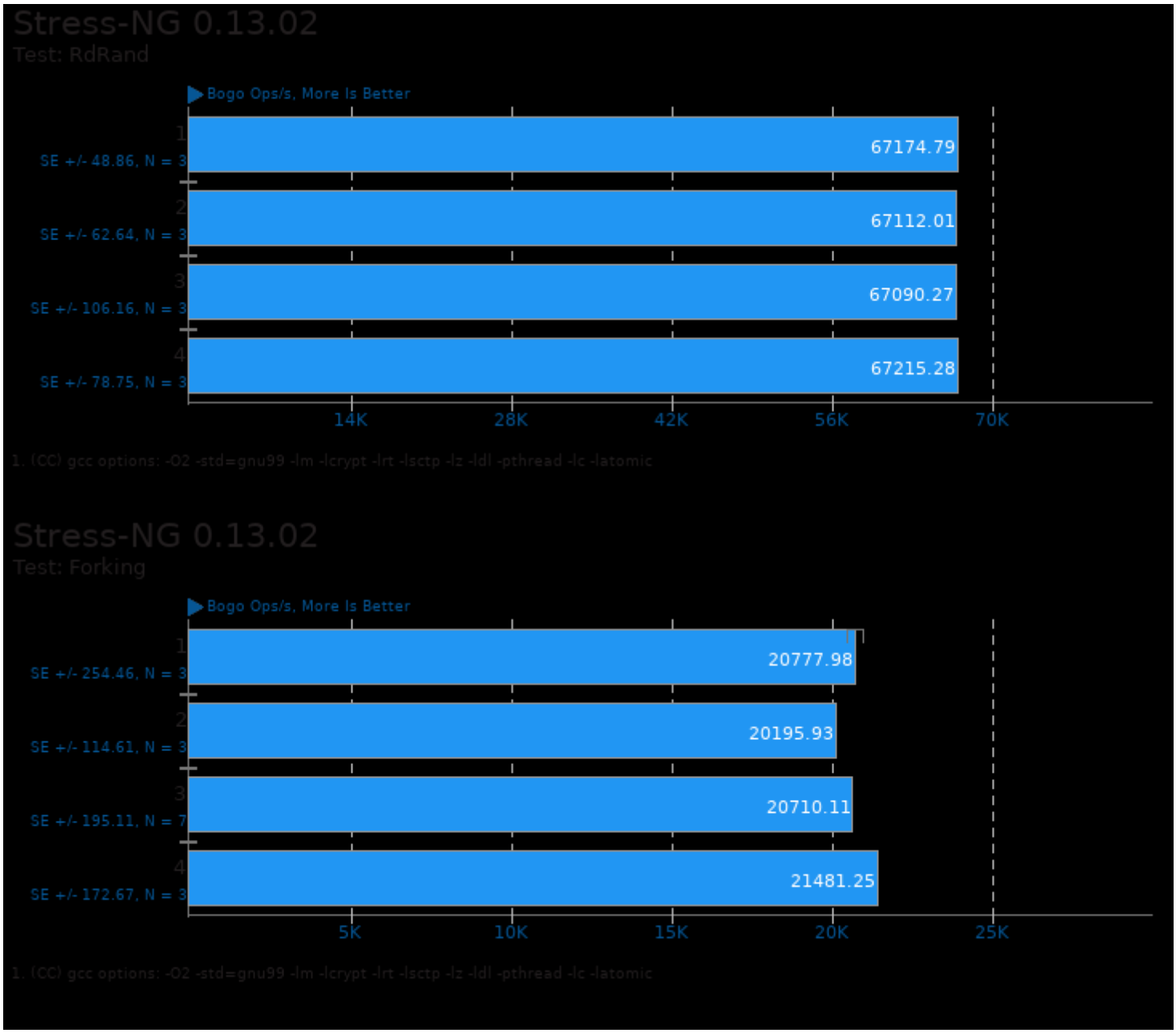
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