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epyc 7742 new tests

2 x Intel Xeon Gold 6258R testing with a GIGABYTE MD61-SC2-00 v01000100 (T15 BIOS) and ASPEED on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

EPYC 7742 2P had the most wins, coming in first place for 52% of the tests.

Based on the geometric mean of all complete results, the fastest (EPYC 7742 2P) was 3.903x the speed of the slowest (epyc 7f32). epyc 7742 was 0.881x the speed of EPYC 7742 2P, EPYC 7F72 2P was 0.961x the speed of epyc 7742, Xeon Gold 6138 was 0.852x the speed of EPYC 7F72 2P, Xeon Gold 6258R was 0.696x the speed of Xeon Gold 6138, Xeon Gold 6250 2P was 0.929x the speed of Xeon Gold 6258R, EPYC 7f32 2P was 0.935x the speed of Xeon Gold 6250 2P, Xeon Gold 6250 was 0.636x the speed of EPYC 7f32 2P, epyc 7f32 was 0.924x the speed of Xeon Gold 6250.

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

GROMACS (Water Benchmark) at 24.801x
Stress-NG (Test: Malloc) at 23.383x
Stress-NG (Test: Crypto) at 13.034x
Stress-NG (Test: CPU Stress) at 12.657x
Stress-NG (Test: Vector Math) at 12.033x
Stress-NG (Test: SENDFILE) at 11.329x

Stress-NG (Test: Glibc C String Functions) at 11.16x
Stress-NG (Test: Glibc Qsort Data Sorting) at 10.679x
Stress-NG (Test: Matrix Math) at 9.728x
Stress-NG (Test: Semaphores) at 9.137x.

Test Systems:

epyc 7742

Processor: AMD EPYC 7742 64-Core @ 2.25GHz (64 Cores / 128 Threads), Motherboard: AMD DAYTONA_X (RDY1006G BIOS), Chipset: AMD Starship/Matisse, Memory: 8 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 280GB INTEL SSDPE21D280GA, Graphics: ASPEED, Monitor: 20 x VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.4.0-21-generic (x86_64), Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7, Display Driver: modesetting 1.20.7, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

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-multilib --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none,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: Scaling Governor: acpi-cpufreq ondemand - CPU Microcode: 0x8301034
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 retroline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + tsx_async_abort: Not affected

epyc 7f32

Processor: AMD EPYC 7F32 8-Core @ 3.70GHz (8 Cores / 16 Threads), Motherboard: AMD DAYTONA_X (RDY1006G BIOS), Chipset: AMD Starship/Matisse, Memory: 8 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 280GB INTEL SSDPE21D280GA, Graphics: ASPEED, Monitor: 25 x VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.4.0-21-generic (x86_64), Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7, Display Driver: modesetting 1.20.7, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

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-multilib --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none,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: Scaling Governor: acpi-cpufreq ondemand - CPU Microcode: 0x8301034
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 retroline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + tsx_async_abort: Not affected

EPYC 7f32 2P

Processor: 2 x AMD EPYC 7F32 8-Core @ 3.70GHz (16 Cores / 32 Threads), Motherboard: AMD DAYTONA_X (RDY1006G BIOS), Chipset: AMD Starship/Matisse, Memory: 16 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 280GB INTEL SSDPE21D280GA, Graphics: llvmpipe 504GB, Monitor: 26 x VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.4.0-21-generic (x86_64), Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7,

Display Driver: modesetting 1.20.7, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

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,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: Scaling Governor: acpi-cpufreq ondemand - CPU Microcode: 0x8301034

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: conditional RSB filling + tsx_async_abort: Not affected

EPYC 7F72 2P

Processor: 2 x AMD EPYC 7F72 24-Core @ 3.20GHz (48 Cores / 96 Threads), Motherboard: AMD DAYTONA_X (RDY1006G BIOS), Chipset: AMD Starship/Matisse, Memory: 16 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 280GB INTEL SSDPE21D280GA, Graphics: ASPEED, Monitor: 28 x VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.4.0-21-generic (x86_64), Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7, Display Driver: modesetting 1.20.7, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

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,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: Scaling Governor: acpi-cpufreq ondemand - CPU Microcode: 0x8301034

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: conditional RSB filling + tsx_async_abort: Not affected

EPYC 7742 2P

Processor: 2 x AMD EPYC 7742 64-Core @ 2.25GHz (128 Cores / 256 Threads), Motherboard: AMD DAYTONA_X (RDY1006G BIOS), Chipset: AMD Starship/Matisse, Memory: 16 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 280GB INTEL SSDPE21D280GA, Graphics: ASPEED, Monitor: 30 x VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.4.0-21-generic (x86_64), Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7, Display Driver: modesetting 1.20.7, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

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,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: Scaling Governor: acpi-cpufreq ondemand - CPU Microcode: 0x8301034

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: conditional RSB filling + tsx_async_abort: Not affected

Xeon Gold 6250

Processor: Intel Xeon Gold 6250 @ 4.50GHz (8 Cores / 16 Threads), Motherboard: GIGABYTE MD61-SC2-00 v01000100 (T15 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 6 x 32 GB DDR4-2933MT/s HMA84GR7CJR4N-VM, Disk: 280GB INTEL SSDPE21D280GA, Graphics: ASPEED, Monitor: 31 x VE228, Network: 2 x Intel X722 for 1GbE + 2 x QLogic FastLinQ QL41000 10/25/40/50GbE

OS: Ubuntu 20.04, Kernel: 5.4.0-21-generic (x86_64), Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7, Display Driver: modesetting 1.20.7, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

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,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: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + 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 Enhanced IBRS IPBP:
conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled
```

Xeon Gold 6250 2P

Processor: 2 x Intel Xeon Gold 6250 @ 4.50GHz (16 Cores / 32 Threads), Motherboard: GIGABYTE MD61-SC2-00 v01000100 (T15 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 12 x 32 GB DDR4-2933MT/s HMA84GR7CJR4N-VM, Disk: 280GB INTEL SSDPE21D280GA, Graphics: ASPEED, Monitor: 32 x VE228, Network: 2 x Intel X722 for 1GbE + 2 x QLogic FastLinQ QL41000 10/25/40/50GbE

OS: Ubuntu 20.04, Kernel: 5.4.0-21-generic (x86_64), Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7, Display Driver: modesetting 1.20.7, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

```
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,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: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + 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 Enhanced IBRS IPBP:
conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled
```

Xeon Gold 6258R

Processor: Intel Xeon Gold 6258R @ 4.00GHz (28 Cores / 56 Threads), Motherboard: GIGABYTE MD61-SC2-00 v01000100 (T15 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 6 x 32 GB DDR4-2933MT/s HMA84GR7CJR4N-VM, Disk: 280GB INTEL SSDPE21D280GA, Graphics: ASPEED, Monitor: 33 x VE228, Network: 2 x Intel X722 for 1GbE + 2 x QLogic FastLinQ QL41000 10/25/40/50GbE

OS: Ubuntu 20.04, Kernel: 5.4.0-21-generic (x86_64), Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7, Display Driver: modesetting 1.20.7, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

```
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,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: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + 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 Enhanced IBRS IPBP:
conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled
```

Xeon Gold 6138

Processor: 2 x Intel Xeon Gold 6258R @ 4.00GHz (56 Cores / 112 Threads), Motherboard: GIGABYTE MD61-SC2-00 v01000100 (T15 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 12 x 32 GB DDR4-2933MT/s HMA84GR7CJR4N-VM, Disk: 280GB INTEL SSDPE21D280GA, Graphics: ASPEED, Monitor: 34 x VE228, Network: 2 x Intel X722 for 1GbE + 2 x QLogic FastLinQ QL41000 10/25/40/50GbE

OS: Ubuntu 20.04, Kernel: 5.4.0-21-generic (x86_64), Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7, Display Driver: modesetting 1.20.7, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

```
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,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: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Java Notes: OpenJDK Runtime Environment (build 11.0.7-ea+9-post-Ubuntu-1ubuntu1)
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + 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 Enhanced IBRS IPB: conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled

	epyc 7742	epyc 7f32	EPYC 7f32 2P	EPYC 7F72 2P	EPYC 7742 2P	Xeon Gold 6250	Xeon Gold 6250 2P	Xeon Gold 6258R	Xeon Gold 6138
NWChem - C240 9525									
Buckyball (sec)									
Java Gradle Build - Reactor (sec)									
Standard Deviation									
WireGuard + Linux	311.369	282.209	368.574	369.917	420.864	251.657	324.614	303.381	372.487
Networking Stack									
Stress Test (sec)									
Normalized	80.82%	89.17%	68.28%	68.03%	59.8%	100%	77.52%	82.95%	67.56%
Standard Deviation	0.1%	0.8%	0.2%	0.2%	3.3%	0.7%	1.7%	1.5%	0.5%
GROMACS - Water	1.655	1.242	1.720	2.044	0.236	1.278	2.414	2.802	5.853
Benchmark (Ns/Day)									
Normalized	28.28%	21.22%	29.39%	34.92%	4.03%	21.83%	41.24%	47.87%	100%
Standard Deviation	5%	0.6%	0.7%	0.6%	38.9%	0.5%	0.8%	0.2%	0.3%
Stress-NG - CPU	47.11	26.77	54.12	65.74	19.72	32.27	55.68	6.06	7.46
Cache (Bogo Ops/s)									
Normalized	71.66%	40.72%	82.32%	100%	30%	49.09%	84.7%	9.22%	11.35%
Standard Deviation	9.1%	11%	6%	3.8%	3.5%	2.8%	4.6%	6.6%	0%
Stress-NG - S.V.M.P	29117889	8403627	8012958		39919720	8822556		8131873	7266353
(Bogo Ops/s)									
Normalized	72.94%	21.05%	20.07%		100%	22.1%		20.37%	18.2%
Standard Deviation	3.5%	1.9%	10.1%		2.1%	0.5%		0.6%	5.8%
Stress-NG - Context	27889759	4017203	8555859	24802611	68872733	3939126	7966983	12440548	10499766
Switching (Bogo Ops/s)									
Normalized	40.49%	5.83%	12.42%	36.01%	100%	5.72%	11.57%	18.06%	15.25%
Standard Deviation	8.3%	0.5%	2.1%	7.1%	9.4%	2.2%	9%	1.5%	1.7%
Stress-NG - MMAP	341.84	114.14	117.78	139.84	165.57	187.31	203.31	459.07	237.97
(Bogo Ops/s)									
Normalized	74.46%	24.86%	25.66%	30.46%	36.07%	40.8%	44.29%	100%	51.84%
Standard Deviation	56.6%	0.4%	0.3%	2.3%	3.4%	1.6%	1.2%	1.5%	7%
Stress-NG - Forking	51887	35949	42218	43396	36345	61957	70283	122991	73129
(Bogo Ops/s)									
Normalized	42.19%	29.23%	34.33%	35.28%	29.55%	50.38%	57.14%	100%	59.46%
Standard Deviation	1.7%	0.1%	0.6%	1.7%	4.8%	0.9%	1.2%	0.9%	2.8%
Stress-NG - Socket	21198	6551	12023	23552	29907	7341	14060	18187	34217
Activity (Bogo Ops/s)									
Normalized	61.95%	19.14%	35.14%	68.83%	87.4%	21.45%	41.09%	53.15%	100%
Standard Deviation	0.4%	0.9%	1.3%	1.2%	0.7%	2.8%	1.5%	0.7%	2.1%

