

www.phoronix-test-suite.com

Clear Linux vs. openSUSE vs. Solus vs. Antergos

Intel Core i7-8086K testing of Linux distros.

Automated Executive Summary

Clear Linux 23530 had the most wins, coming in first place for 50% of the tests.

Based on the geometric mean of all complete results, the fastest (Clear Linux 23530) was 2.182x the speed of the slowest (openSUSE Tumbleweed 20180703). Solus 3.9999 was 0.901x the speed of Clear Linux 23530, Antergos 18.7-Rolling was 0.764x the speed of Solus 3.9999, Debian 9.4 was 0.94x the speed of Antergos 18.7-Rolling, openSUSE Tumbleweed 20180703 was 0.709x the speed of Debian 9.4.

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

Systemd Total Boot Time (Test: Loader) at 271.346x
Systemd Total Boot Time (Test: Userspace) at 58.024x
OpenArena (Resolution: 1920 x 1080 - Total Frame Time) at 33x
PyBench (Total For Average Test Times) at 4.481x
PHPBench (PHP Benchmark Suite) at 4.403x
Zstd Compression (Compressing ubuntu-16.04.3-server-i386.img, Compression Level 19) at 4.129x
LAME MP3 Encoding (WAV To MP3) at 3.533x
Systemd Total Boot Time (Test: Total) at 3.446x

Systemd Total Boot Time (Test: Kernel) at 3.023x
OSBench (Test: Create Files) at 2.879x.

Test Systems:

Clear Linux 23530

Processor: Intel Core i7-8086K @ 5.00GHz (6 Cores / 12 Threads), Motherboard: ASUS PRIME Z370-A (0809 BIOS), Chipset: Intel 8th Gen Core, Memory: 16384MB, Disk: 118GB INTEL SSDPEK1W120GA, Graphics: Intel UHD 630 3072MB (1200MHz), Audio: Realtek ALC1220, Monitor: DELL P2415Q, Network: Intel Connection

OS: Clear Linux OS 23530, Kernel: 4.17.4-589.native (x86_64), Desktop: GNOME Shell 3.28.2, Display Server: X Server 1.20.0, Display Driver: modesetting 1.20.0, OpenGL: 4.5 Mesa 18.2.0-devel, Vulkan: 1.0.39, Compiler: GCC 8.1.1 20180514 + Clang 6.0.0 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes:
CFFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wl--copy-dt-needed-entries-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl-sort-common-Wl--enable-new-dtags MESA_GLSL_CACHE_DISABLE=0
CFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-Wl--copy-dt-needed-entries-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags
CXXFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-Wl--copy-dt-needed-entries-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-fvisibility-inlines-hidden-Wl--enable-new-dtags
FFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wl--copy-dt-needed-entries-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl--enable-new-dtags THEANO_FLAGS=floatX=float32 openmp=true gcc.cxxflags="-ftree-vectorize-mavx"
Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --enable-__cxa_atexit --enable-bootstrap --enable-clocale=gnu --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Disk Notes: MQ-DEADLINE / relatime,rw,stripe=256
Processor Notes: Scaling Governor: intel_pstate performance
Python Notes: Python 3.7.0
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp Protection

openSUSE Tumbleweed 20180703

Processor: Intel Core i7-8086K @ 5.00GHz (6 Cores / 12 Threads), Motherboard: ASUS PRIME Z370-A (0809 BIOS), Chipset: Intel Device 3ec2, Memory: 16384MB, Disk: 118GB INTEL SSDPEK1W120GA, Graphics: Intel UHD 630 3072MB (1200MHz), Audio: Realtek ALC1220, Monitor: DELL P2415Q, Network: Intel Connection

OS: openSUSE Tumbleweed 20180703, Kernel: 4.17.3-1-default (x86_64), Desktop: KDE Plasma 5.13.2, Display Server: X Server 1.19.6, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 18.1.2, Compiler: GCC 8.1.1 20180614 [gcc-8-branch revision 261584], File-System: xfs, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-suse-linux --disable-cet --disable-libcc1 --disable-libssp --disable-libstdcxx-pch --disable-libvtv --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-gnu-indirect-function --enable-languages=c,c++,objc,fortran,obj-c++,ada,go --enable-libstdcxx-allocator=new --enable-linux-futex --enable-multilib --enable-offload-targets=hsa,nvptx-none=/usr/nvptx-none, --enable-plugin --enable-ssp --enable-version-specific-runtime-libs --host=x86_64-suse-linux --mandir=/usr/share/man --with-arch-32=x86-64 --with-gcc-major-version-only --with-slibdir=/lib64 --with-tune=generic --without-cuda-driver --without-system-libunwind
Disk Notes: MQ-DEADLINE / attr2,inode64,noquota,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Python Notes: Python 2.7.15 + Python 3.6.5
Security Notes: KPTI + __user pointer sanitization + Indirect Branch Restricted Speculation IBPB IBRS_FW + SSB disabled via prctl and seccomp Protection

Antergos 18.7-Rolling

Processor: Intel Core i7-8086K @ 5.00GHz (6 Cores / 12 Threads), Motherboard: ASUS PRIME Z370-A (0809 BIOS), Chipset: Intel 8th Gen Core, Memory: 16384MB, Disk: 118GB INTEL SSDPEK1W120GA, Graphics: inteldrmfb (1200MHz), Audio: Realtek ALC1220, Monitor: DELL P2415Q, Network: Intel Connection

OS: Antergos Linux 18.7-ISO-Rolling, Kernel: 4.17.3-1-ARCH (x86_64), Desktop: GNOME Shell 3.28.2, Display Server: X Server 1.20.0, Display Driver: modesetting 1.20.0, Compiler: GCC 8.1.1 20180531, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++ --enable-libmpx --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Disk Notes: NONE / relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Graphics Notes: SNA
Python Notes: Python 3.6.6
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp Protection

Solus 3.9999

Processor: Intel Core i7-8086K @ 5.00GHz (6 Cores / 12 Threads), Motherboard: ASUS PRIME Z370-A (0809 BIOS), Chipset: Intel Device 3ec2, Memory: 16384MB, Disk: 118GB INTEL SSDPEK1W120GA, Graphics: Intel UHD 630 3072MB (1200MHz), Audio: Realtek ALC1220, Monitor: DELL P2415Q, Network: Intel Connection

OS: Solus 3.9999, Kernel: 4.17.2-78.current (x86_64), Desktop: Budgie, Display Server: X Server 1.19.6, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 18.1.1, Compiler: GCC 7.3.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-solus-linux --enable-__cxa_atexit --enable-clocale=gnu --enable-gnu-indirect-function --enable-gold --enable-languages=c,c++,fortran --enable-ld=default --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --target=x86_64-solus-linux --with-arch_32=i686 --with-gnu-ld --with-linker-hash-style=gnu --with-multilib-list=m32,m64
Disk Notes: NONE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Python Notes: Python 2.7.15 + Python 3.6.5
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp Protection

Debian 9.4

Processor: Intel Core i7-8086K @ 5.00GHz (6 Cores / 12 Threads), Motherboard: ASUS PRIME Z370-A (0809 BIOS), Chipset: Intel Device 3ec2, Memory: 2 x 8192 MB DDR4-3000MHz, Disk: 118GB INTEL SSDPEK1W120GA, Graphics: EFI VGA, Audio: Realtek Generic, Network: Intel Connection

OS: Debian 9.4, Kernel: 4.9.0-6-amd64 (x86_64), Desktop: GNOME Shell 3.22.3, Display Server: X Server 1.19.2, Display Driver: modesetting 1.19.2, Compiler: GCC 6.3.0 20170516, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --disable-vtable-verify --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-gtk-cairo --enable-java-awt=gtk --enable-java-home --enable-languages=c,ada,c++,java,go,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --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-arch-directory=amd64 --with-default-libstdcxx-abi=new --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic -v
Disk Notes: none / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Python Notes: Python 2.7.13 + Python 3.5.3
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW Protection

Clear Linux vs. openSUSE vs. Solus vs. Antergos

	Clear Linux 23530	openSUSE Tumbleweed 20180703	Antergos 18.7-Rolling	Solus 3.9999	Debian 9.4
FS-Mark - 1.F.1.S (Files/s)	**440.50**		274.77	**265.80**	324.45
Normalized	100%		62.38%	60.34%	73.65%
Standard Deviation	1.2%		1.7%	2.4%	6.7%
FS-Mark - 5.F.1.S.4.T (Files/s)	**537.77**		**394.53**	407.20	429.07
Normalized	100%		73.36%	75.72%	79.79%
Standard Deviation	2%		2.3%	1.8%	0.9%
FS-Mark - 4.F.3.S.D.1.S (Files/s)	**423.57**		**267.87**	279.25	340.42
Normalized	100%		63.24%	65.93%	80.37%
Standard Deviation	1.8%		2.5%	5.2%	10.6%
ET: Legacy - Renderer2 - 3840 x 2160 (FPS)	**35.93**	**34.43**	35.67	34.97	
Normalized	100%	95.83%	99.28%	97.33%	
Standard Deviation	0.4%	0.2%	0.6%	0.2%	
OpenArena - 1920 x 1080 (FPS)	87.30	**69.53**	**88.87**	84.20	
Normalized	98.23%	78.24%	100%	94.75%	
Standard Deviation	0.2%	0.2%	0.2%	0.2%	
Tesseract - 1920 x 1080 (FPS)	**56.84**		55.63	**54.53**	
Normalized	100%		97.87%	95.94%	
Standard Deviation	0.4%		0.4%	0.2%	
Tesseract - 3840 x 2160 (FPS)	**22.69**		**23.21**	22.94	
Normalized	97.76%		100%	98.84%	
Standard Deviation	0.4%		1.9%	0.9%	
Xonotic - 3840 x 2160 - Low	**83.27**	**77.50**	83.22	78.31	
Normalized	100%	93.07%	99.94%	94.04%	
Standard Deviation	0.1%	0.3%	0.1%	0.2%	
Xonotic - 3840 x 2160 - High	39.18	**37.74**	**39.48**	38.08	
Normalized	99.24%	95.59%	100%	96.45%	
Standard Deviation	0.1%	0.5%	0.2%	0%	
ParaView - Many Spheres - 1920 x 1080 (Frames / Sec)	6.39	6.38	**6.68**	**6.37**	
Normalized	95.66%	95.51%	100%	95.36%	
Standard Deviation	0.1%	0.1%	0%	0%	
ParaView - Many Spheres - 1920 x 1080 (MiPolys / Sec)	640.97	639.96	**669.51**	**638.64**	
Normalized	95.74%	95.59%	100%	95.39%	
Standard Deviation	0.1%	0.1%	0.1%	0%	
ParaView - Wavelet Volume - 1920 x 1080 (Frames / Sec)	**27.69**	**22.86**	24.91	24.76	
Normalized	100%	82.56%	89.96%	89.42%	
Standard Deviation	0.2%	0.9%	0.2%	0.2%	
ParaView - Wavelet Volume - 1920 x 1080 (MiVoxels / Sec)	**443.02**	**365.83**	398.61	396.15	
Normalized	100%	82.58%	89.98%	89.42%	
Standard Deviation	0.2%	0.9%	0.2%	0.2%	
ParaView - Wavelet Contour - 1920 x 1080 (Frames / Sec)	17.94	17.72	**18.91**	**17.70**	
Normalized	94.87%	93.71%	100%	93.6%	
Standard Deviation	0.1%	0.1%	0.1%	0%	