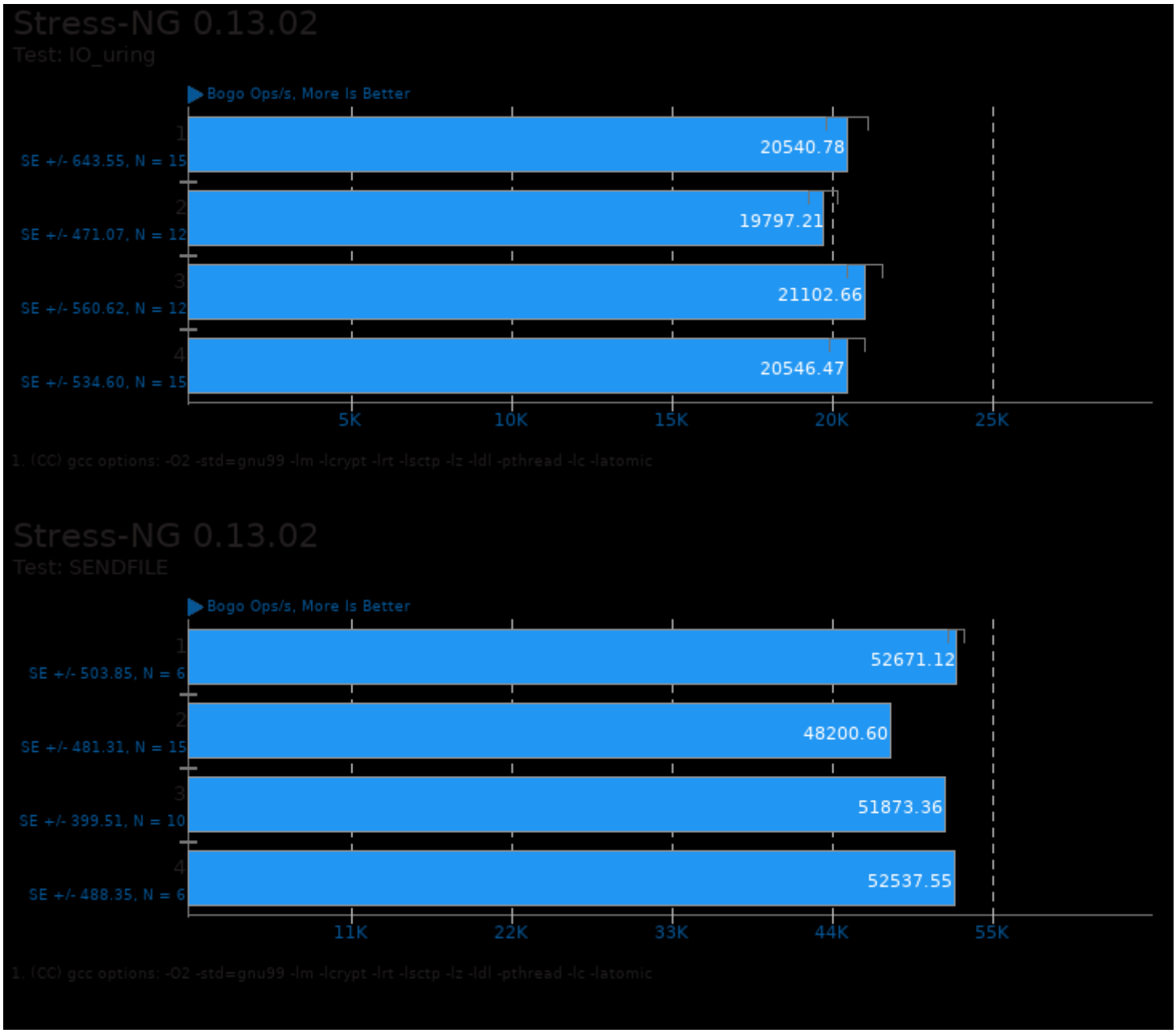
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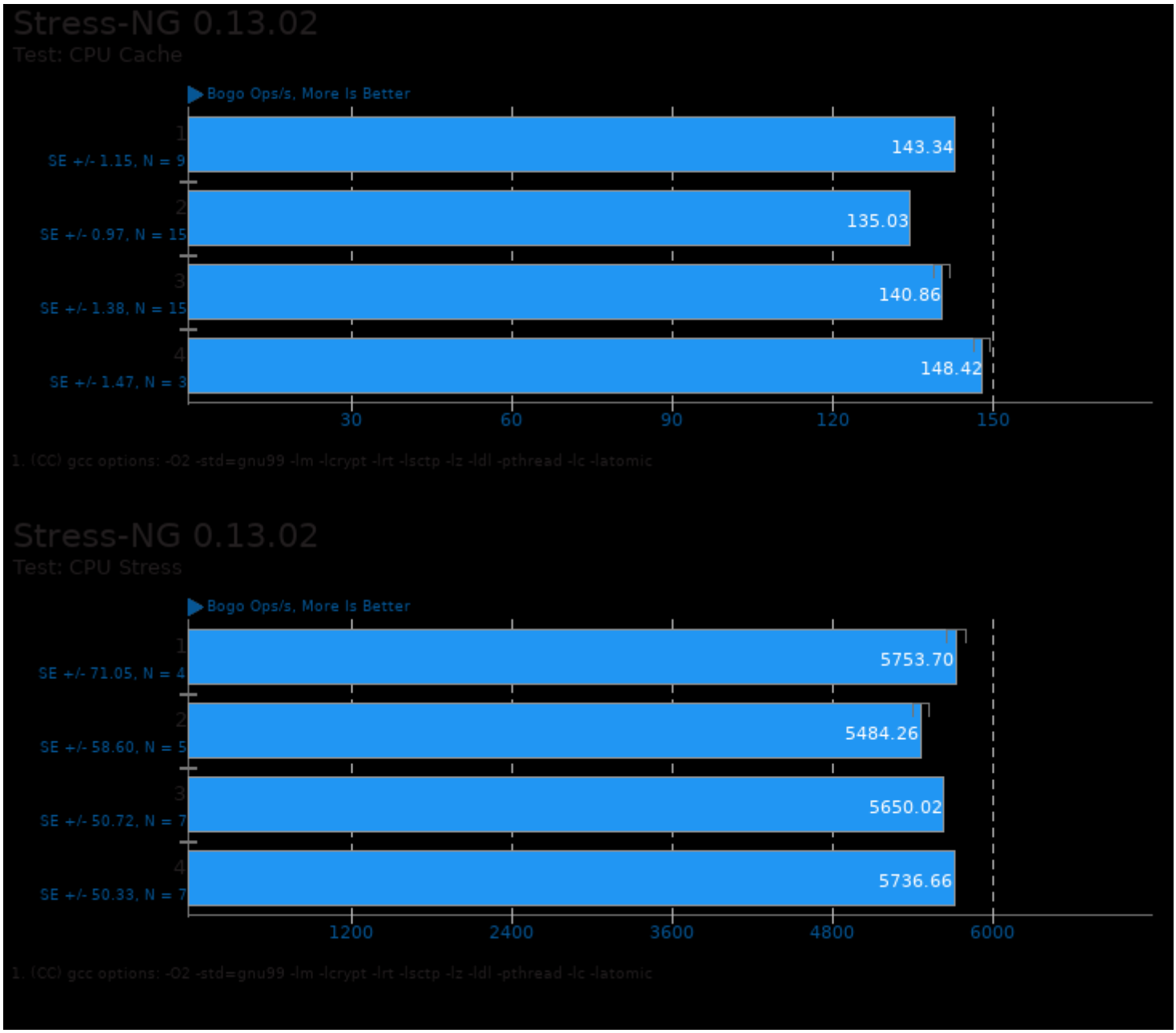