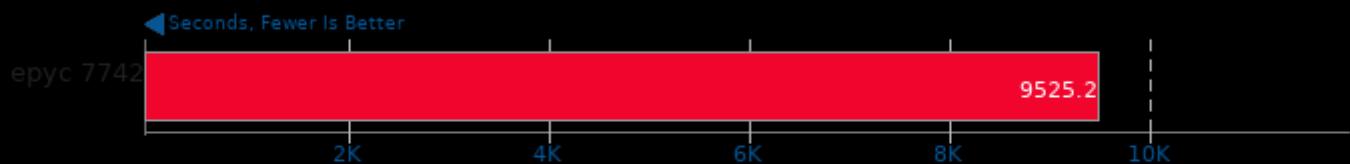
Stress-NG - CPU	19368	3106	6230	17830	39317	3522	7395	9467	19283
Stress (Bogo Ops/s)									
Normalized	49.26%	7.9%	15.85%	45.35%	100%	8.96%	18.81%	24.08%	49.04%
Standard Deviation	0.4%	0.5%	0.2%	0%	0.6%	0%	1%	0.2%	1%
Stress-NG - NUMA	1264	228.53	419.09	824.70	669.59	258.60	472.91	642.27	636.92
(Bogo Ops/s)									
Normalized	100%	18.07%	33.14%	65.22%	52.95%	20.45%	37.4%	50.79%	50.37%
Standard Deviation	0.5%	0.9%	0.6%	0.8%	1.2%	0.4%	0.5%	0.1%	0.7%
Stress-NG - Memory	12488	5060	5568	16473	11139	9279	13332	5973	9835
Copying (Bogo)									
Normalized	75.81%	30.72%	33.8%	100%	67.62%	56.33%	80.93%	36.26%	59.7%
Standard Deviation	0.2%	0.9%	0.4%	0.9%	1.4%	0.4%	0.4%	0.2%	0.7%
Stress-NG - Atomic	403279	506107	558384	360002	396151	213077	131535	114098	81202
(Bogo Ops/s)									
Normalized	72.22%	90.64%	100%	64.47%	70.95%	38.16%	23.56%	20.43%	14.54%
Standard Deviation	0%	0.1%	0.2%	0.6%	0%	2.4%	2.8%	2%	1.8%
Stress-NG - Malloc	12413023	12153141	32124432	12875062	24256299	10373603	25026878	37493861	82519838
(Bogo Ops/s)									
Normalized	51.17%	5.01%	13.24%	53.08%	100%	4.28%	10.32%	15.46%	34.02%
Standard Deviation	0.2%	0.2%	0.5%	0.3%	0.1%	0.2%	0.2%	0.2%	0.5%
Stress-NG - SENDFILE	807945	143649	287659	809494	1627445	156579	309767	386622	762644
(Bogo Ops/s)									
Normalized	49.65%	8.83%	17.68%	49.74%	100%	9.62%	19.03%	23.76%	46.86%
Standard Deviation	0.2%	0.1%	0.2%	0.7%	0.1%	0.2%	0.1%	0%	0.7%
Stress-NG - MEMFD	1091	547.23	1572	2028	2116	855.49	2404	1407	3275
(Bogo Ops/s)									
Normalized	33.31%	16.71%	47.99%	61.92%	64.62%	26.12%	73.41%	42.96%	100%
Standard Deviation	0.3%	0.1%	0.1%	0.1%	0.3%	0.1%	0%	0.1%	0%
Stress-NG - G.C.S.F	6802869	1292610	2580361	6839852	13203789	1183153	2337487	2890565	5806297
(Bogo Ops/s)									
Normalized	51.52%	9.79%	19.54%	51.8%	100%	8.96%	17.7%	21.89%	43.97%
Standard Deviation	1.3%	0.8%	0.9%	2%	2.2%	0%	0.8%	0.7%	0.2%
Stress-NG - G.Q.D.S	720.50	132.53	259.67	717.89	1415	136.03	271.25	334.60	670.44
(Bogo Ops/s)									
Normalized	50.91%	9.36%	18.35%	50.72%	100%	9.61%	19.17%	23.64%	47.37%
Standard Deviation	0.1%	0.7%	1.8%	2.1%	0.2%	0.4%	0.4%	0.2%	0%
Stress-NG - Crypto	12909	2287	4569	12791	25387	1948	3890	5028	9977
(Bogo Ops/s)									
Normalized	50.85%	9.01%	18%	50.39%	100%	7.67%	15.32%	19.81%	39.3%
Standard Deviation	0.2%	0.1%	0.1%	0.1%	0.2%	0.2%	0.1%	0.1%	0.8%
Stress-NG - Matrix	215075	44968	89347	228110	437439	50729	101418	131381	261828
Math (Bogo Ops/s)									
Normalized	49.17%	10.28%	20.43%	52.15%	100%	11.6%	23.18%	30.03%	59.85%
Standard Deviation	0.2%	0.9%	2.4%	1.8%	1.3%	0.2%	0.1%	0.2%	0.3%
Stress-NG - Vector	424714	71353	142662	402846	834158	69325	138047	180229	359027
Math (Bogo Ops/s)									
Normalized	50.92%	8.55%	17.1%	48.29%	100%	8.31%	16.55%	21.61%	43.04%
Standard Deviation	0%	0%	0%	0.1%	0.1%	0%	0.1%	0.1%	0.2%

Stress-NG -	9893642	1367916	2651156	6653492	11094028	1214205	2331239	3821302	6813145
Semaphores (Bogo									
Ops/s)									
Normalized	89.18%	12.33%	23.9%	59.97%	100%	10.94%	21.01%	34.44%	61.41%
Standard Deviation	0.1%	0.4%	1.3%	0.3%	0.1%	1.4%	0.5%	0%	0.6%

epyc 7742 new tests

NWChem 7.0

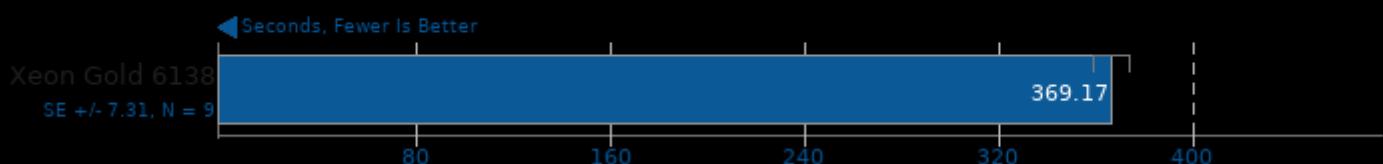
Input: C240 Buckyball



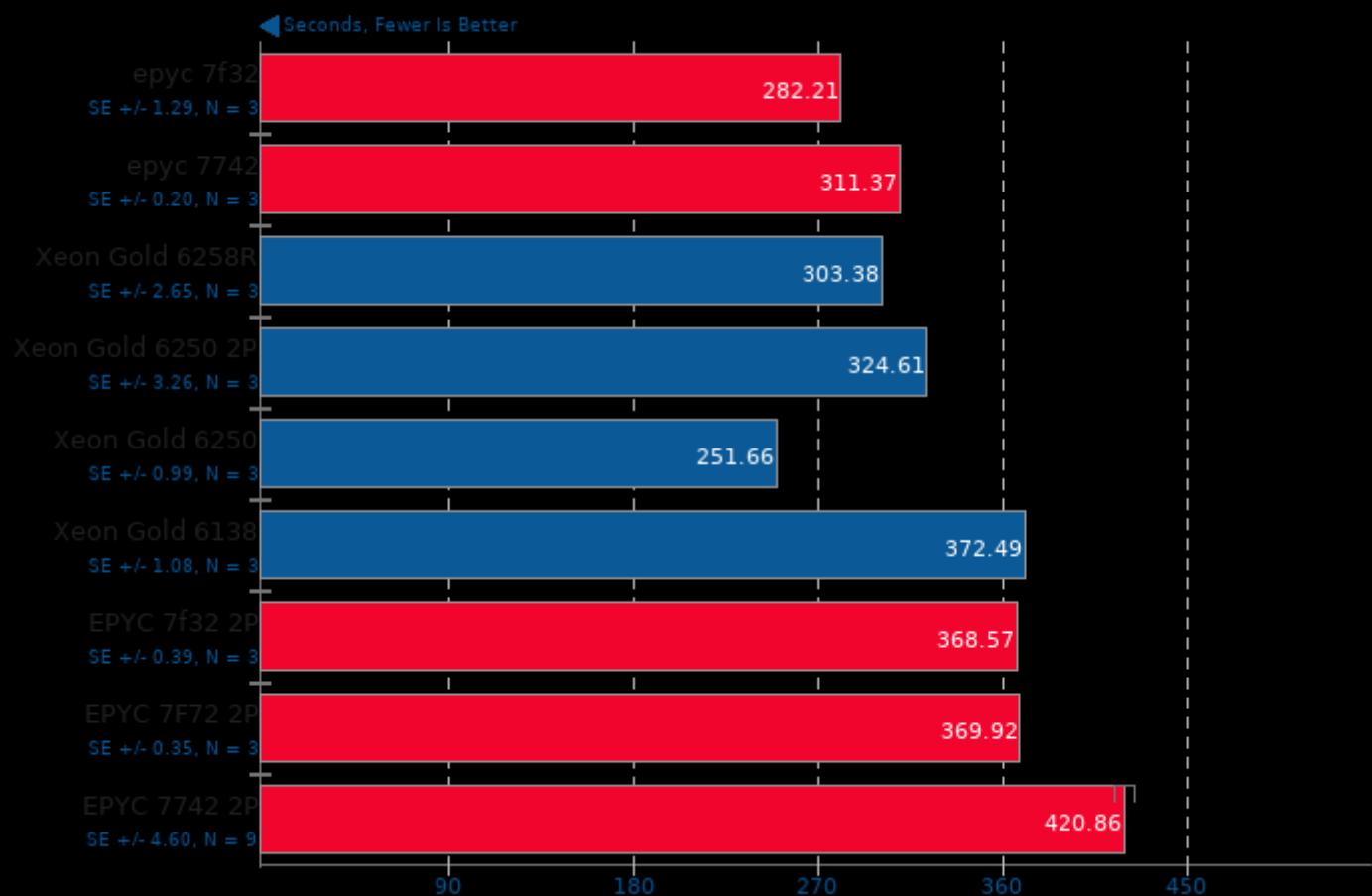
1. (F9X) gfortran options: -Iwctask -Iccsd -Imcscf -Iscfci -Iimp2 -Imoints -Istepper -Idriver -Ioptim -Iwdft -Igradients -Icpfh -Iesp -Iddscf -Idangchang -Igue