Clear Linux vs. openSUSE vs. Solus vs. Antergos

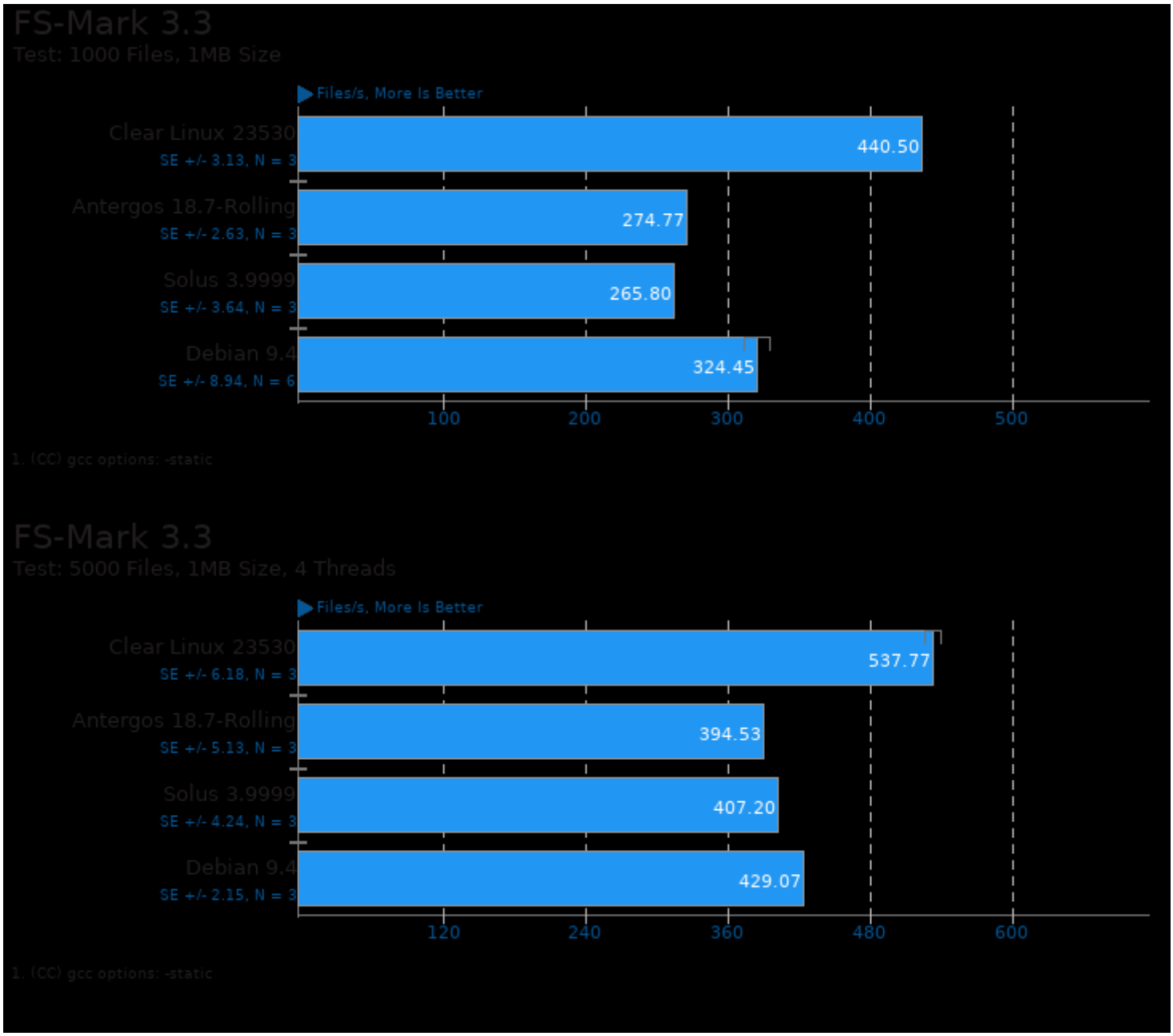
ParaView - Wavelet Contour - 1920 x 1080 (MiPolys / Sec)	187.01	184.67	197.02	184.43	
Normalized	94.92%	93.73%	100%	93.61%	
Standard Deviation	0.1%	0.1%	0.1%	0%	
Tinymembench - Standard Memcpy (MB/s)	18112	18876	18426	18199	18442
Normalized	95.95%	100%	97.61%	96.41%	97.7%
Tinymembench - Standard Memset (MB/s)	40604	40058	39016	37969	36350
Normalized	100%	98.66%	96.09%	93.51%	89.52%
Sockperf - Throughput (Messages/sec)	784258		723567	719789	845861
Normalized	92.72%		85.54%	85.1%	100%
Standard Deviation	1.6%		5.9%	1.3%	2.4%
Sockperf - Latency Ping Pong (usec)	2.63		2.64	2.71	2.37
Normalized	90.11%		89.77%	87.45%	100%
Standard Deviation	1.1%		1.2%	1%	1.6%
Sockperf - Latency Under Load (usec)	18.75		18.03	18.01	12.86
Normalized	68.59%		71.33%	71.4%	100%
Standard Deviation	22.3%		14%	1.8%	52.6%
Rodinia - OpenMP LavaMD (sec)	82.08	85.08	88.78	84.98	89.21
Normalized	100%	96.47%	92.45%	96.59%	92.01%
Standard Deviation	0.9%	0.9%	0.4%	0.3%	0.4%
Rodinia - OpenMP CFD Solver (sec)	27.28	26.77	25.78	26.74	26.46
Normalized	94.5%	96.3%	100%	96.41%	97.43%
Standard Deviation	0.5%	1.1%	0.3%	0.2%	0.2%
Rodinia - O.S (sec)	19.14	18.48	18.28	19.49	19.61
Normalized	95.51%	98.92%	100%	93.79%	93.22%
Standard Deviation	9.2%	0%	0.2%	0.2%	0.1%
LuaJIT - Composite (Mflops)	1834	1818	1832	1827	1836
Normalized	99.87%	98.98%	99.76%	99.47%	100%
Standard Deviation	0.2%	0.2%	0%	0.1%	0.1%
Crafty - Elapsed Time (Nodes/s)	10527050	8552782	10001484	10280781	9892590
Normalized	100%	81.25%	95.01%	97.66%	93.97%
Standard Deviation	0.1%	0.1%	0.4%	0.2%	0.2%
VP9 libvpx Encoding - vpxenc (FPS)	19.35	15.42	18.79	19.03	18.62
Normalized	100%	79.69%	97.11%	98.35%	96.23%
Standard Deviation	0.2%	0%	2.4%	0.2%	0.4%
Himeno Benchmark - P.P.S (MFLOPS)	2891	3261	2932	2859	3332
Normalized	86.78%	97.89%	88%	85.81%	100%
Standard Deviation	2.3%	1.3%	1.4%	0.6%	1.8%
Stockfish - Total Time (Nodes/s)	23474950	23795805	22051555	22255004	22008042
Normalized	98.65%	100%	92.67%	93.52%	92.49%
Standard Deviation	0%	1%	1.1%	0.5%	2.2%
Timed Linux Kernel Compilation - Time To Compile (sec)	62.80		73.96	61.60	68.39
Normalized	98.09%		83.29%	100%	90.07%
Standard Deviation	1.5%		2.1%	1%	1.2%

Clear Linux vs. openSUSE vs. Solus vs. Antergos

C-Ray - Total Time (sec)	**9.43**	9.85	9.78	**11.09**	9.70
Normalized	100%	95.74%	96.42%	85.03%	97.22%
Standard Deviation	0%	0.2%	0.1%	0%	0.1%
FLAC Audio Encoding - WAV To FLAC (sec)	**7.19**	**7.81**	7.61	7.54	7.23
Normalized	100%	92.06%	94.48%	95.36%	99.45%
Standard Deviation	0.5%	0.8%	0.5%	0.4%	0.9%
LAME MP3 Encoding - WAV To MP3 (sec)	**7.03**	**24.84**	24.23	8.89	24.06
Normalized	100%	28.3%	29.01%	79.08%	29.22%
Standard Deviation	0.1%	0.1%	0%	0.1%	0.8%
Zstd Compression - C.u.1.0.3.s.i.i.C.L.1 (sec)	**29.22**	81.71	107.47	87.51	**120.64**
Normalized	100%	35.76%	27.19%	33.39%	24.22%
Standard Deviation	0.1%	0.2%	0.1%	0.1%	0.4%
System Libxml2 Parsing - 1 MB (ms)	329	**573**	337	**295**	
Normalized	89.67%	51.48%	87.54%	100%	
Standard Deviation			2.1%		
Systemd Total Boot Time - Total (ms)	**13486**	**46468**	20724	16315	25681
Normalized	100%	29.02%	65.07%	82.66%	52.51%
Systemd Total Boot Time - Kernel (ms)	851.80	**2071**	1514	**685**	1417
Normalized	80.42%	33.08%	45.24%	100%	48.34%
Systemd Total Boot Time - Loader (ms)	**31.20**	**8466**	5407	67	1787
Normalized	100%	0.37%	0.58%	46.57%	1.75%
Systemd Total Boot Time - Firmware (ms)	**12099**	12855	13162	**14524**	12867
Normalized	100%	94.12%	91.93%	83.31%	94.03%
Systemd Total Boot Time - Userspace (ms)	502.90	**21701**	640	**374**	9608
Normalized	74.37%	1.72%	58.44%	100%	3.89%
PostgreSQL pgbench - Buffer Test - Normal Load - Read Only	**232306**		227157	217402	**215469**
Normalized	100%		97.78%	93.58%	92.75%
Standard Deviation	0.2%		0.3%	0.3%	0.1%
PostgreSQL pgbench - Buffer Test - Normal Load - Read Write	**25969**		25380	**25251**	25402
Normalized	100%		97.73%	97.24%	97.82%
Standard Deviation	0.9%		0.4%	0.9%	2.6%
Redis - GET (Reqs/sec)	**4304497**	**1656422**	3997699	4028686	3420815
Normalized	100%	38.48%	92.87%	93.59%	79.47%
Standard Deviation	1.1%	3.4%	3.3%	2.6%	0.5%
Redis - SET (Reqs/sec)	**2955705**	**1017765**	2344462	2525154	2391128
Normalized	100%	34.43%	79.32%	85.43%	80.9%
Standard Deviation	0.5%	1.4%	10%	6.3%	2.1%
PyBench - T.F.A.T.T	1176	**4387**	997	**979**	1080
Normalized	83.25%	22.32%	98.19%	100%	90.65%
Standard Deviation	0.4%	0.1%	0.6%	0.2%	0.1%
PHPBench - P.B.S (Score)	**1014366**	**230363**	817049	845952	657929
Normalized	100%	22.71%	80.55%	83.4%	64.86%