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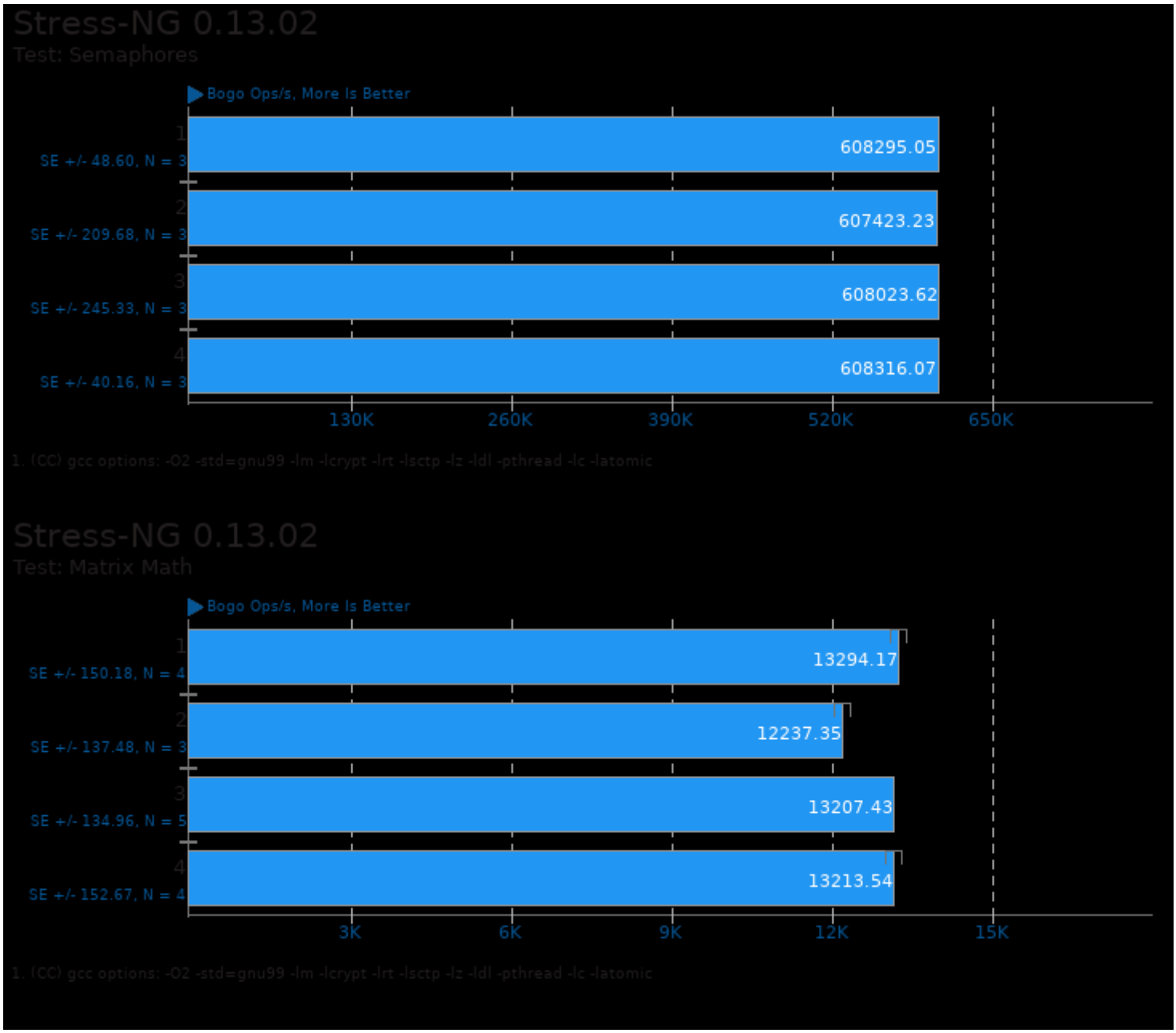