Java Gradle Build

Gradle Build: Reactor

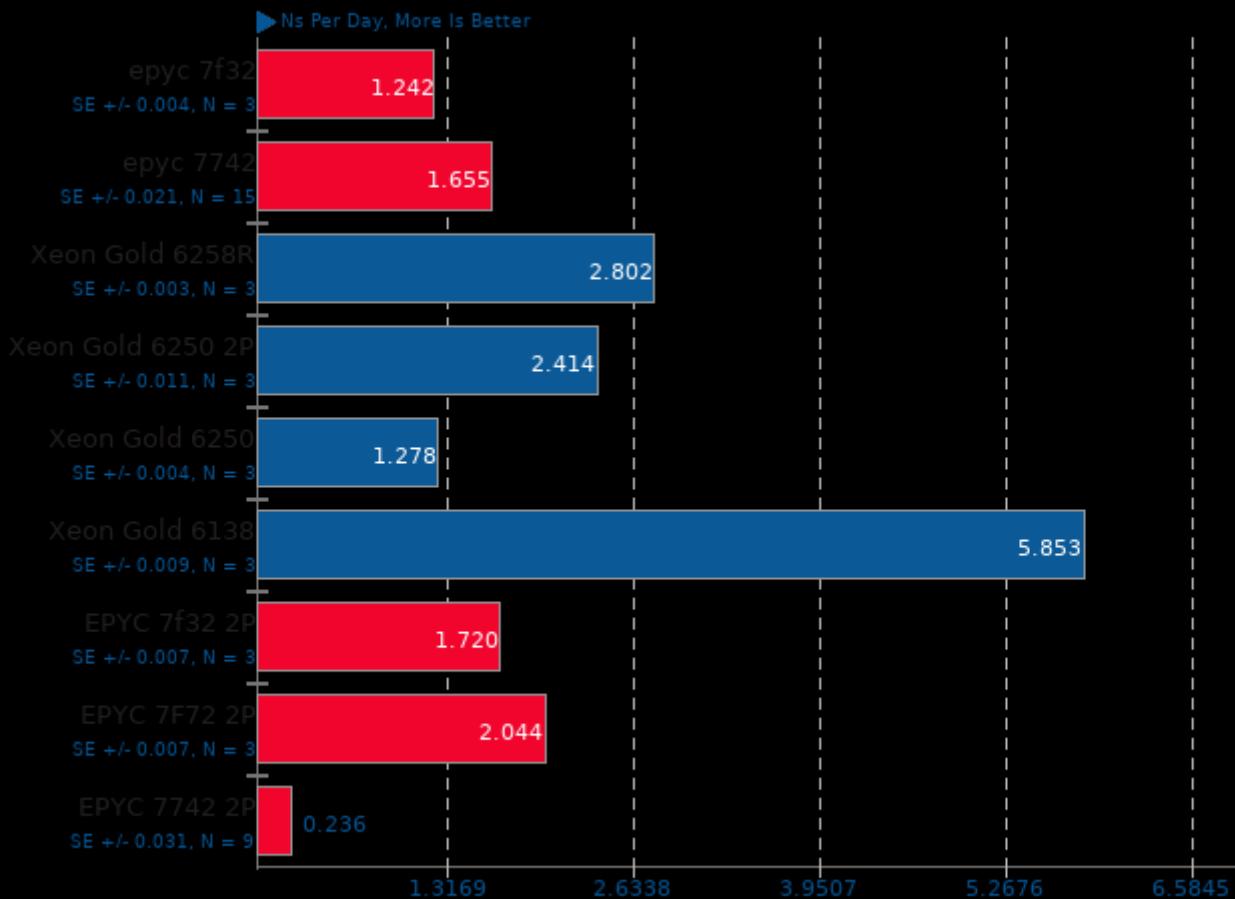


WireGuard + Linux Networking Stack Stress Test



GROMACS 2020.1

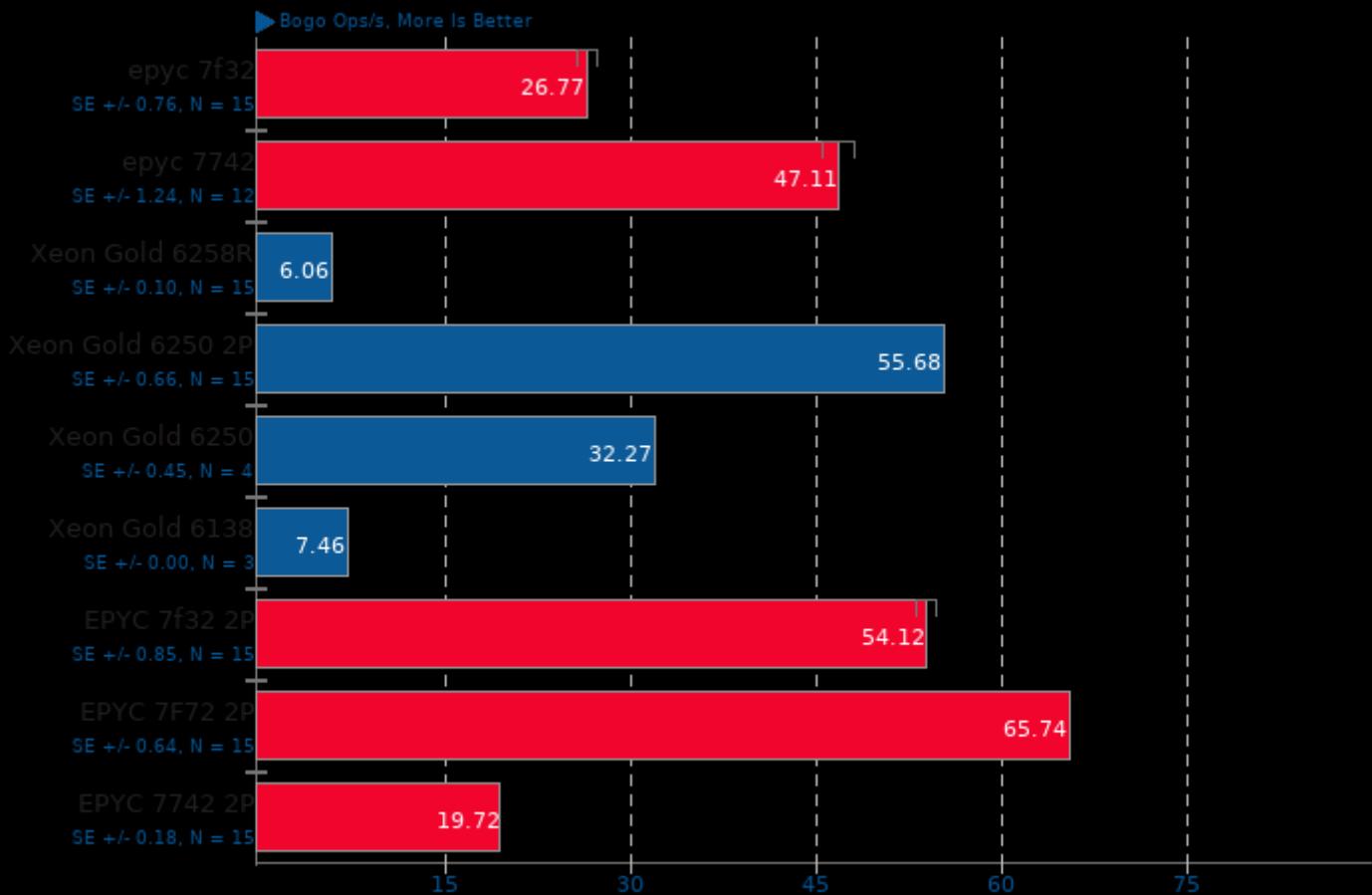
Water Benchmark



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

Stress-NG 0.11.07

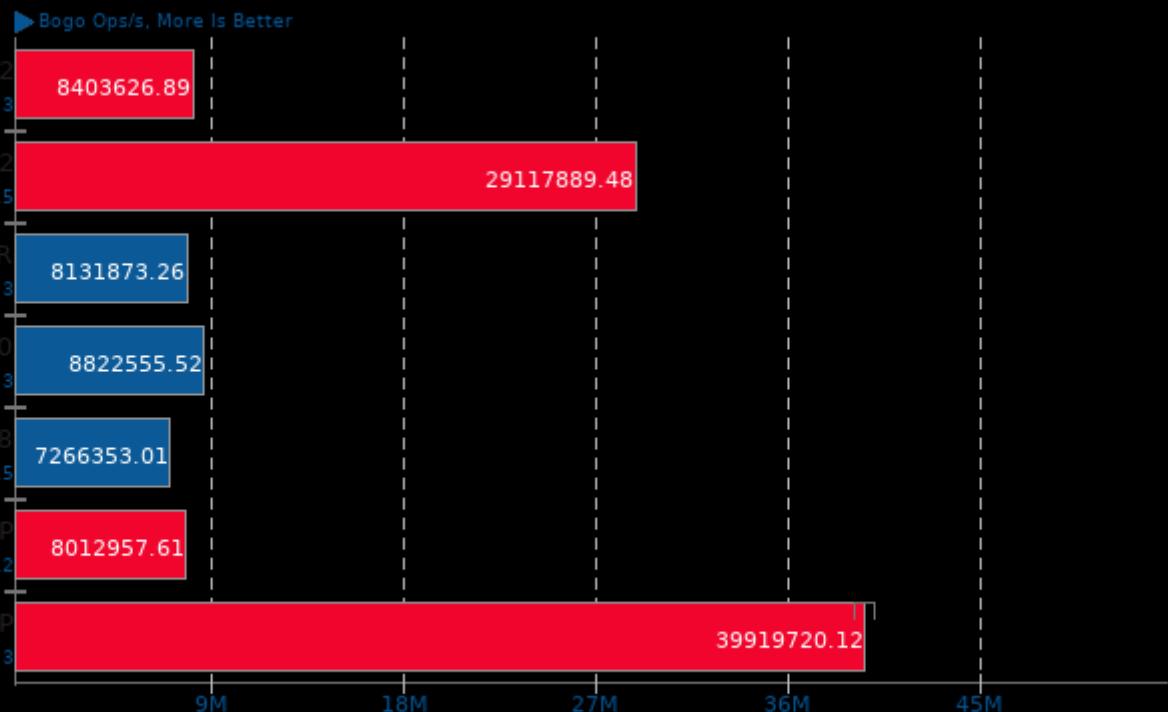
Test: CPU Cache



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

Stress-NG 0.11.07

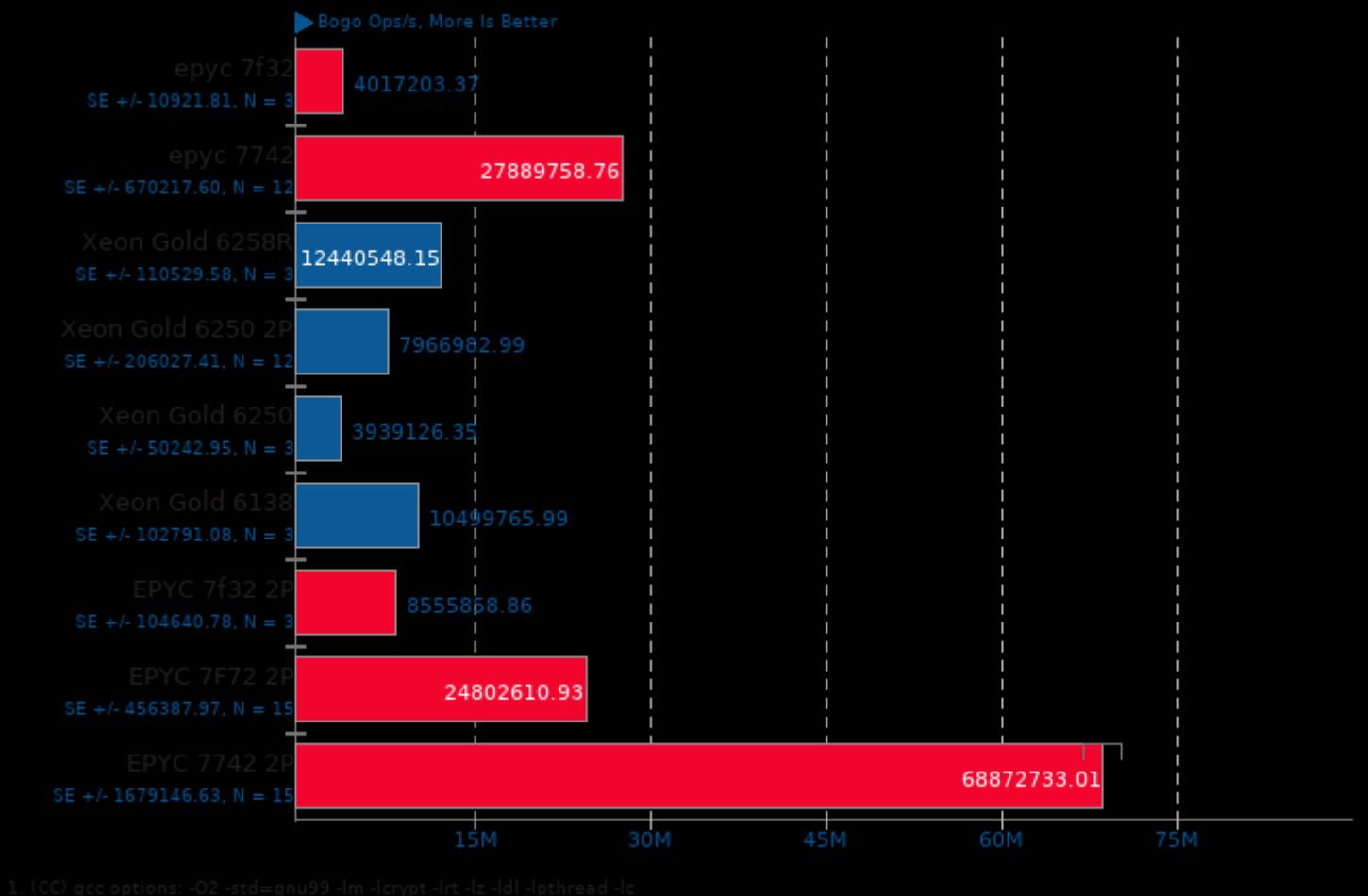
Test: System V Message Passing