Clear Linux vs. openSUSE vs. Solus vs. Antergos

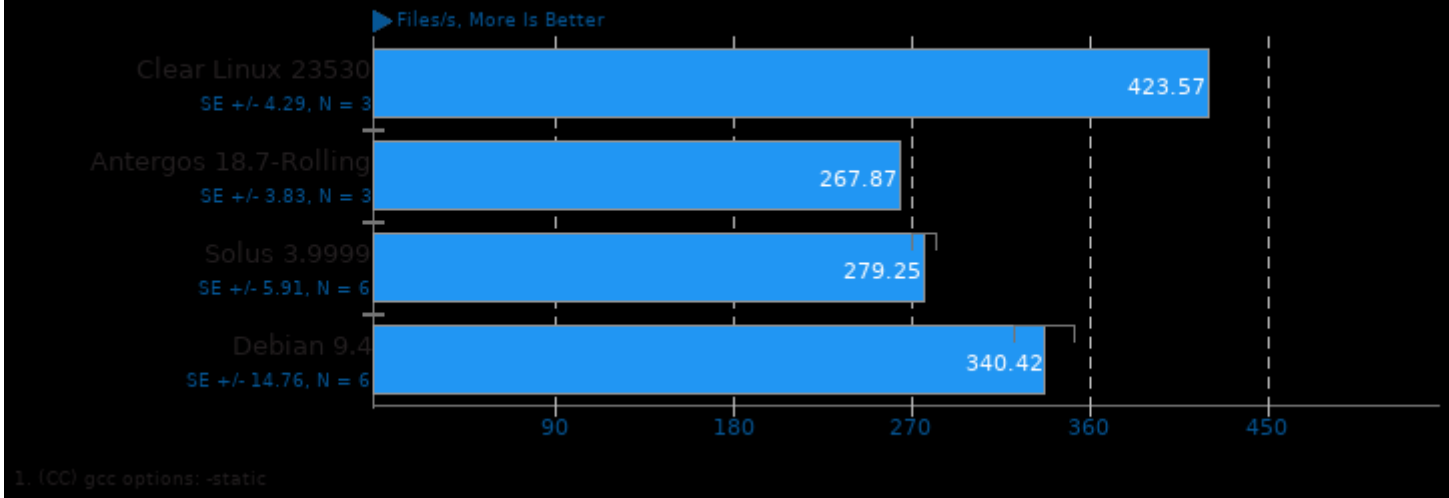
Standard Deviation	0.2%	0.1%	0.4%	0.3%	0.1%
Git - T.T.C.C.G.C (sec)	4.34	**5.39**	4.28	4.31	**4.25**
Normalized	97.93%	78.85%	99.3%	98.61%	100%
Standard Deviation	0.2%	0.3%	1.8%	1.2%	0.2%
OSBench - Create Files	10.53	**27.58**	11.65	**9.58**	10.70
Normalized	90.98%	34.74%	82.23%	100%	89.53%
Standard Deviation	0.5%	0.4%	0.5%	0.7%	0.5%
OSBench - Create Threads (us/Event)	9.51	**11.56**	10.14	10.04	**8.11**
Normalized	85.28%	70.16%	79.98%	80.78%	100%
Standard Deviation	3.2%	7.8%	3.4%	3.4%	4%
OSBench - Launch Programs (us/Event)	22.37	**24.94**	23.56	23.43	**20.23**
Normalized	90.43%	81.11%	85.87%	86.34%	100%
Standard Deviation	0.4%	0.9%	0.6%	0.5%	0.5%
OSBench - Memory Allocations (Ns/Event)	**43.96**	**75.39**	59.96	59.13	57.07
Normalized	100%	58.31%	73.32%	74.34%	77.03%
Standard Deviation	0.1%	0%	0.2%	0.1%	0.1%


FS-Mark 3.3
Test: 1000 Files, 1MB Size
Files/s, More Is Better
Clear Linux 23530
SE +/- 3.13, N = 3
440.50
Antergos 18.7-Rolling
SE +/- 2.63, N = 3
274.77
Solus 3.9999
SE +/- 3.64, N = 3
265.80
Debian 9.4
SE +/- 8.94, N = 6
324.45
100
200
300
400
500
1. (CC) gcc options: -static
FS-Mark 3.3
Test: 5000 Files, 1MB Size, 4 Threads
Files/s, More Is Better
Clear Linux 23530
SE +/- 6.18, N = 3
537.77
Antergos 18.7-Rolling
SE +/- 5.13, N = 3
394.53
Solus 3.9999
SE +/- 4.24, N = 3
407.20
Debian 9.4
SE +/- 2.15, N = 3
429.07
120
240
360
480
600
1. (CC) gcc options: -static