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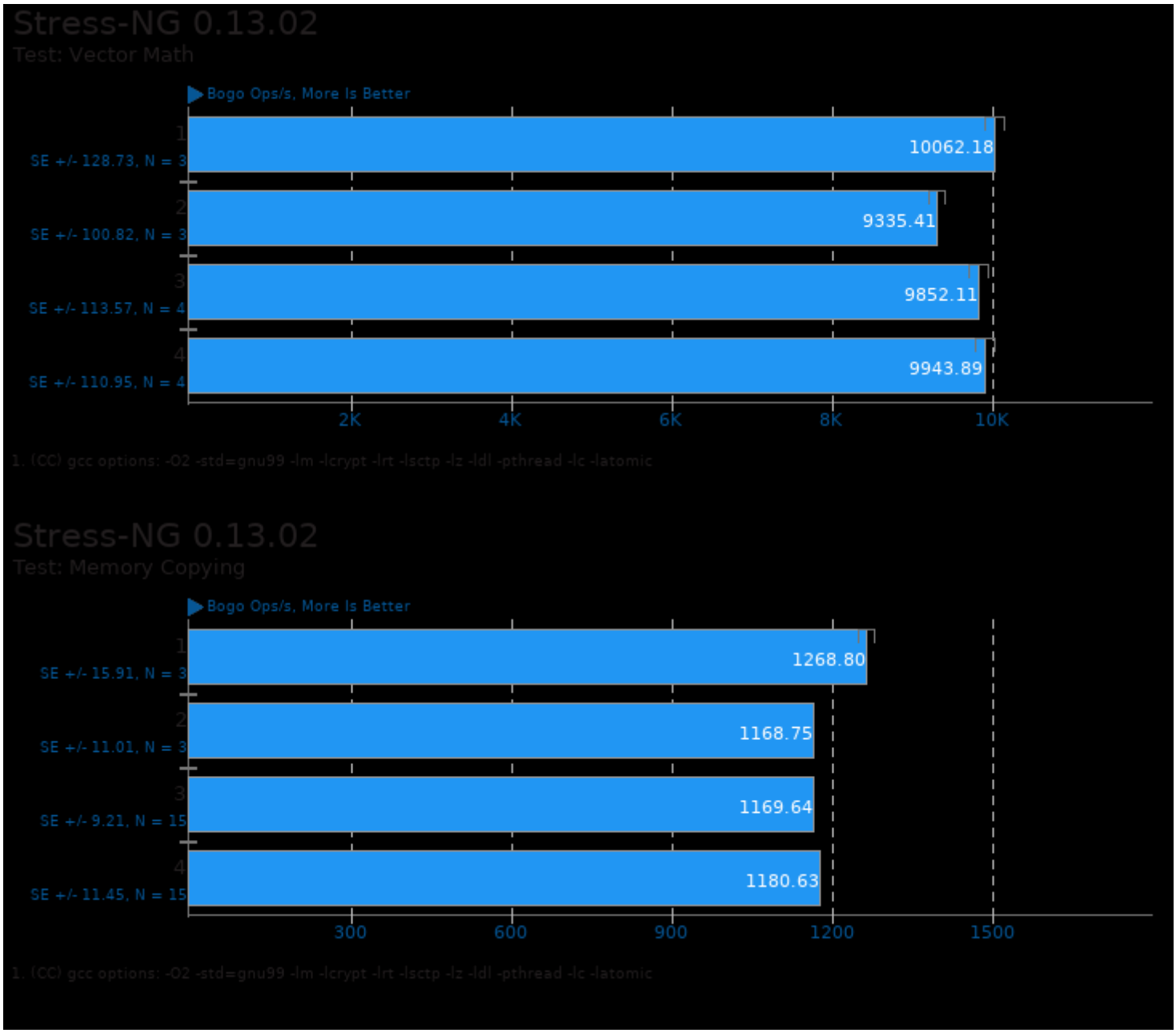