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

Stress-NG 0.11.07

Test: Context Switching



Stress-NG 0.11.07

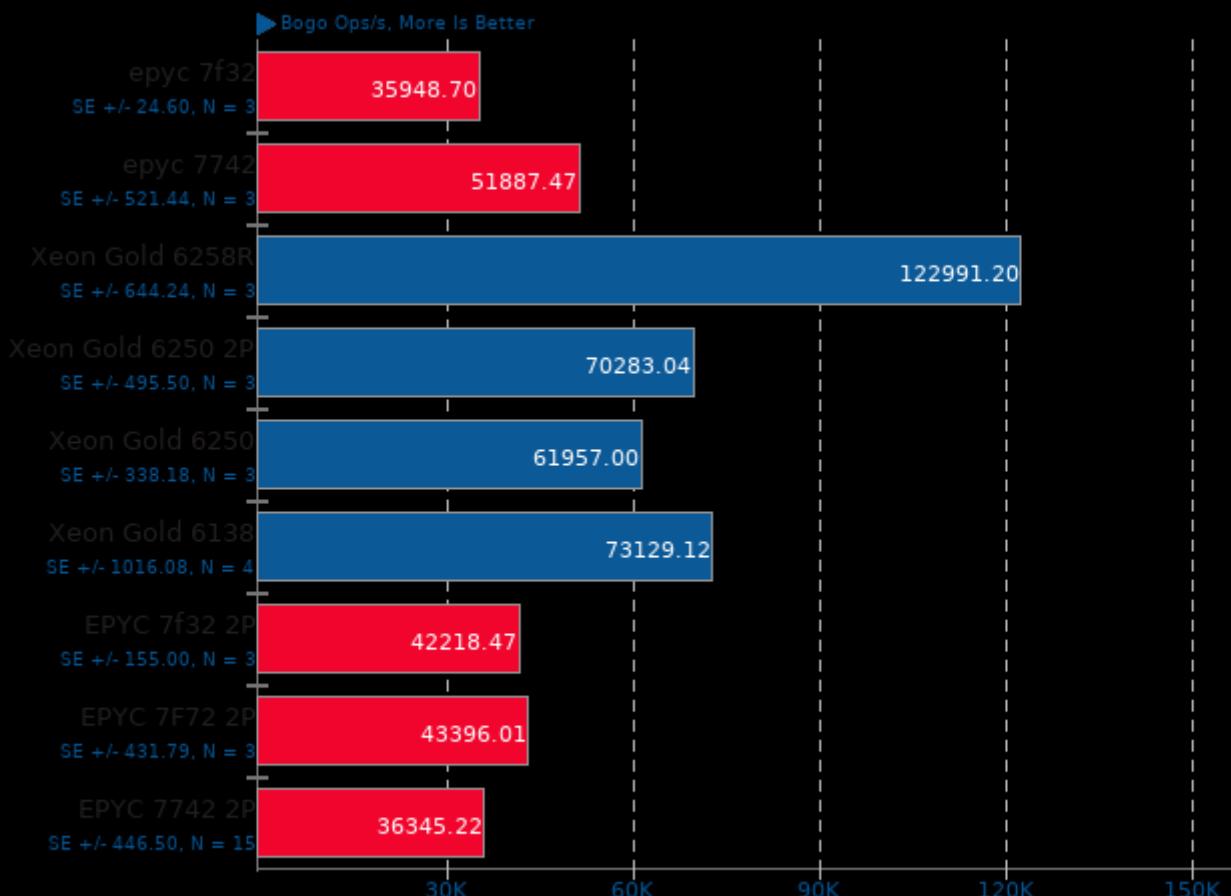
Test: MMAP



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

Stress-NG 0.11.07

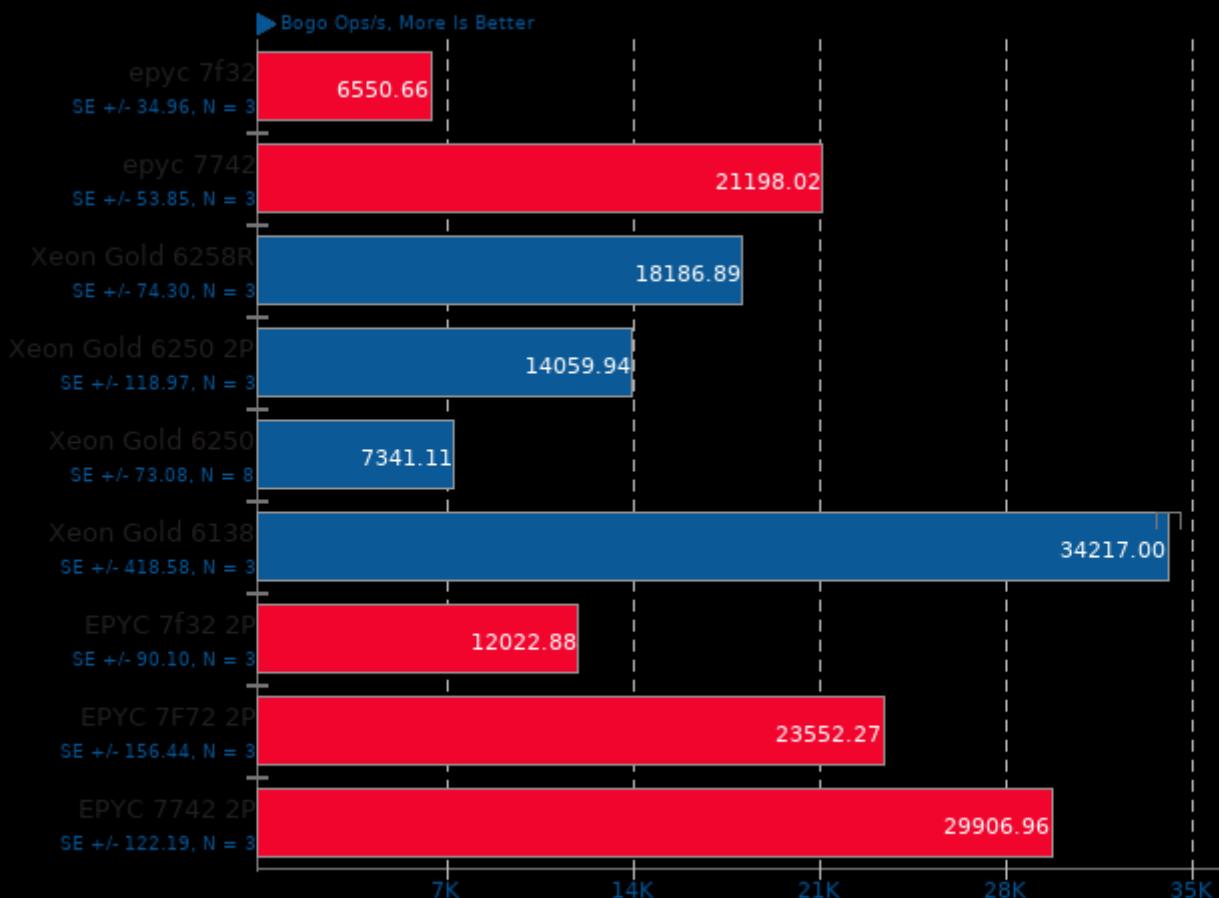
Test: Forking



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

Stress-NG 0.11.07

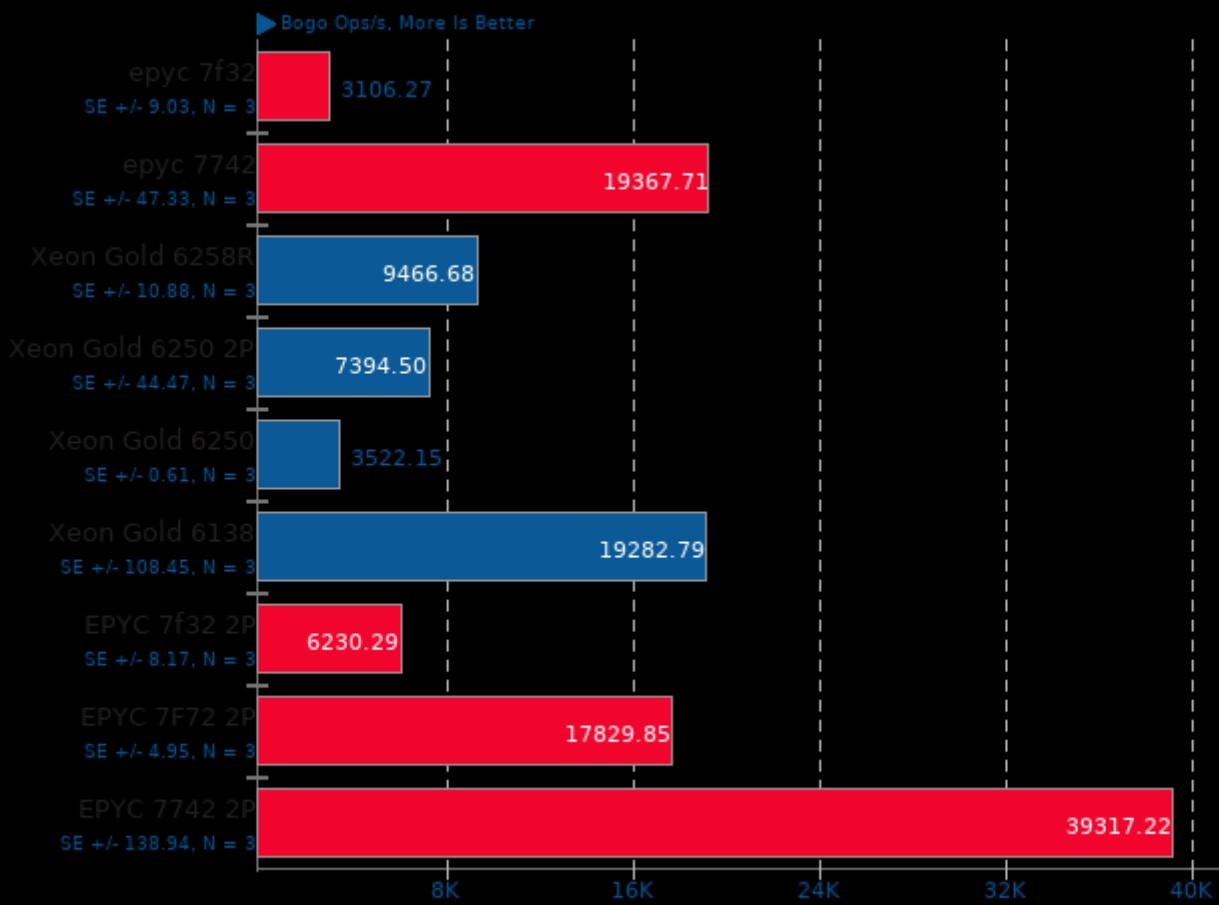
Test: Socket Activity



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