Clear Linux vs. openSUSE vs. Solus vs. Antergos

FS-Mark 3.3

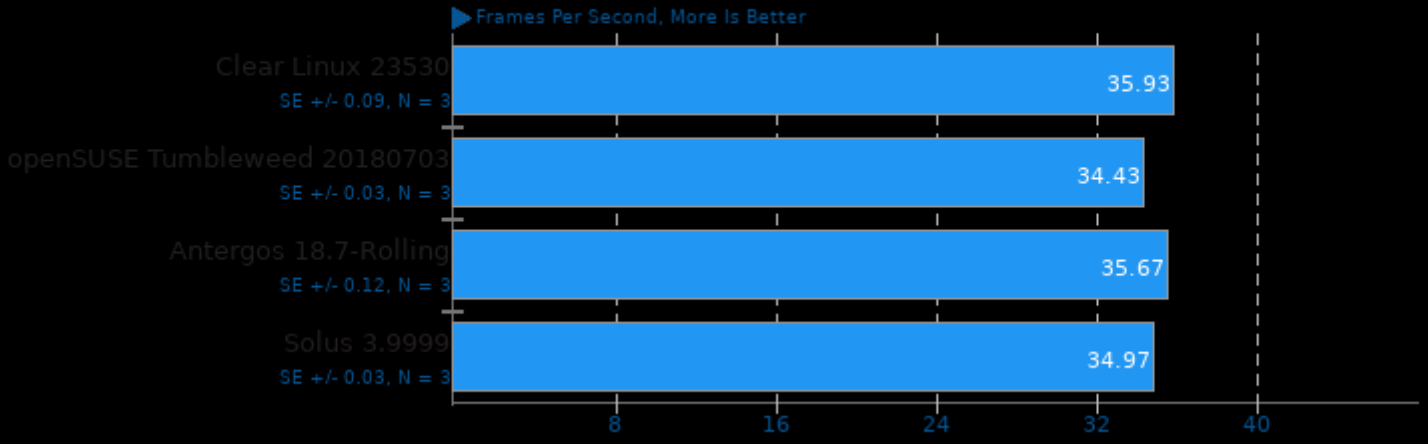
Test: 4000 Files, 32 Sub Dirs, 1MB Size



1. (CC) gcc options: -static

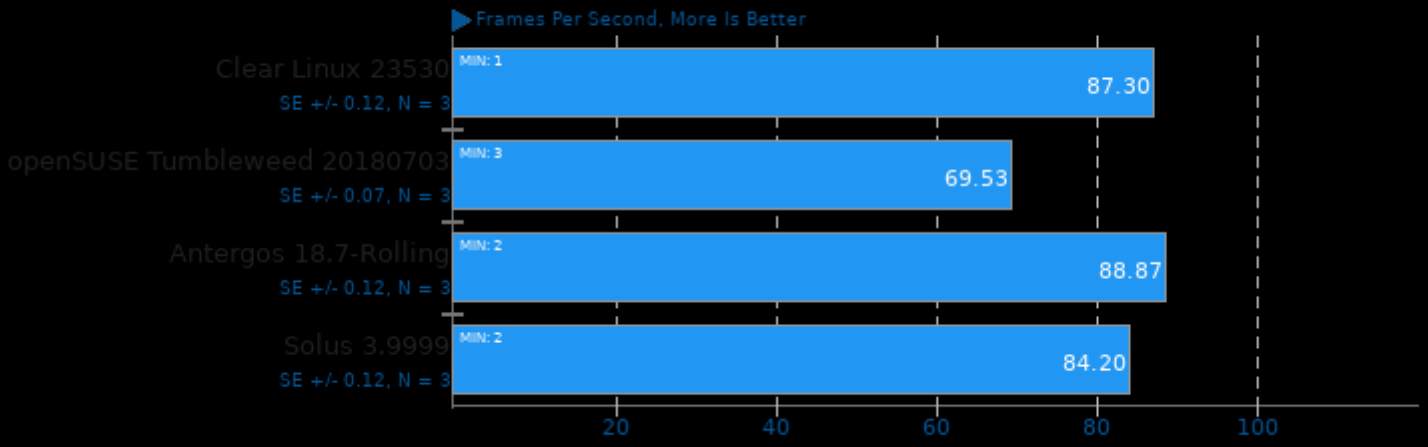
ET: Legacy 2.75

Renderer: Renderer2 - Resolution: 3840 x 2160

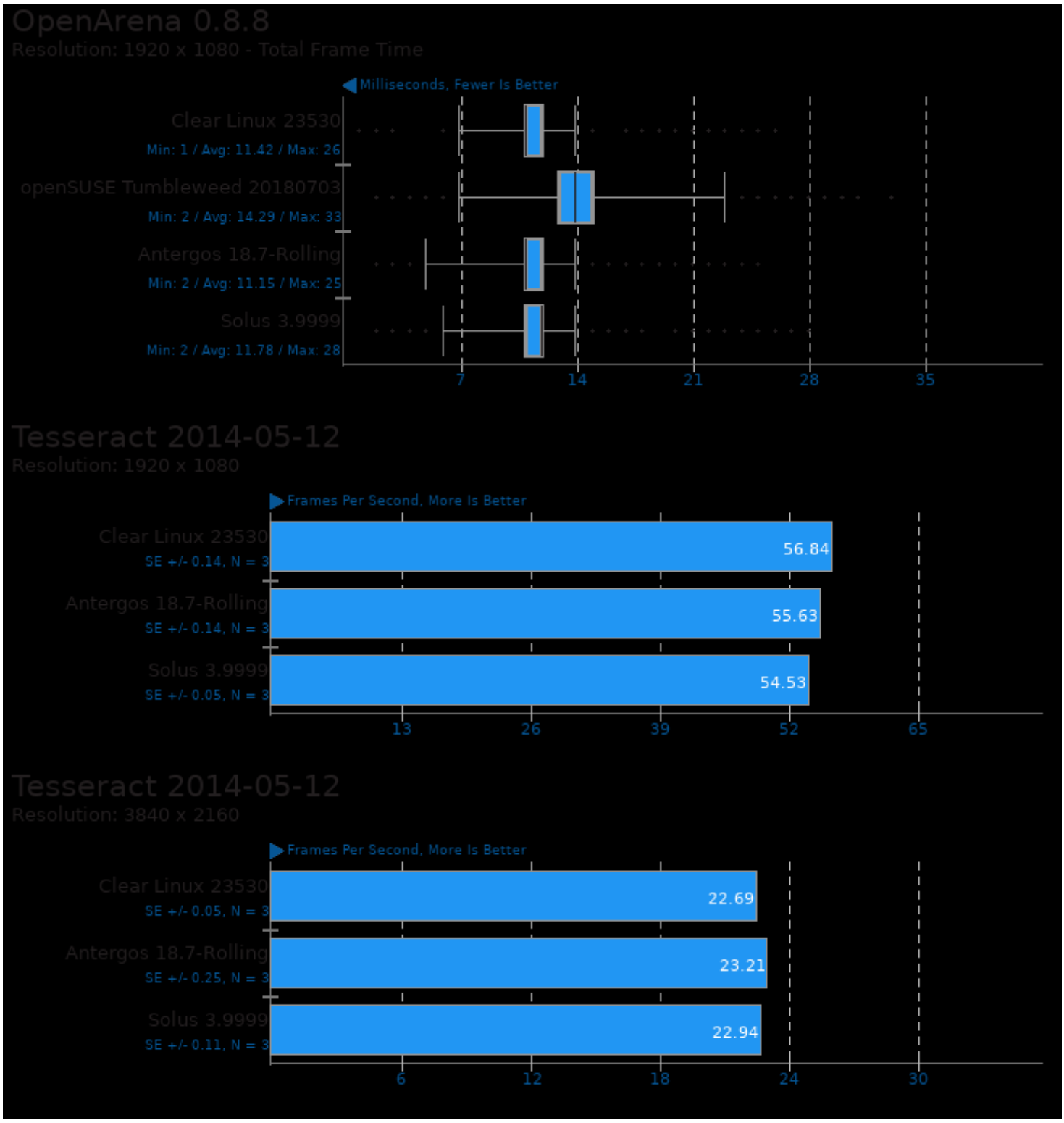


OpenArena 0.8.8

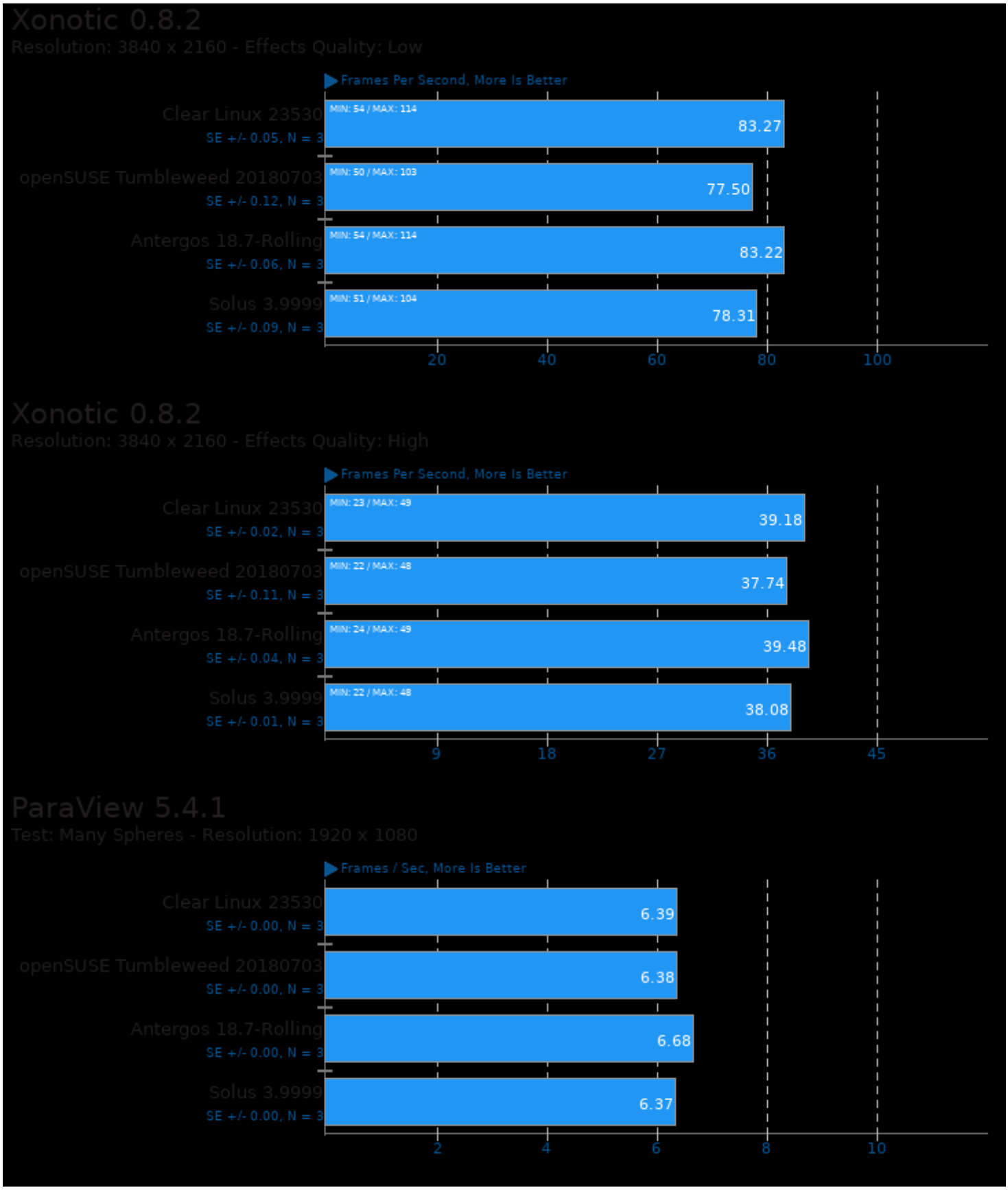
Resolution: 1920 x 1080

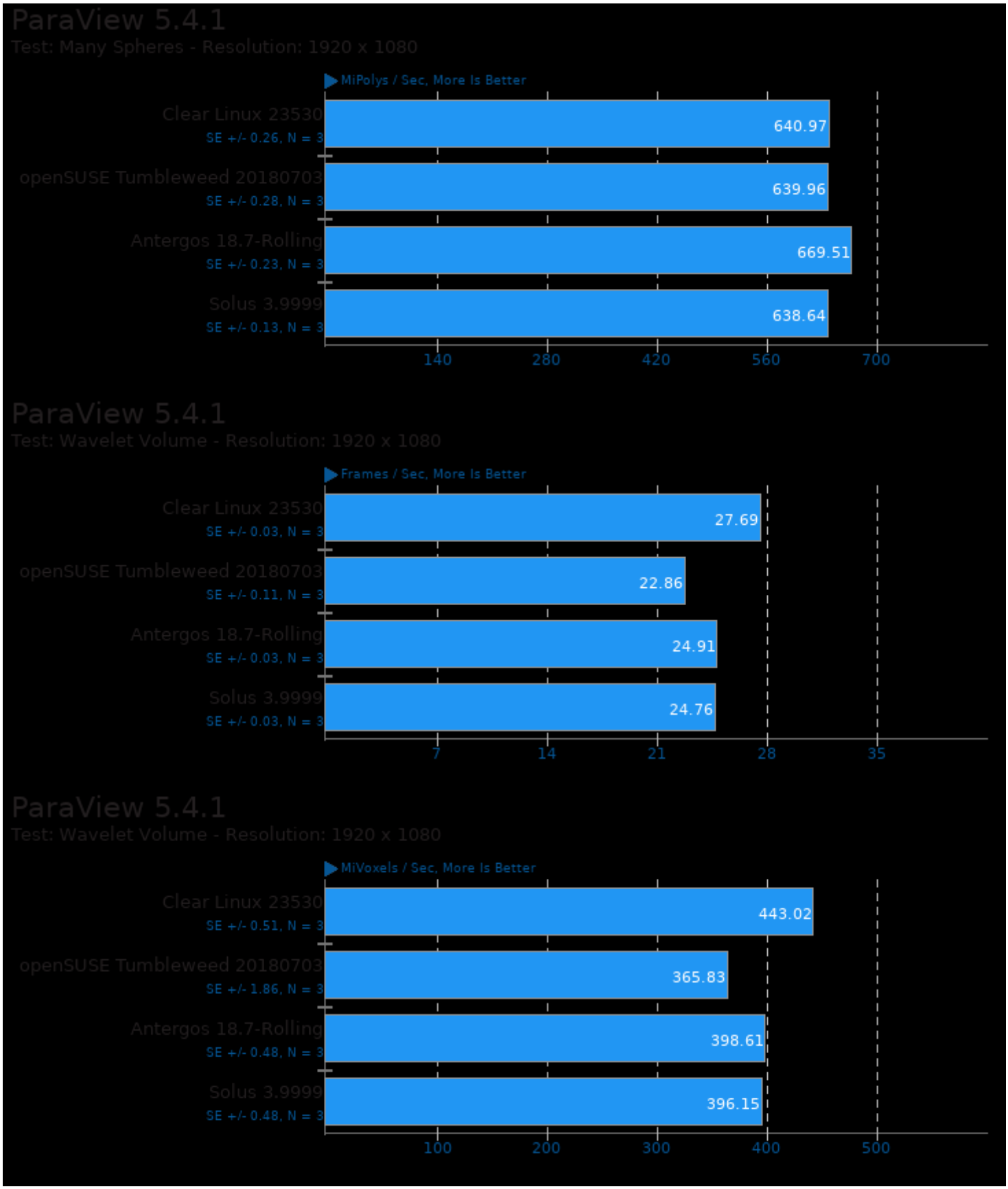


Clear Linux vs. openSUSE vs. Solus vs. Antergos

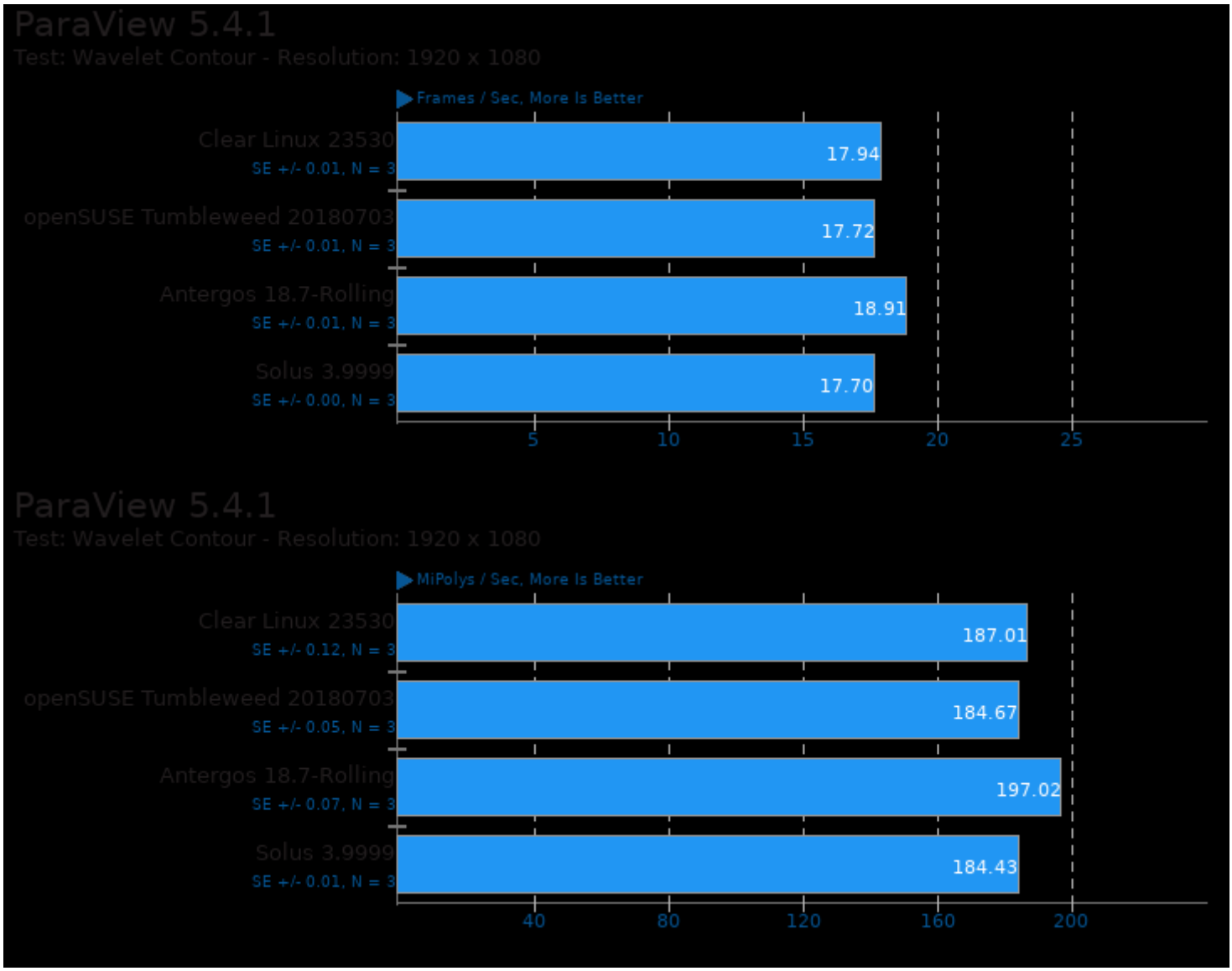


Clear Linux vs. openSUSE vs. Solus vs. Antergos

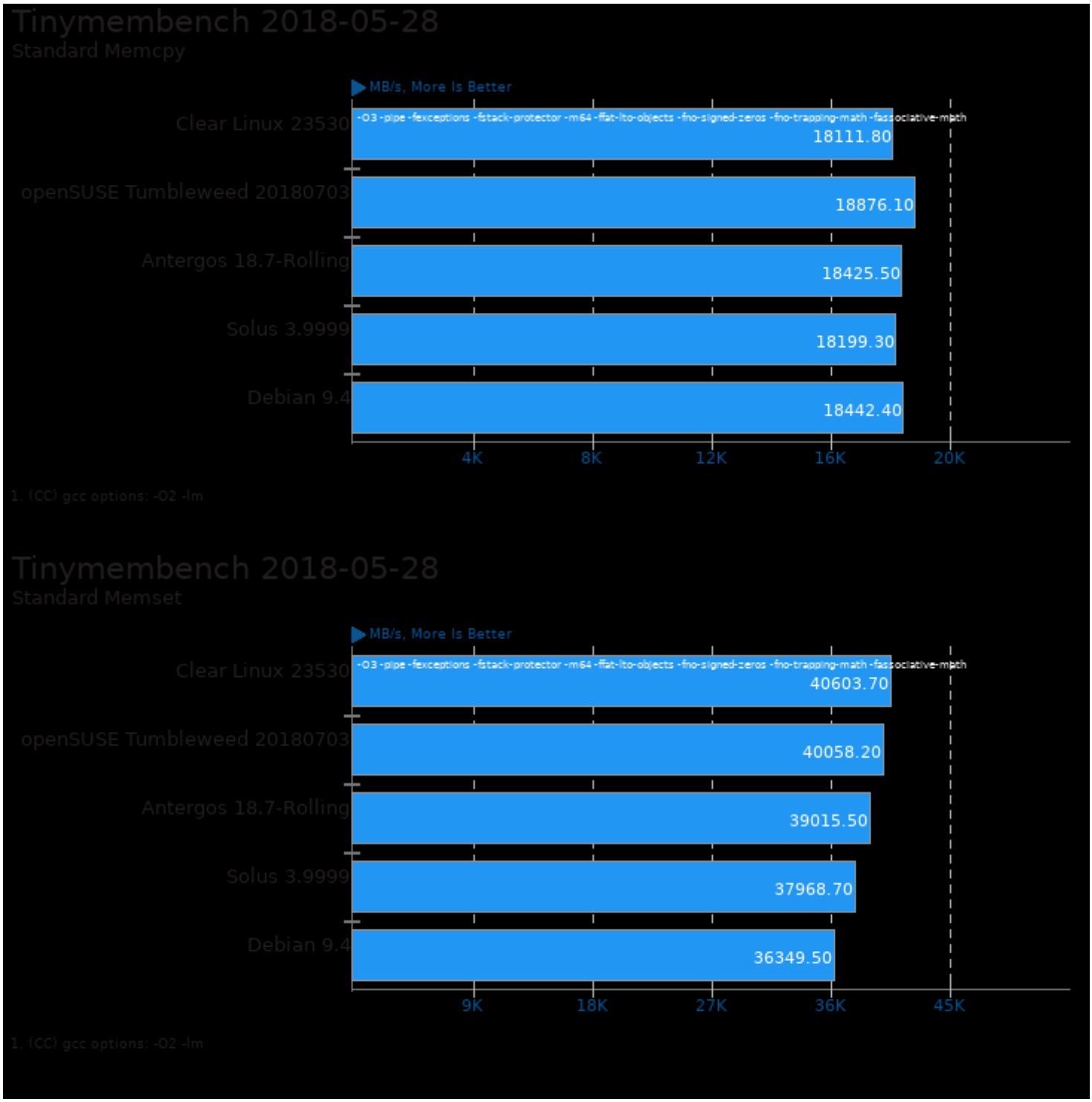


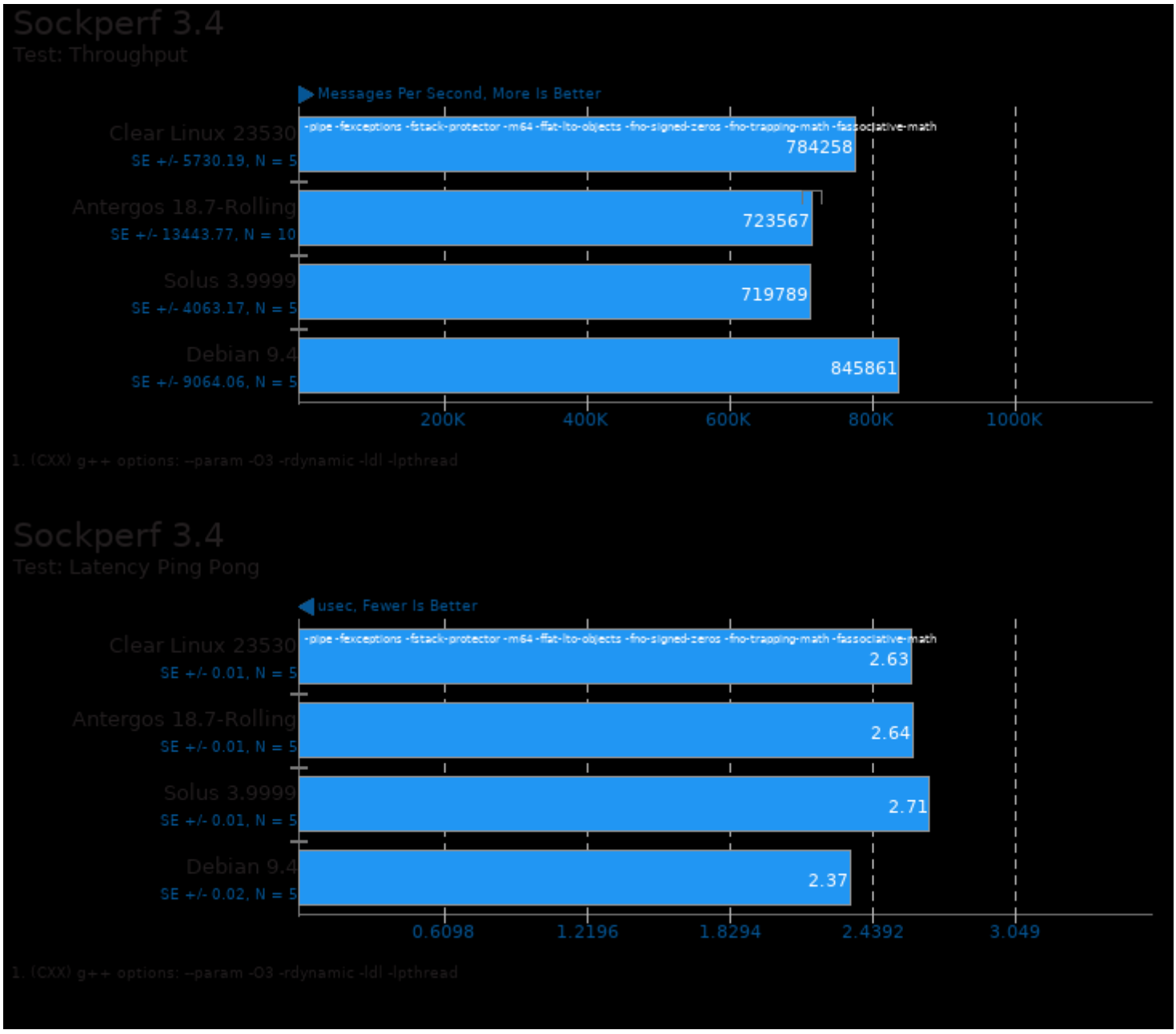

ParaView 5.4.1
Test: Many Spheres - Resolution: 1920 x 1080
MiPolys / Sec, More Is Better
Clear Linux 23530
SE +/- 0.26, N = 3
640.97
openSUSE Tumbleweed 20180703
SE +/- 0.28, N = 3
639.96
Antergos 18.7-Rolling
SE +/- 0.23, N = 3
669.51
Solus 3.9999
SE +/- 0.13, N = 3
638.64
140
280
420
560
700
ParaView 5.4.1
Test: Wavelet Volume - Resolution: 1920 x 1080
Frames / Sec, More Is Better
Clear Linux 23530
SE +/- 0.03, N = 3
27.69
openSUSE Tumbleweed 20180703
SE +/- 0.11, N = 3
22.86
Antergos 18.7-Rolling
SE +/- 0.03, N = 3
24.91
Solus 3.9999
SE +/- 0.03, N = 3
24.76
7
14
21
28
35
ParaView 5.4.1
Test: Wavelet Volume - Resolution: 1920 x 1080
MiVoxels / Sec, More Is Better
Clear Linux 23530
SE +/- 0.51, N = 3
443.02
openSUSE Tumbleweed 20180703
SE +/- 1.86, N = 3
365.83
Antergos 18.7-Rolling
SE +/- 0.48, N = 3
398.61
Solus 3.9999
SE +/- 0.48, N = 3
396.15
100
200
300
400
500