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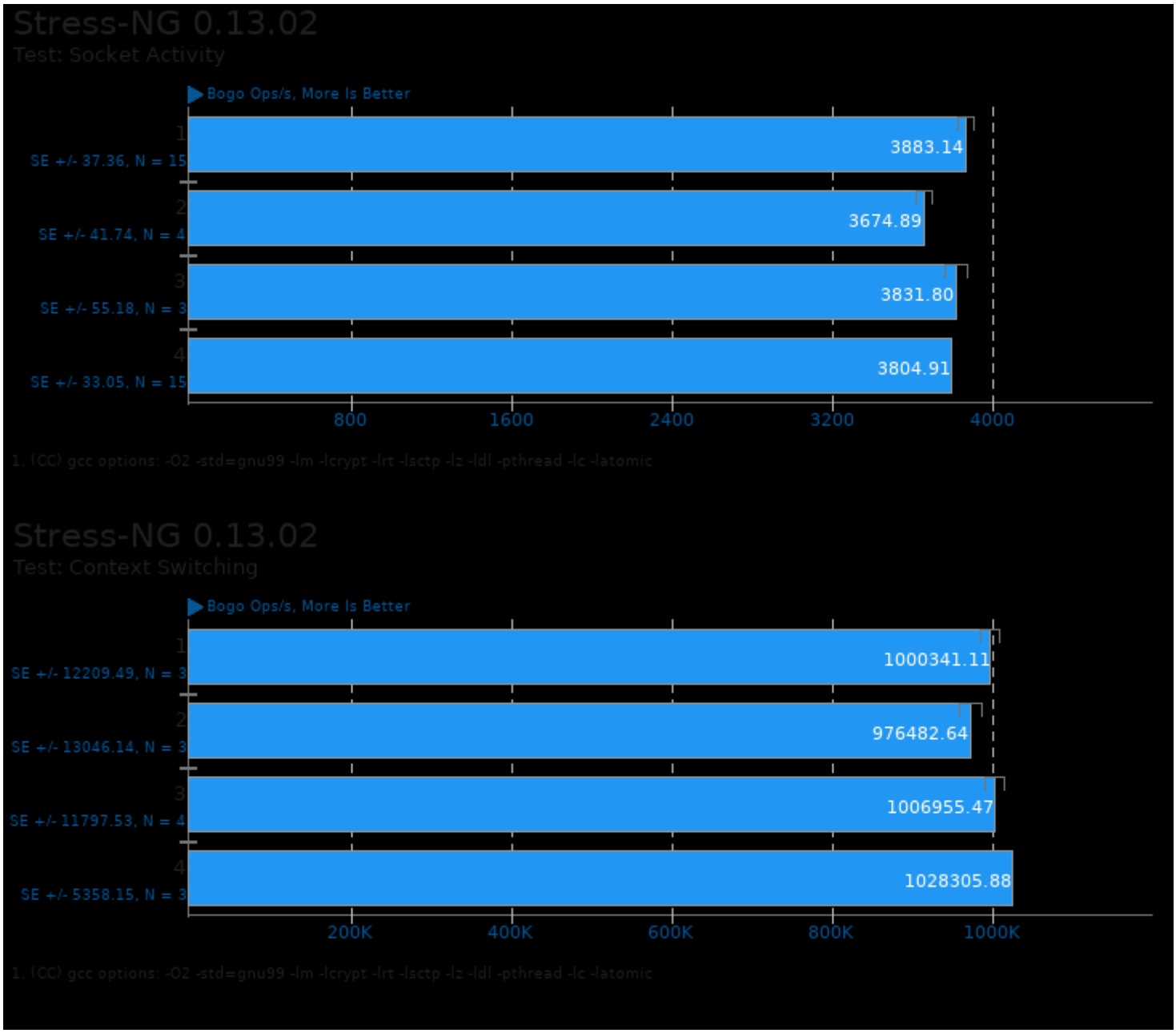