Stress-NG 0.11.07

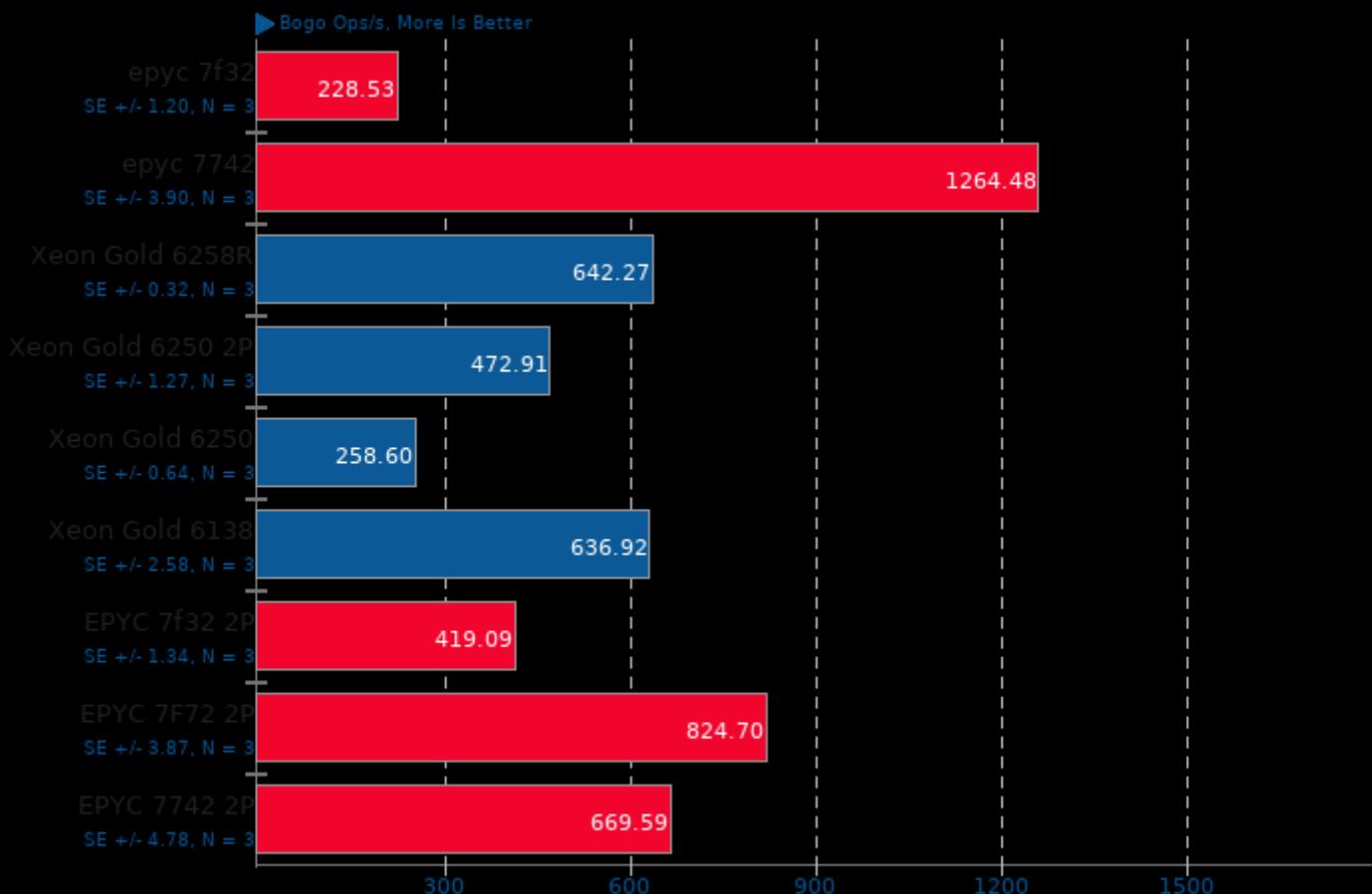
Test: CPU Stress



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

Stress-NG 0.11.07

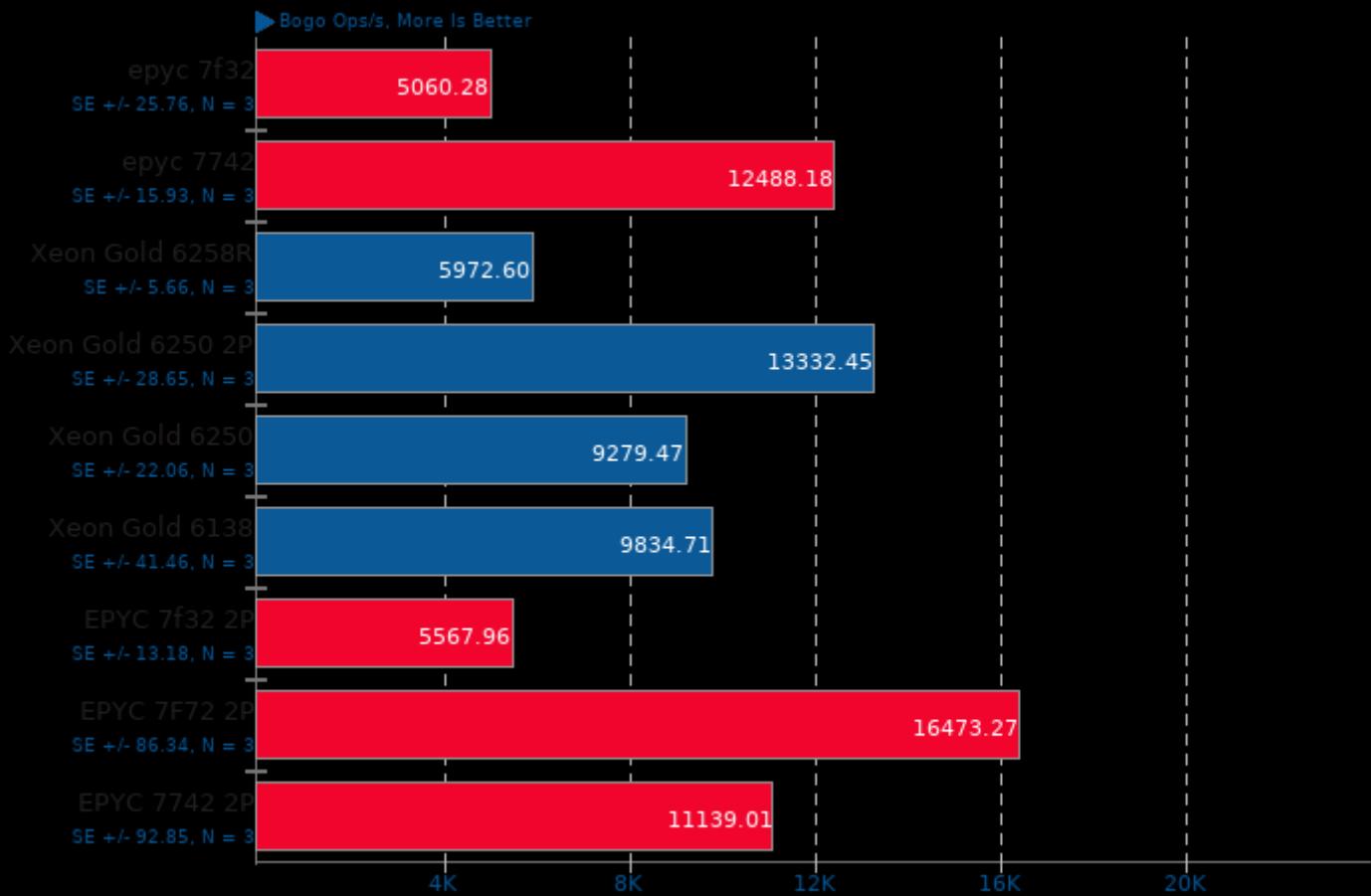
Test: NUMA



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

Stress-NG 0.11.07

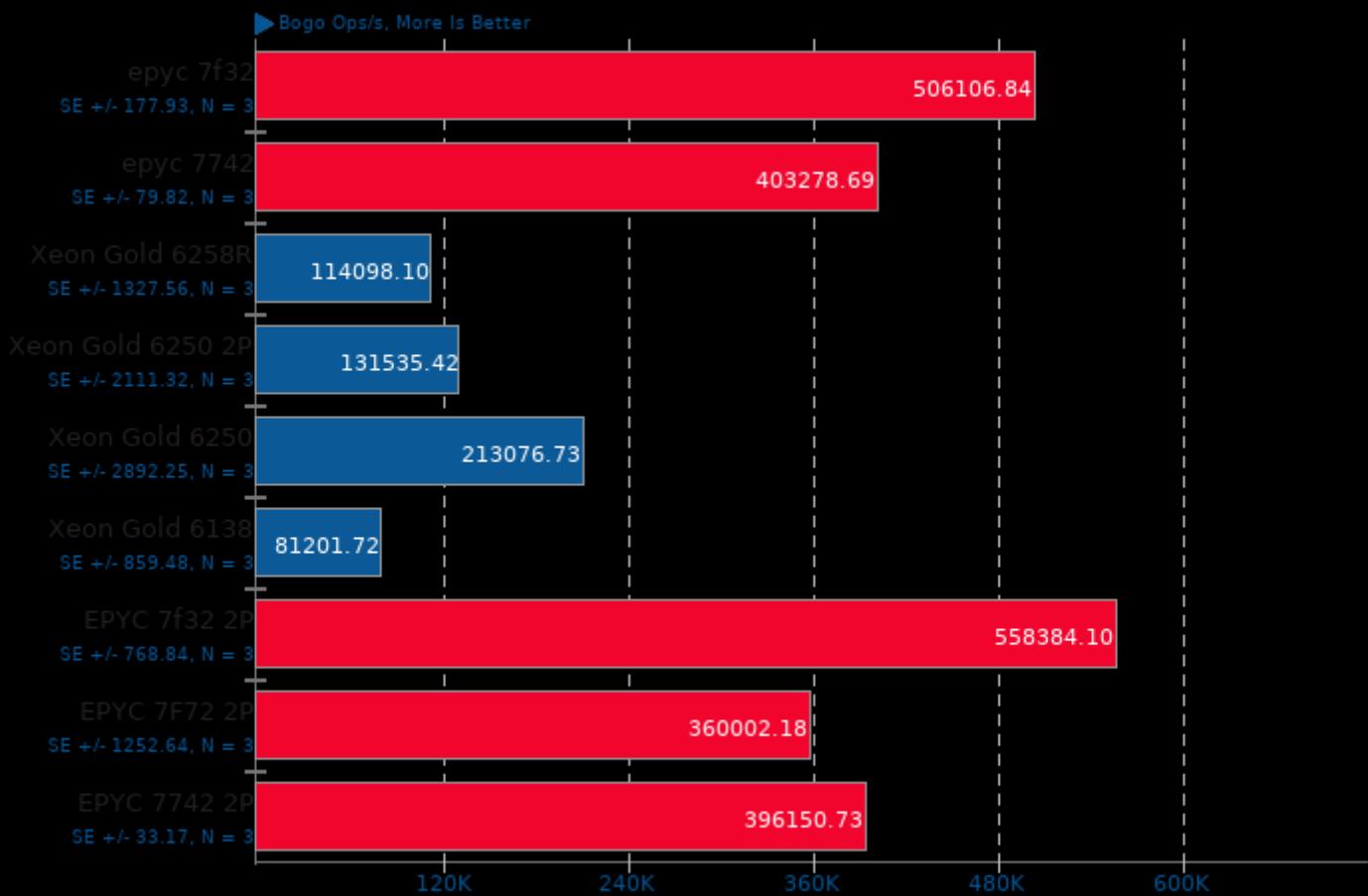
Test: Memory Copying



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

Stress-NG 0.11.07

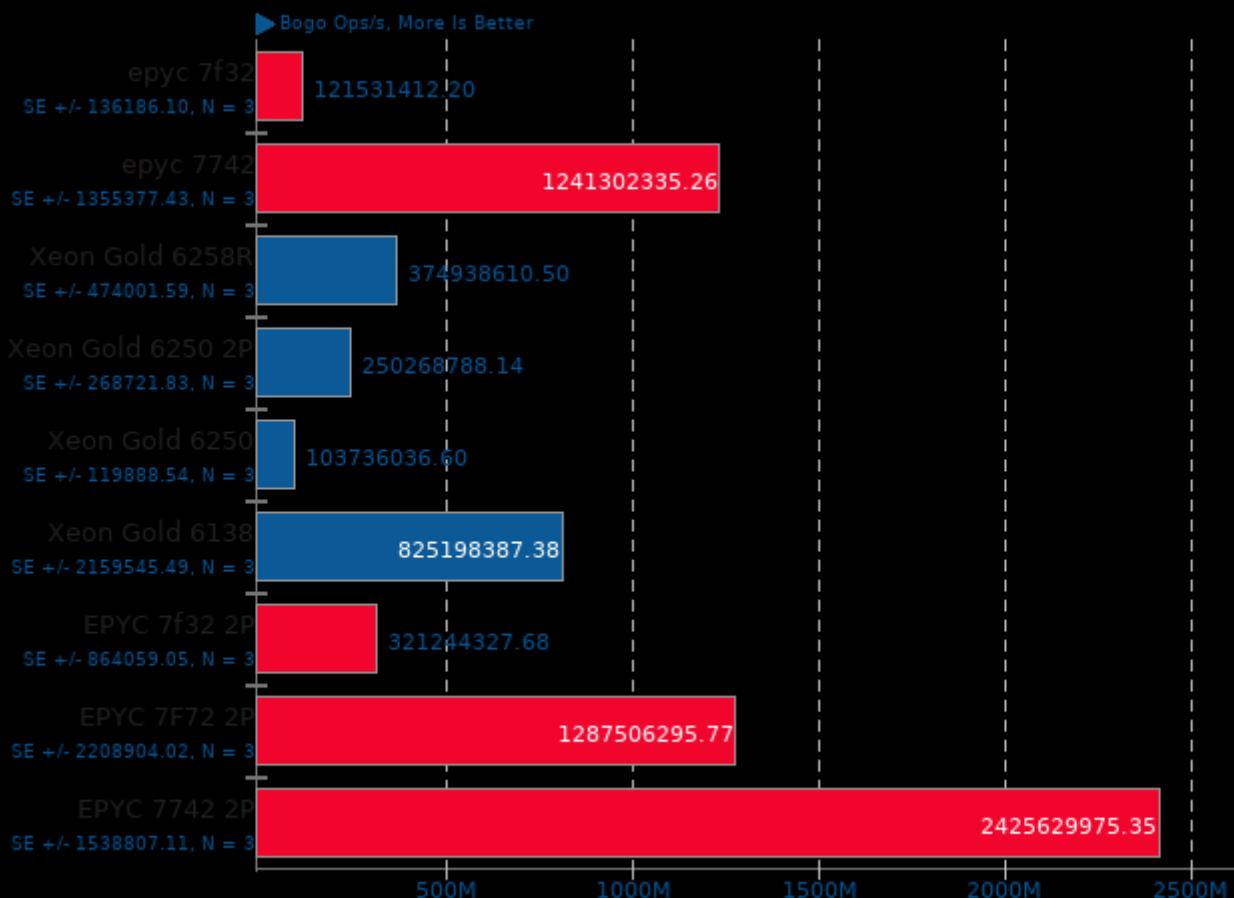
Test: Atomic