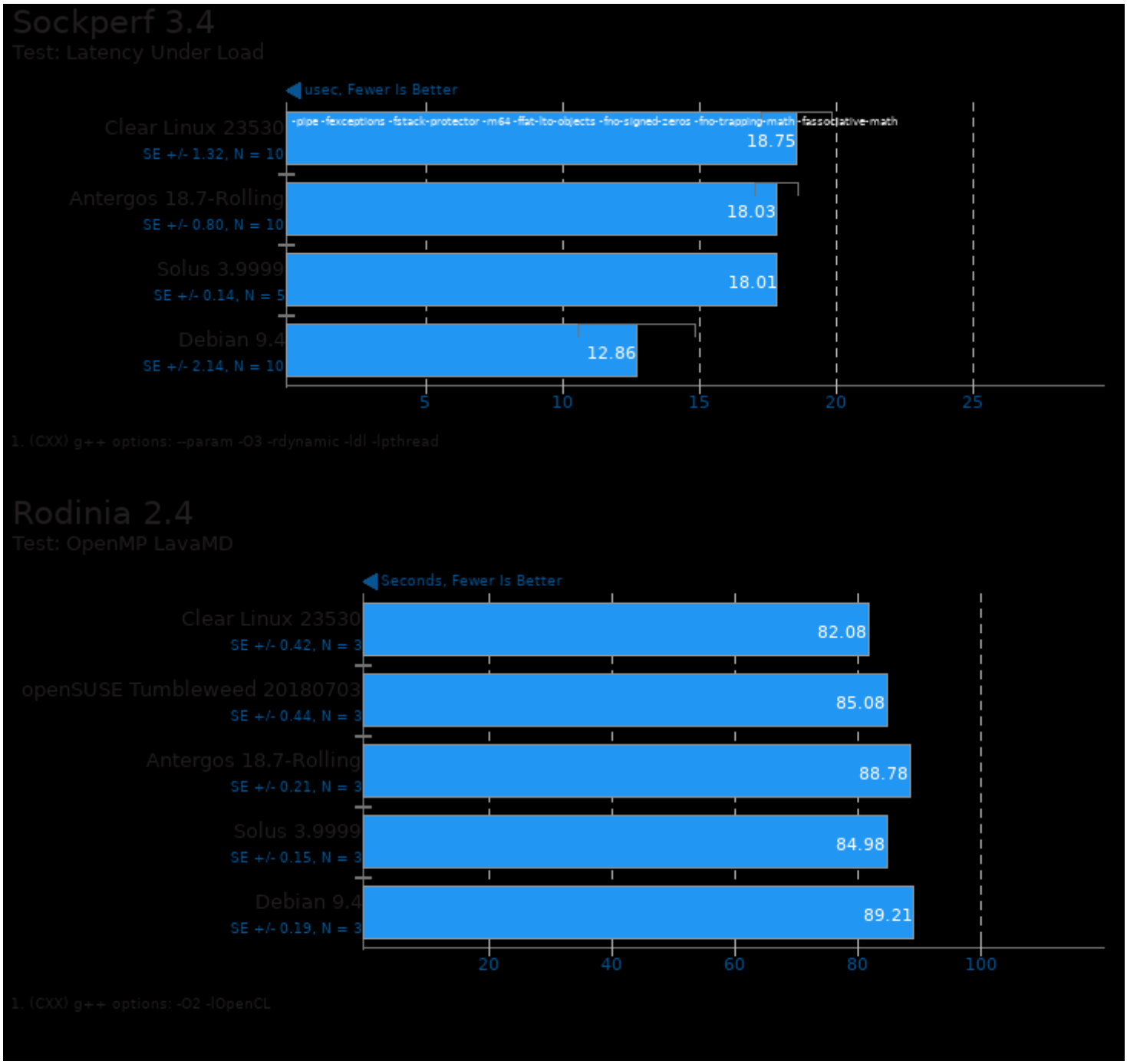
Clear Linux vs. openSUSE vs. Solus vs. Antergos

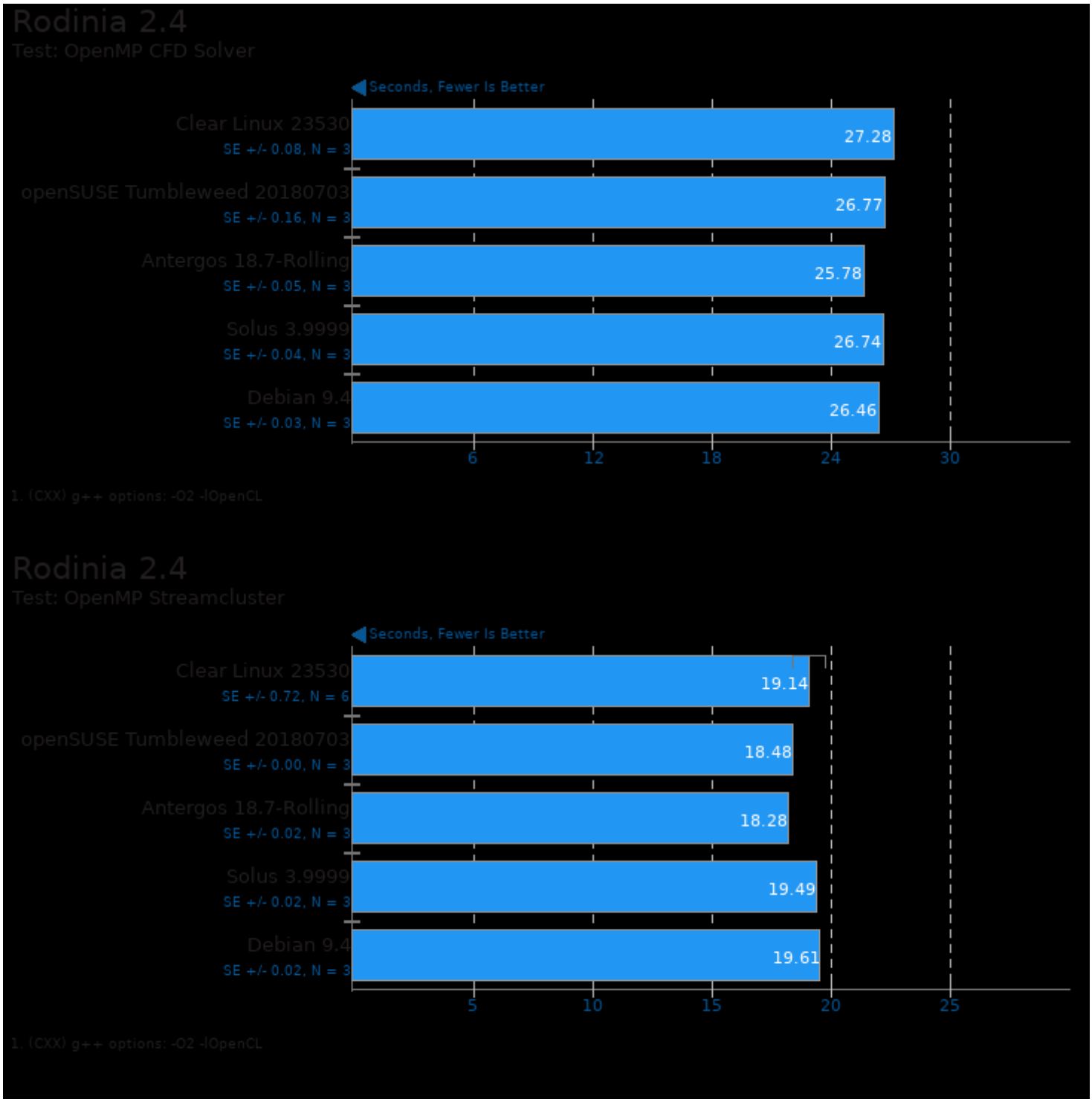


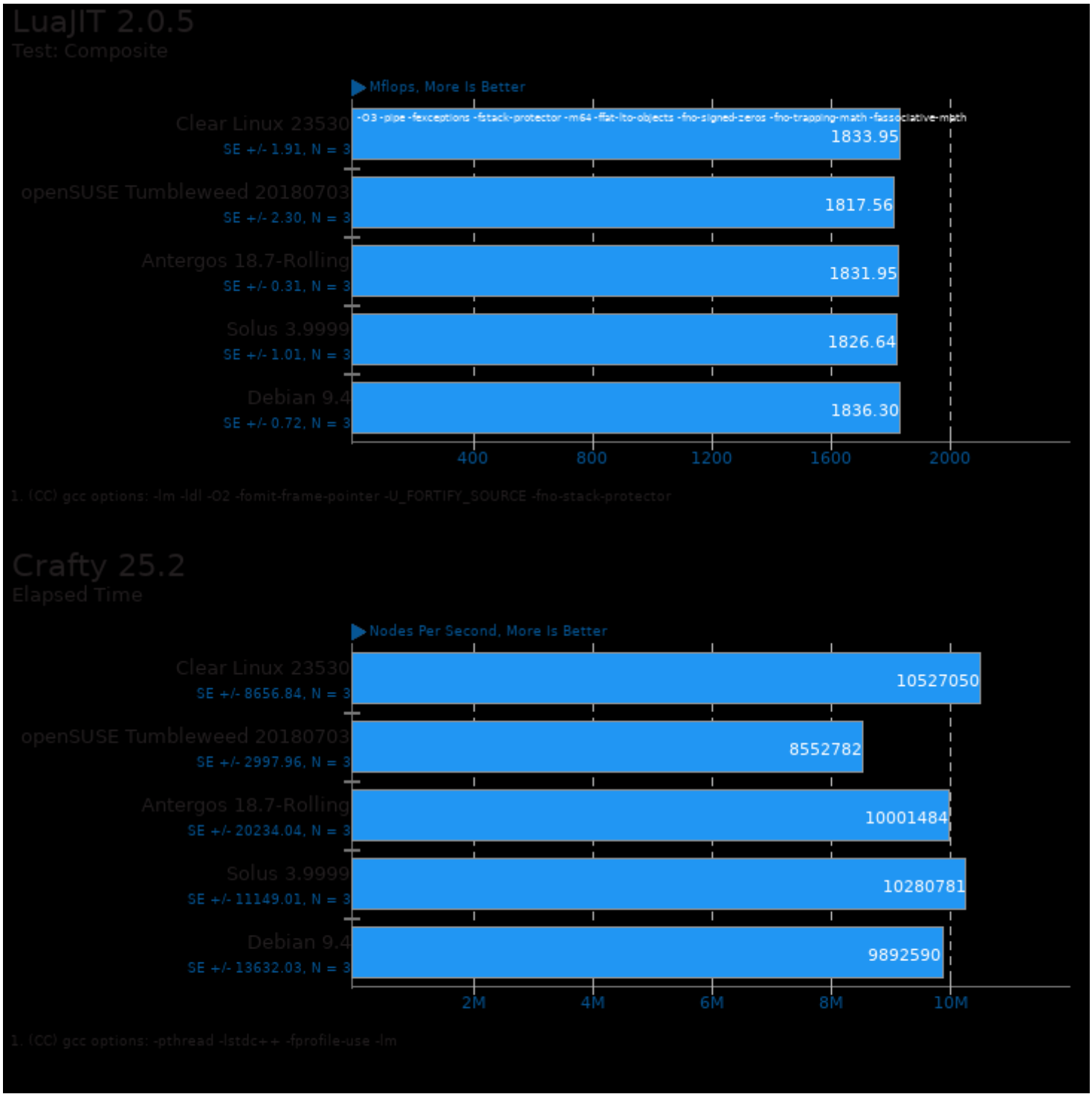
Clear Linux vs. openSUSE vs. Solus vs. Antergos