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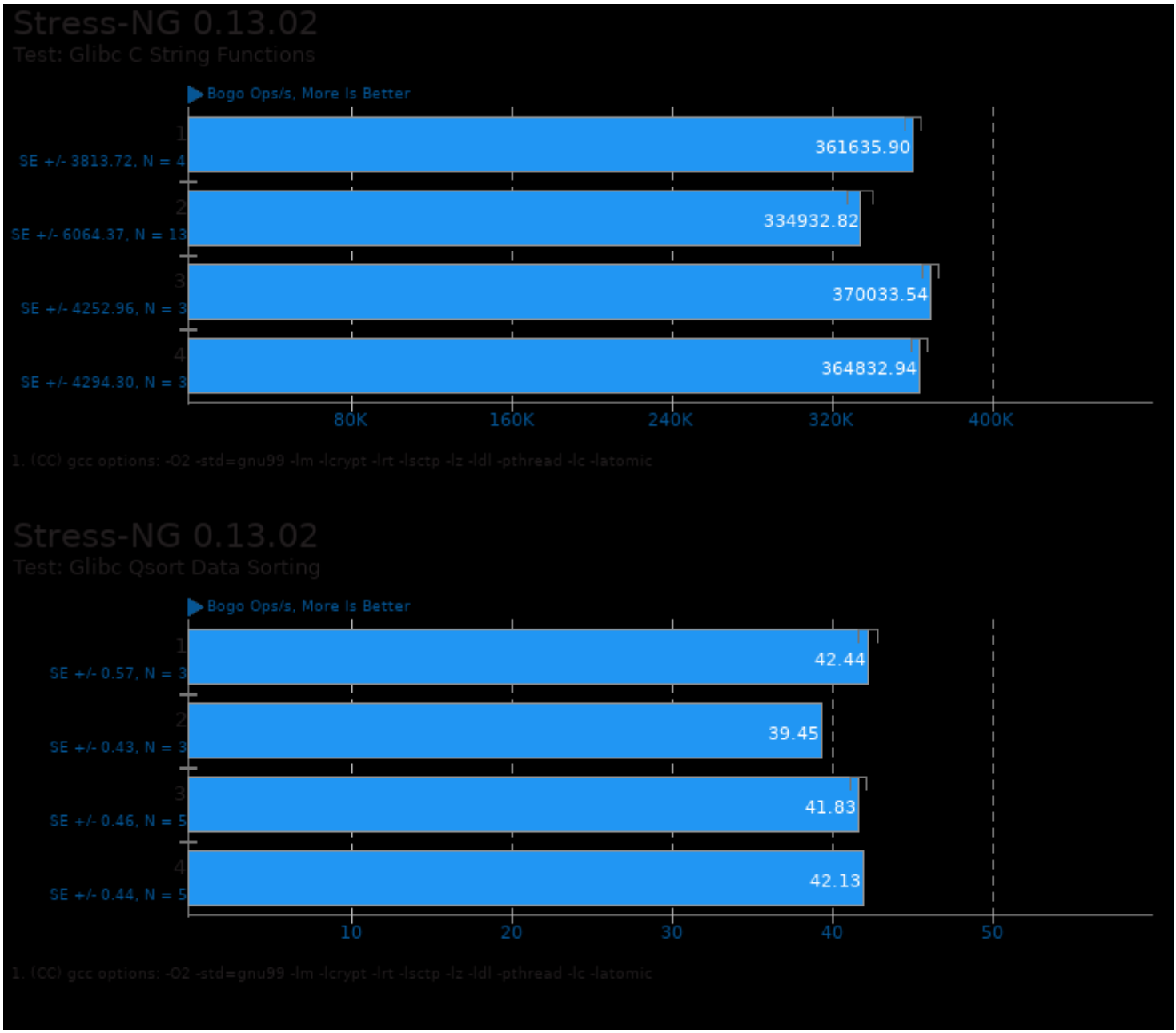
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