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

Stress-NG 0.11.07

Test: Malloc



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

Stress-NG 0.11.07

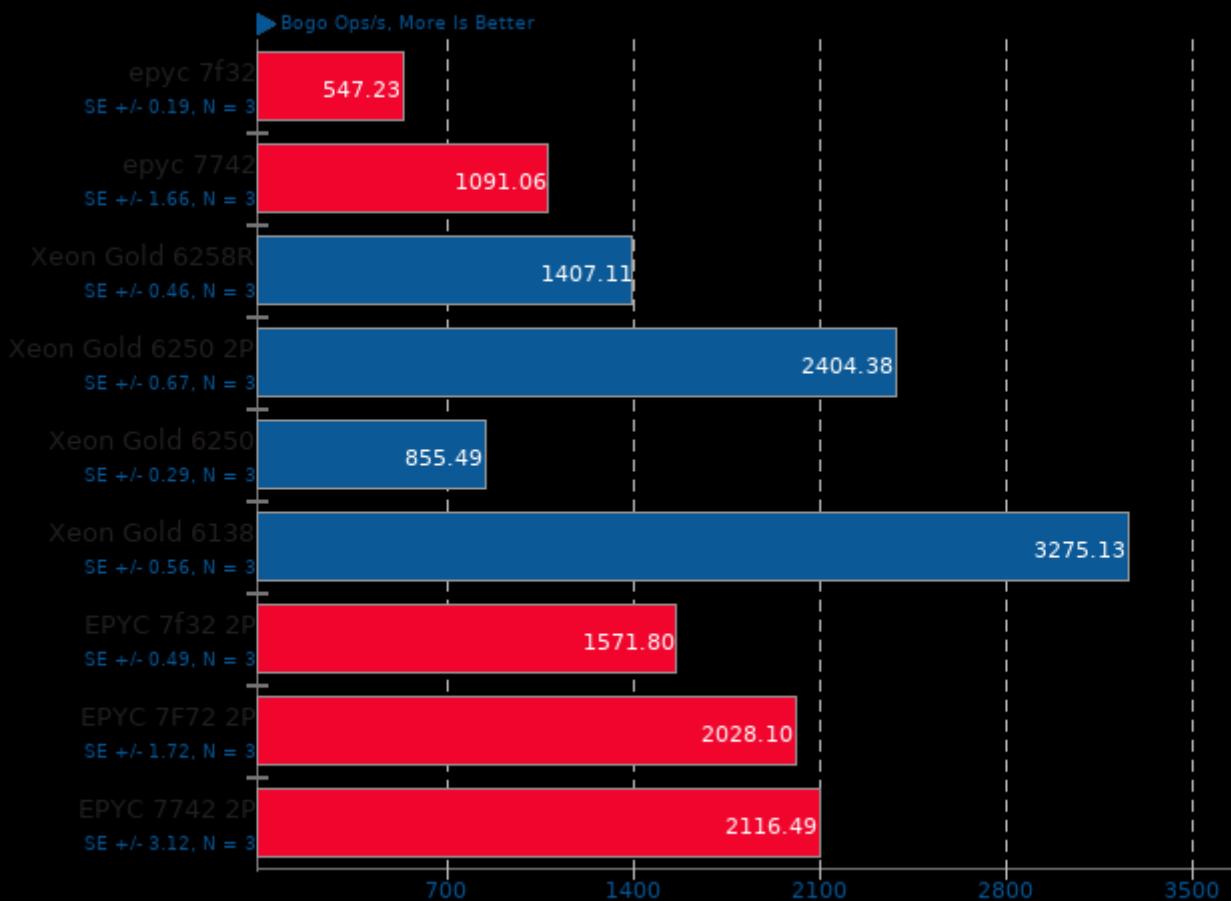
Test: SENDFILE



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

Stress-NG 0.11.07

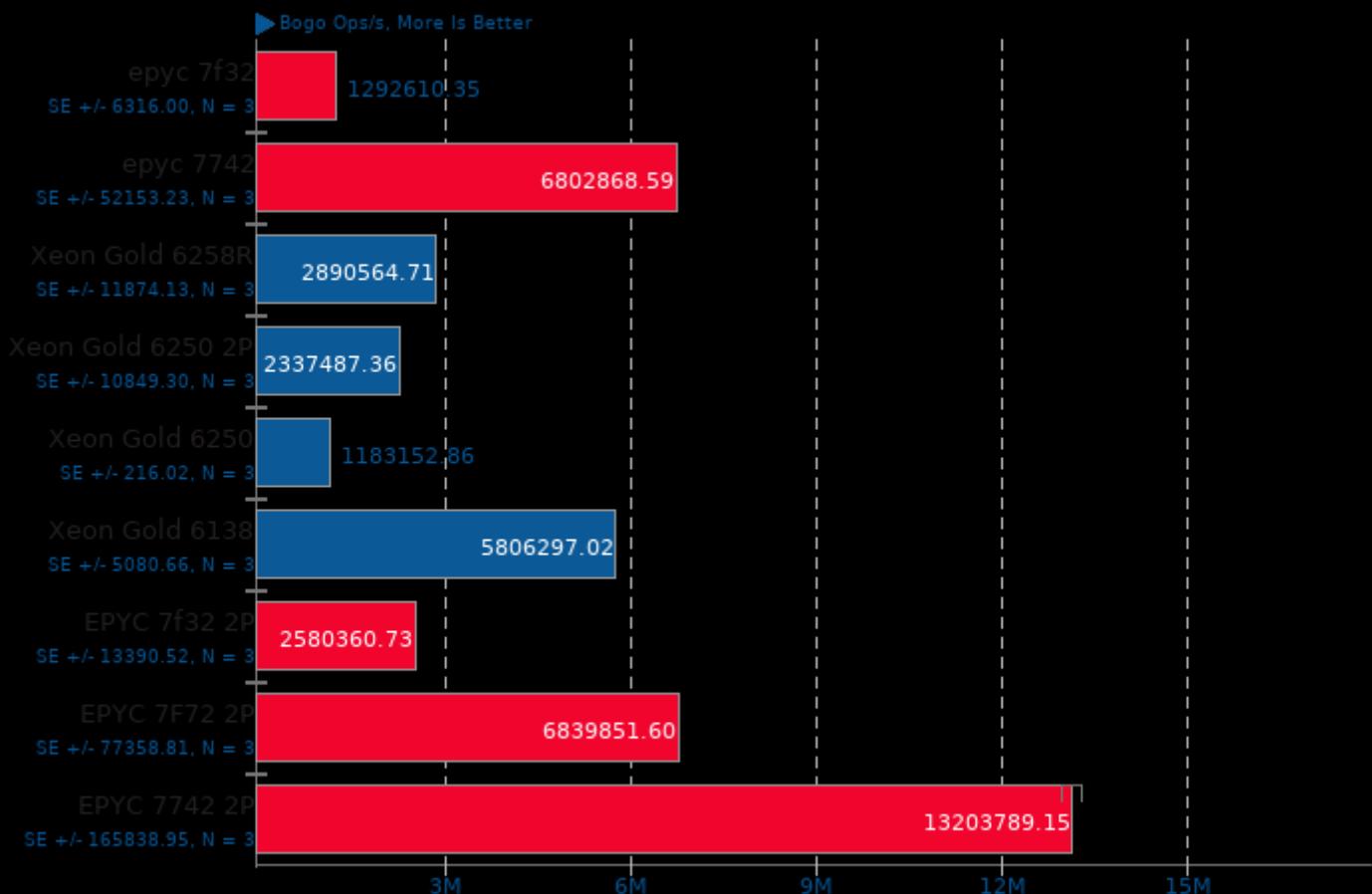
Test: MEMFD



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

Stress-NG 0.11.07

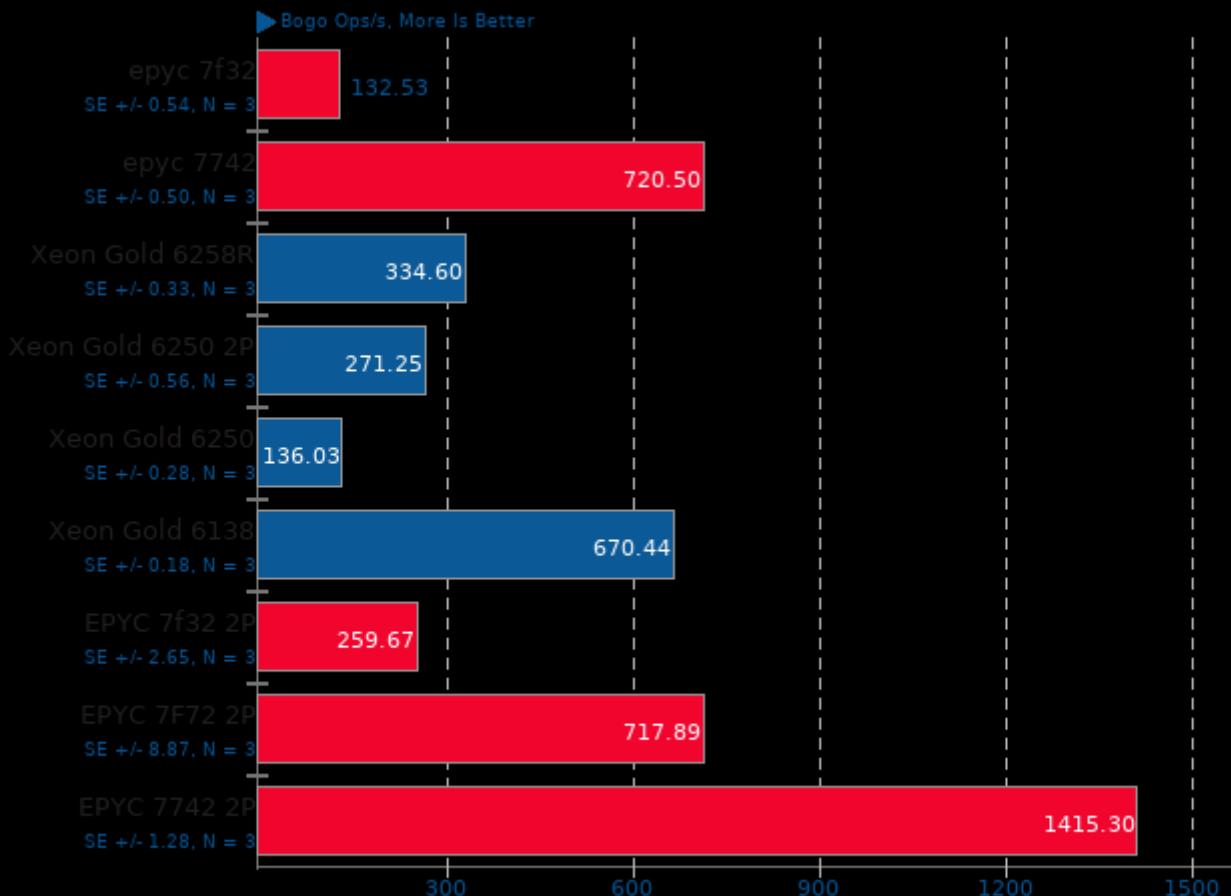
Test: Glibc C String Functions