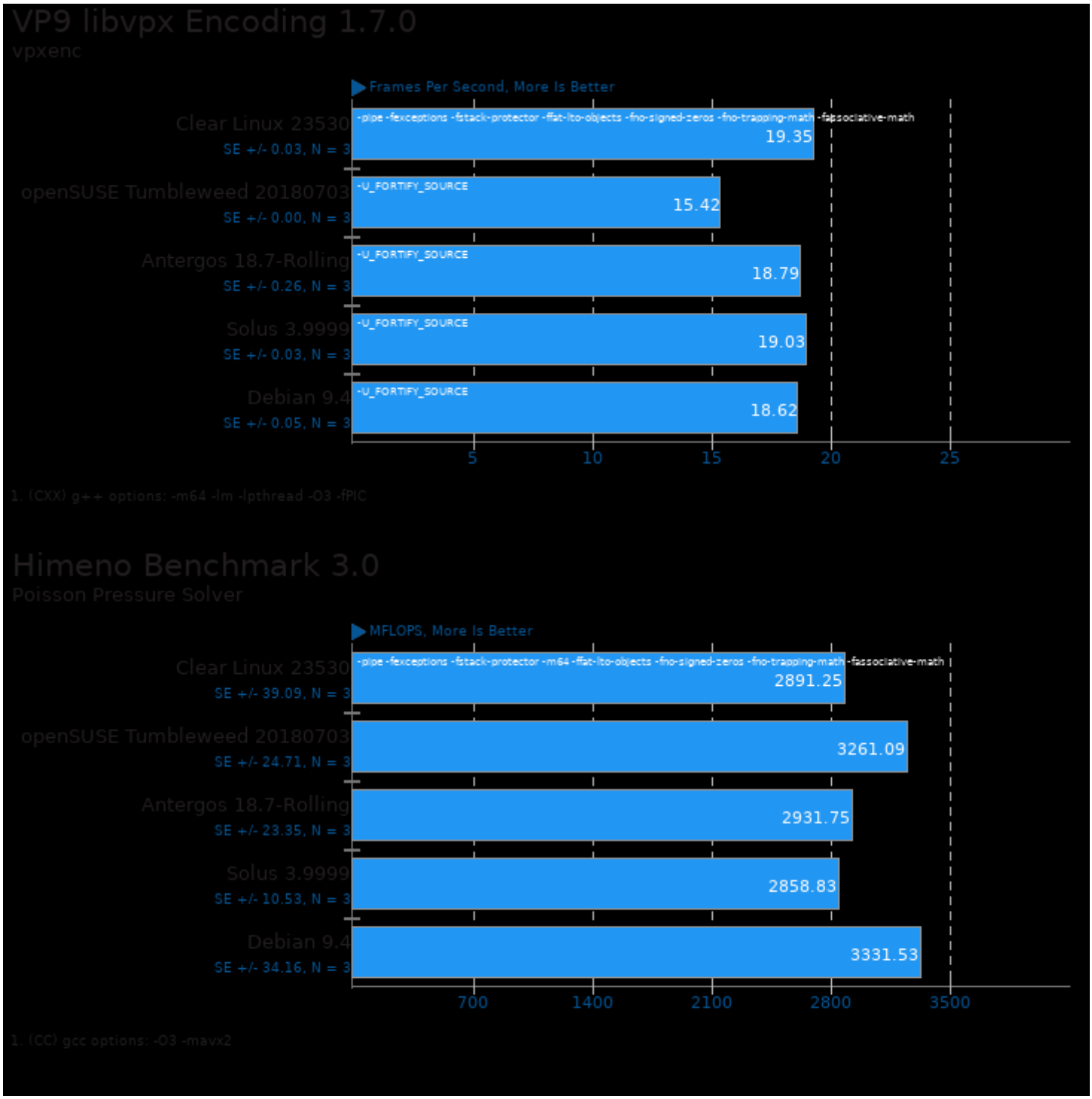

Sockperf 3.4
Test: Throughput
Messages Per Second, More Is Better
-pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
Clear Linux 23530
SE +/- 5730.19, N = 5
784258
Antergos 18.7-Rolling
SE +/- 13443.77, N = 10
723567
Solus 3.9999
SE +/- 4063.17, N = 5
719789
Debian 9.4
SE +/- 9064.06, N = 5
845861
200K
400K
600K
800K
1000K
1. (CXX) g++ options: -param -O3 -rdynamic -ldl -lpthread
Sockperf 3.4
Test: Latency Ping Pong
usec, Fewer Is Better
-pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
Clear Linux 23530
SE +/- 0.01, N = 5
2.63
Antergos 18.7-Rolling
SE +/- 0.01, N = 5
2.64
Solus 3.9999
SE +/- 0.01, N = 5
2.71
Debian 9.4
SE +/- 0.02, N = 5
2.37
0.6098
1.2196
1.8294
2.4392
3.049
1. (CXX) g++ options: -param -O3 -rdynamic -ldl -lpthread


Sockperf 3.4
Test: Latency Under Load
usec, Fewer Is Better
Clear Linux 23530
SE +/- 1.32, N = 10
-pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
18.75
Antergos 18.7-Rolling
SE +/- 0.80, N = 10
18.03
Solus 3.9999
SE +/- 0.14, N = 5
18.01
Debian 9.4
SE +/- 2.14, N = 10
12.86
5
10
15
20
25
1. (CXX) g++ options: -param -O3 -rdynamic -ldl -lpthread
Rodinia 2.4
Test: OpenMP LavaMD
Seconds, Fewer Is Better
Clear Linux 23530
SE +/- 0.42, N = 3
82.08
openSUSE Tumbleweed 20180703
SE +/- 0.44, N = 3
85.08
Antergos 18.7-Rolling
SE +/- 0.21, N = 3
88.78
Solus 3.9999
SE +/- 0.15, N = 3
84.98
Debian 9.4
SE +/- 0.19, N = 3
89.21
20
40
60
80
100
1. (CXX) g++ options: -O2 -lOpenCL

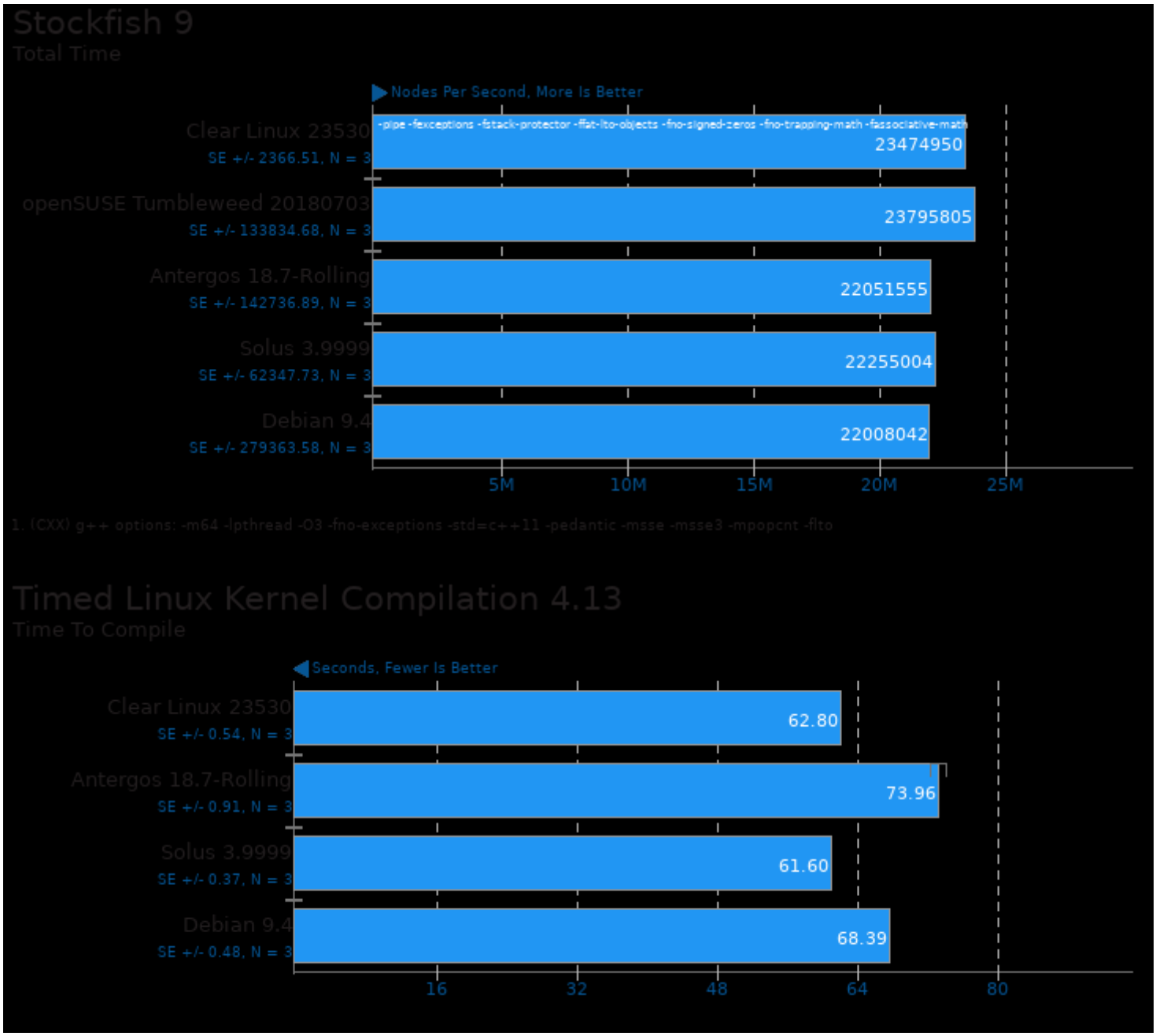

Rodinia 2.4
Test: OpenMP CFD Solver
Seconds, Fewer Is Better
Clear Linux 23530
SE +/- 0.08, N = 3
27.28
openSUSE Tumbleweed 20180703
SE +/- 0.16, N = 3
26.77
Antergos 18.7-Rolling
SE +/- 0.05, N = 3
25.78
Solus 3.9999
SE +/- 0.04, N = 3
26.74
Debian 9.4
SE +/- 0.03, N = 3
26.46
6
12
18
24
30
1. (CXX) g++ options: -O2 -lOpenCL
Rodinia 2.4
Test: OpenMP Streamcluster
Seconds, Fewer Is Better
Clear Linux 23530
SE +/- 0.72, N = 6
19.14
openSUSE Tumbleweed 20180703
SE +/- 0.00, N = 3
18.48
Antergos 18.7-Rolling
SE +/- 0.02, N = 3
18.28
Solus 3.9999
SE +/- 0.02, N = 3
19.49
Debian 9.4
SE +/- 0.02, N = 3
19.61
5
10
15
20
25
1. (CXX) g++ options: -O2 -lOpenCL