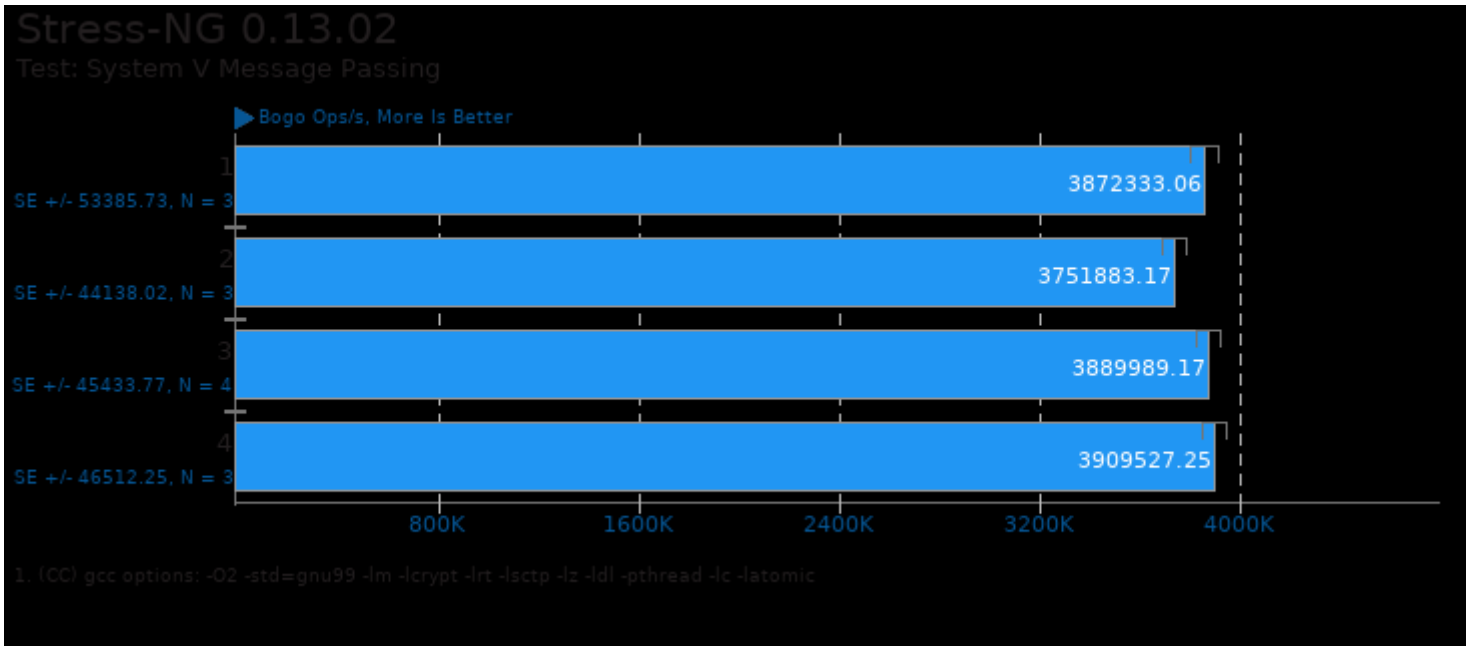
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