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

Stress-NG 0.11.07

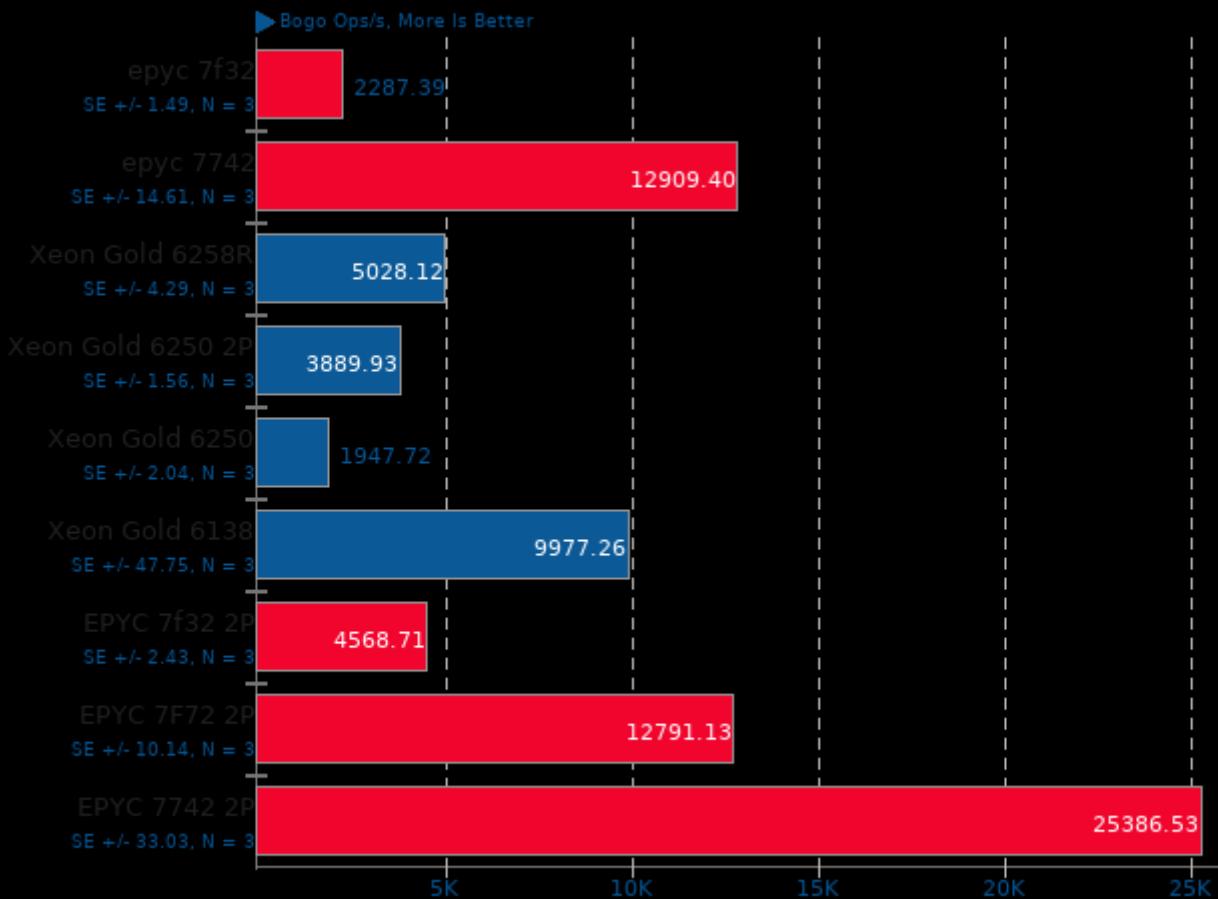
Test: Glibc Qsort Data Sorting



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

Stress-NG 0.11.07

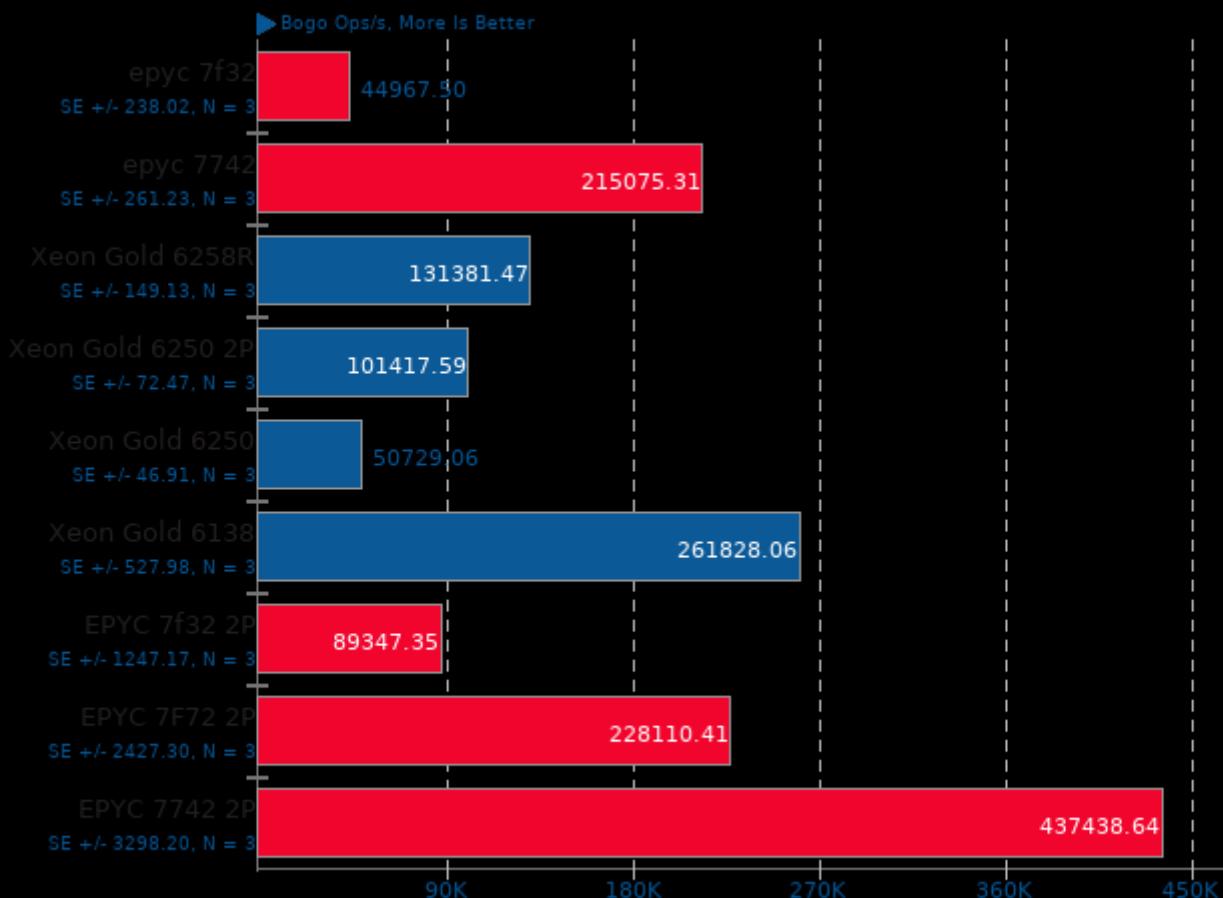
Test: Crypto



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

Stress-NG 0.11.07

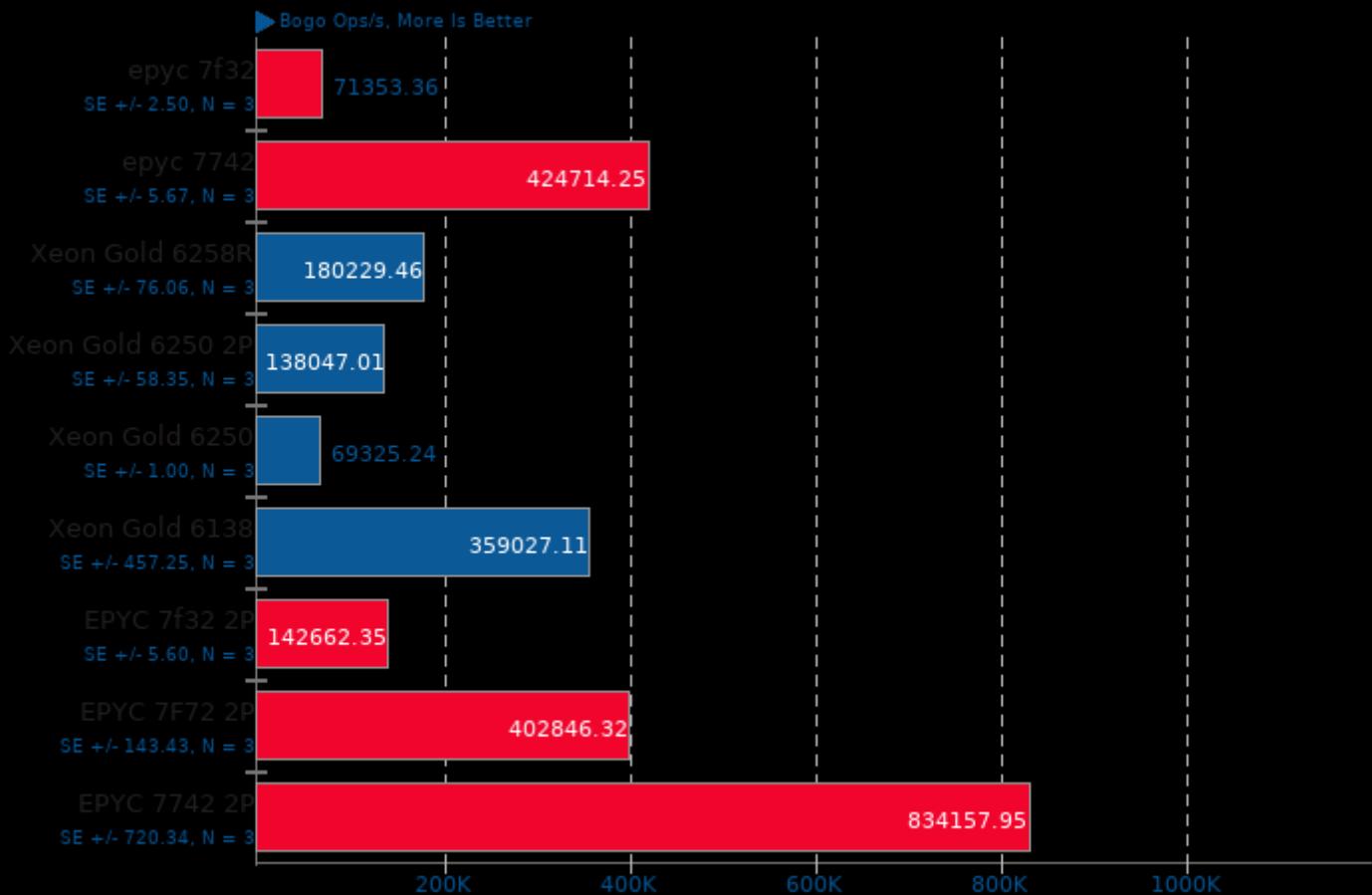
Test: Matrix Math



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

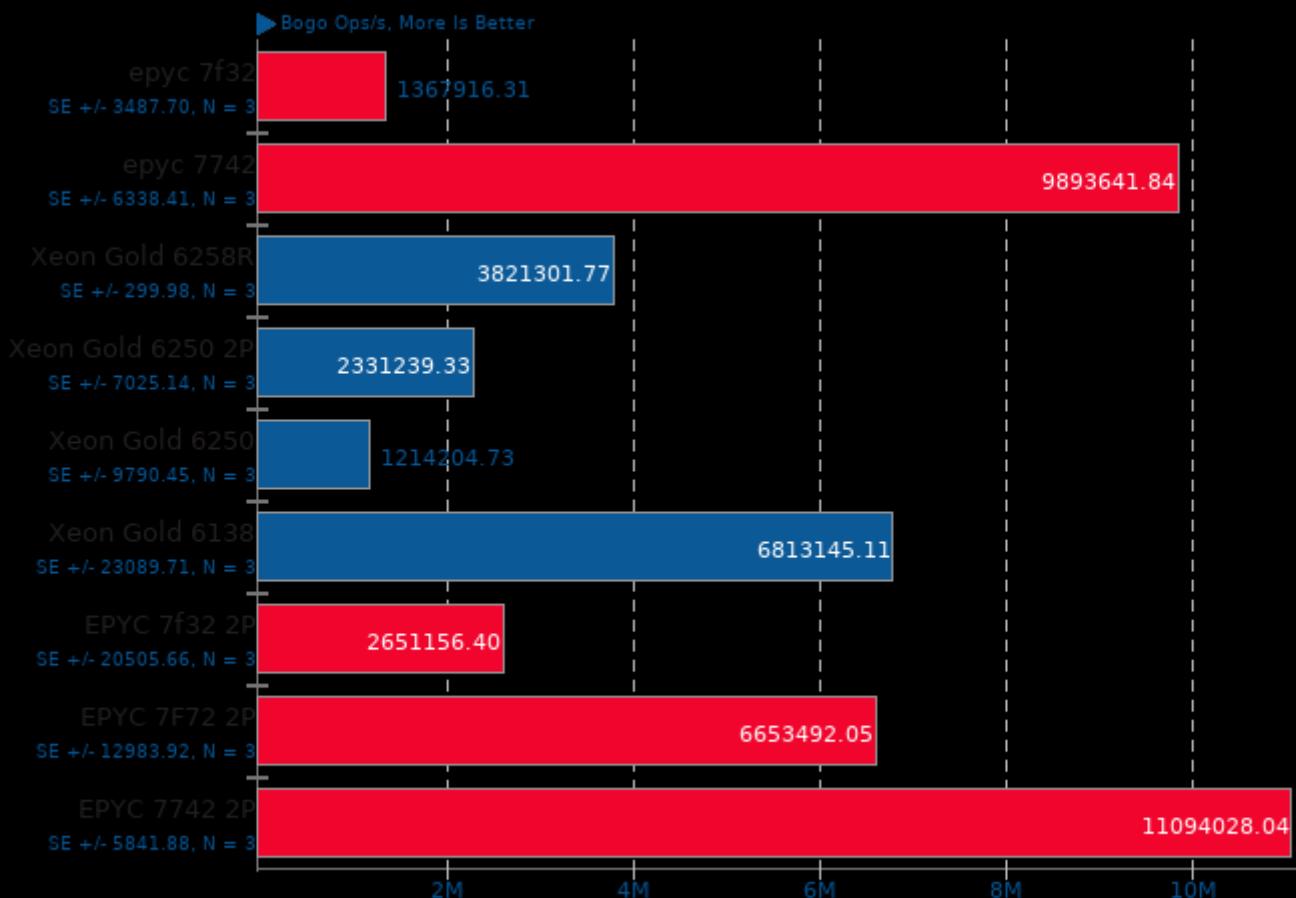
Stress-NG 0.11.07

Test: Vector Math



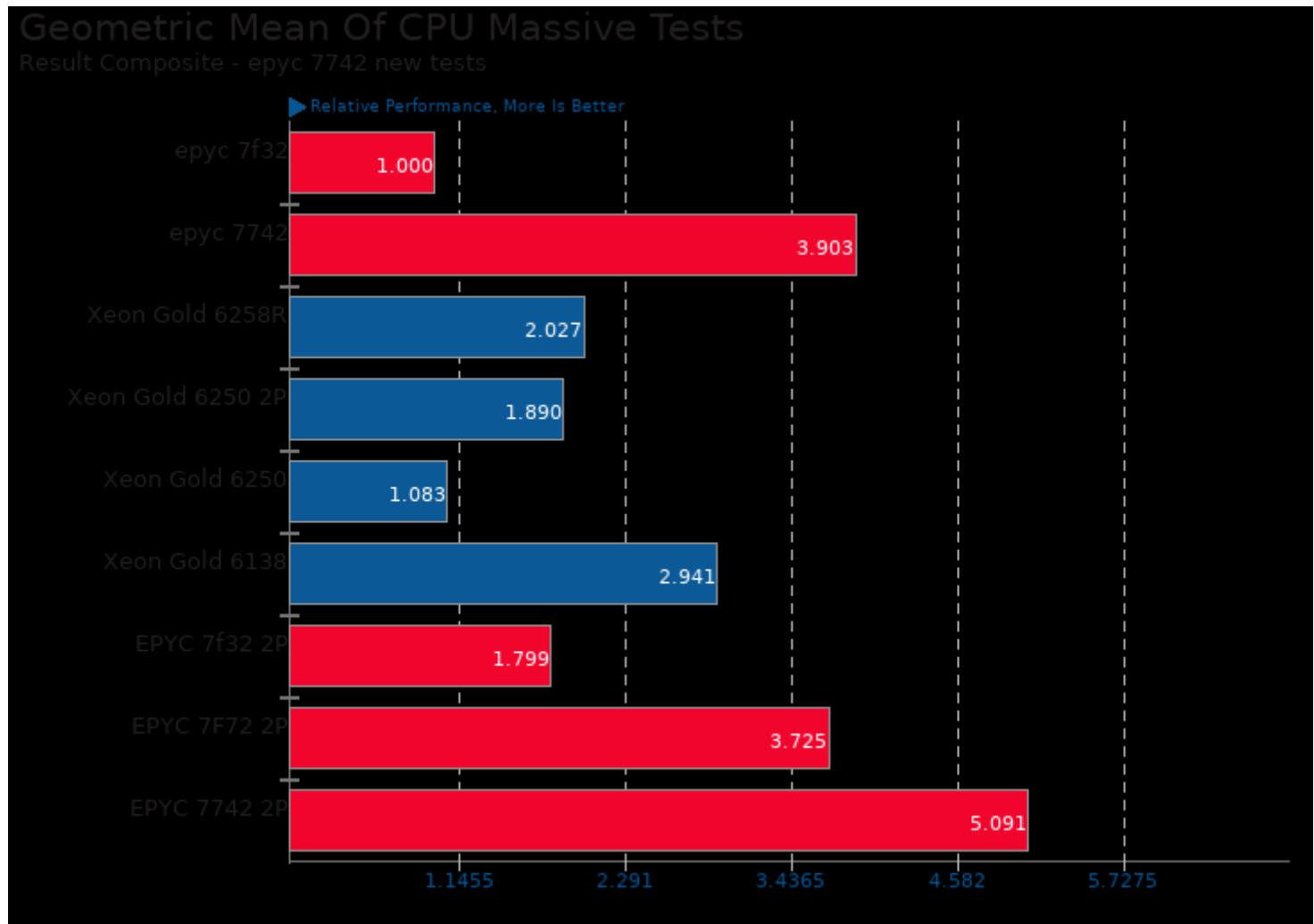
Stress-NG 0.11.07

Test: Semaphores



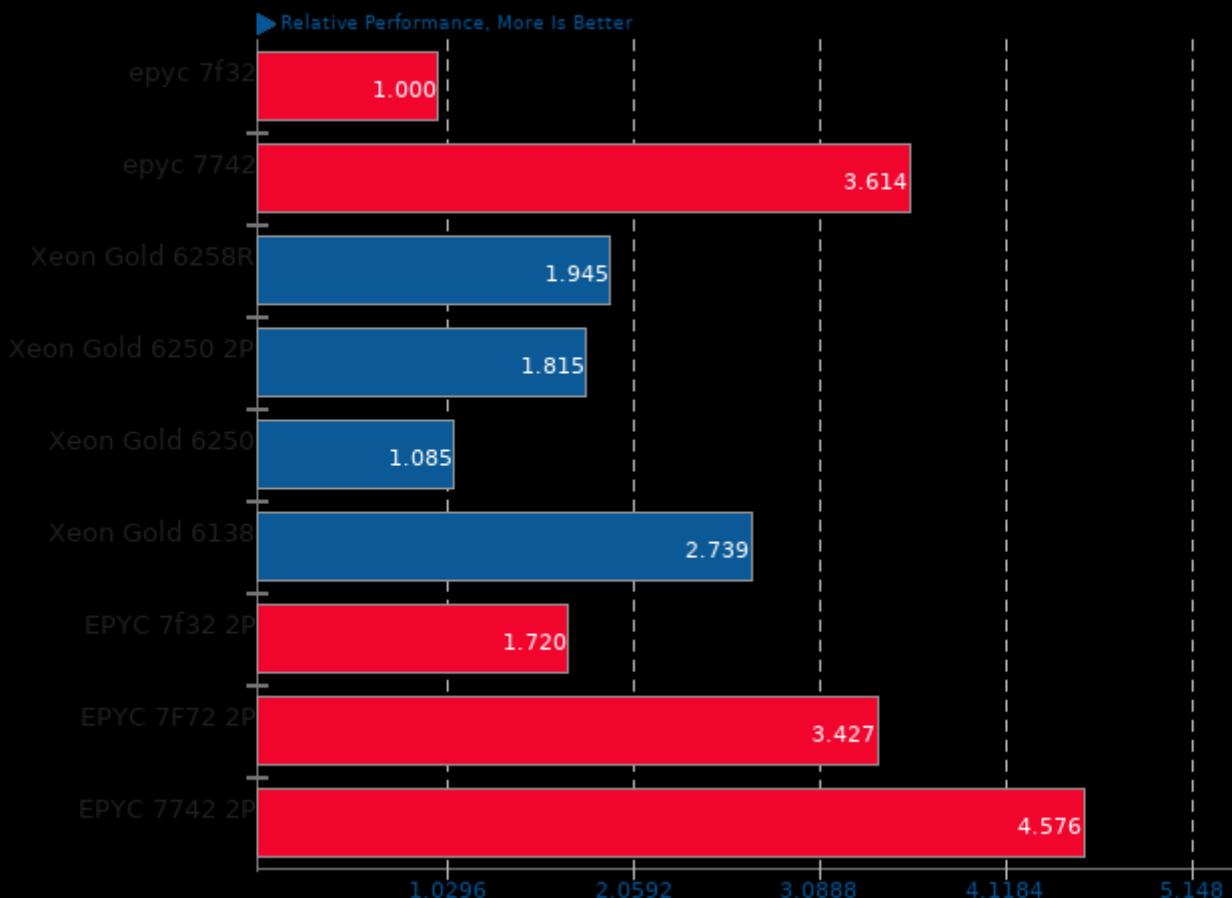
1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -lpthread -lc

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



Geometric Mean Of Common Kernel Benchmarks Tests

Result Composite - epyc 7742 new tests



Geometric mean based upon tests: system/wireguard and pts/stress-ng

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 00:45.