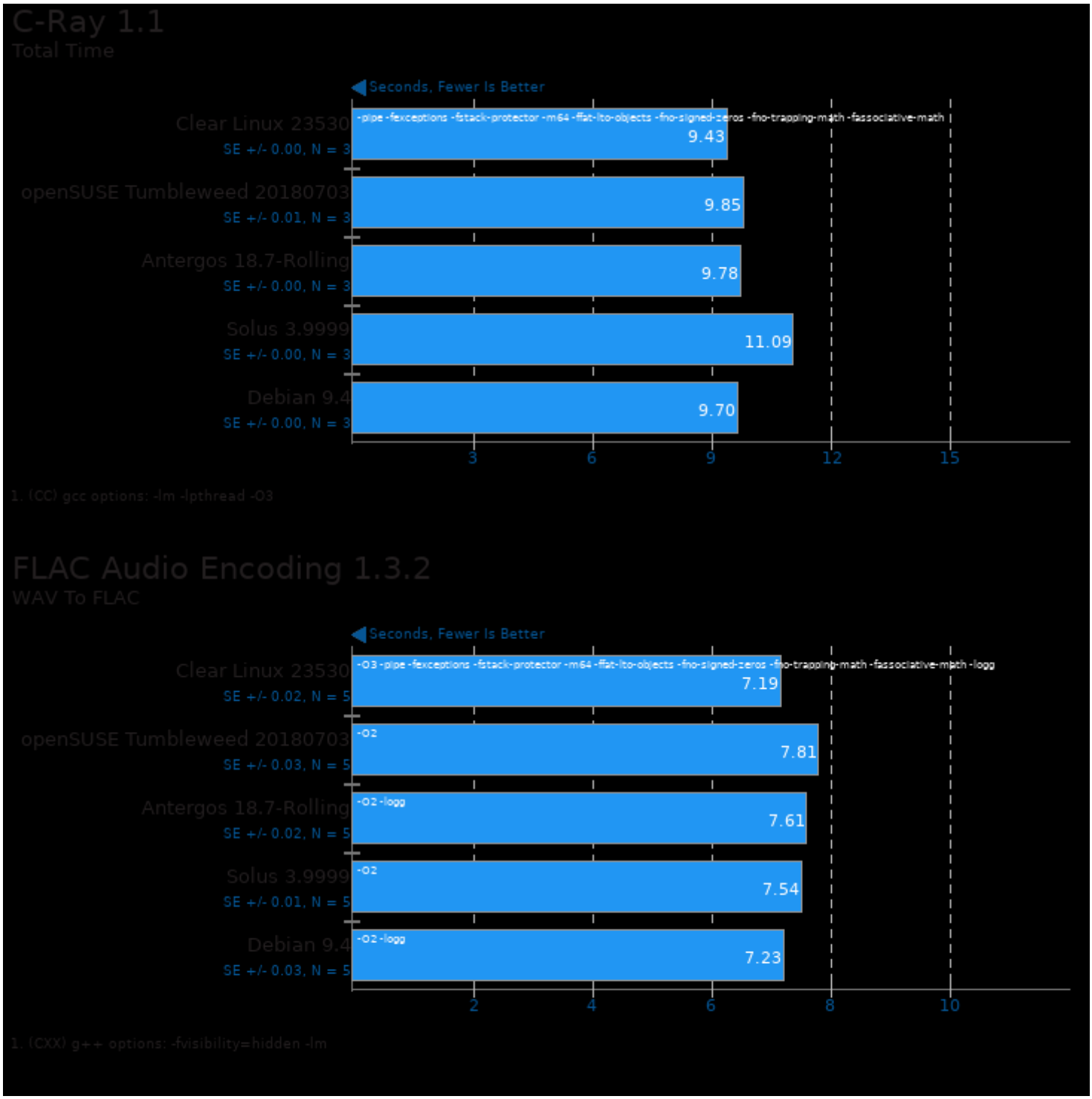

LuaJIT 2.0.5
Test: Composite
Mflops, More Is Better
-O3 -pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
Clear Linux 23530
SE +/- 1.91, N = 3
1833.95
openSUSE Tumbleweed 20180703
SE +/- 2.30, N = 3
1817.56
Antergos 18.7-Rolling
SE +/- 0.31, N = 3
1831.95
Solus 3.9999
SE +/- 1.01, N = 3
1826.64
Debian 9.4
SE +/- 0.72, N = 3
1836.30
400
800
1200
1600
2000
1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector
Crafty 25.2
Elapsed Time
Nodes Per Second, More Is Better
Clear Linux 23530
SE +/- 8656.84, N = 3
10527050
openSUSE Tumbleweed 20180703
SE +/- 2997.96, N = 3
8552782
Antergos 18.7-Rolling
SE +/- 20234.04, N = 3
10001484
Solus 3.9999
SE +/- 11149.01, N = 3
10280781
Debian 9.4
SE +/- 13632.03, N = 3
9892590
2M
4M
6M
8M
10M
1. (CC) gcc options: -pthread -lstdc++ -fprofile-use -lm

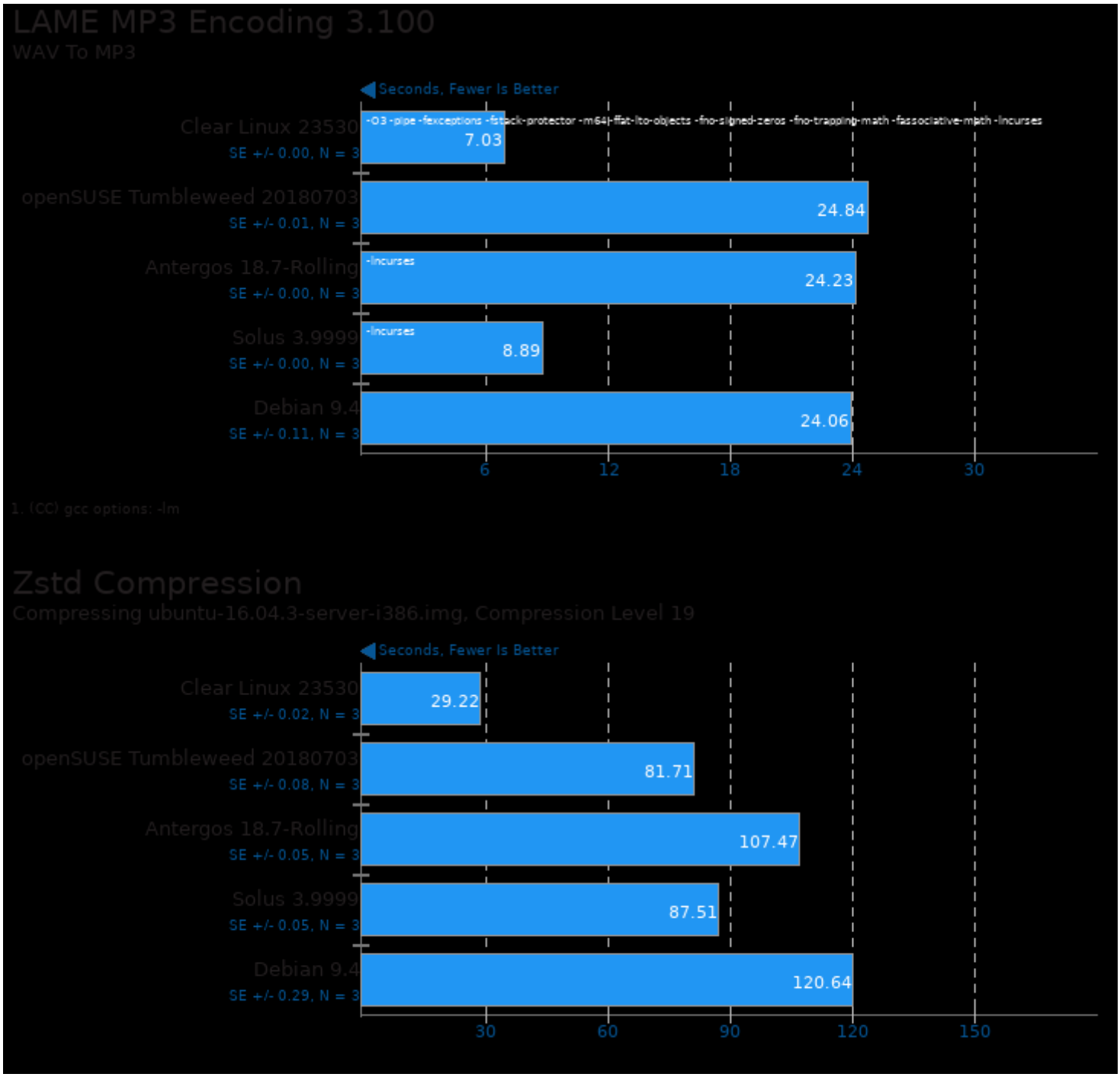
Clear Linux vs. openSUSE vs. Solus vs. Antergos



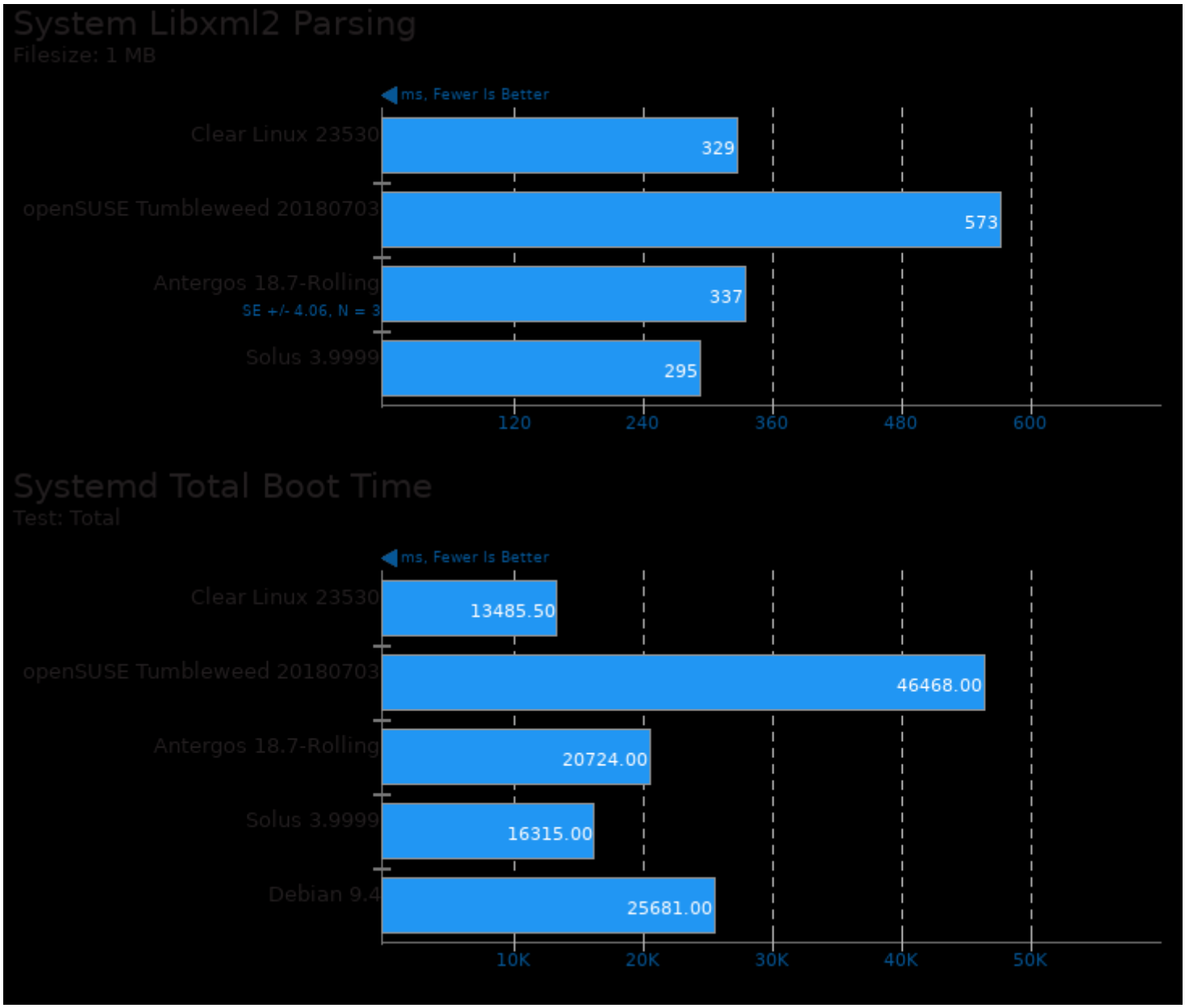
Clear Linux vs. openSUSE vs. Solus vs. Antergos



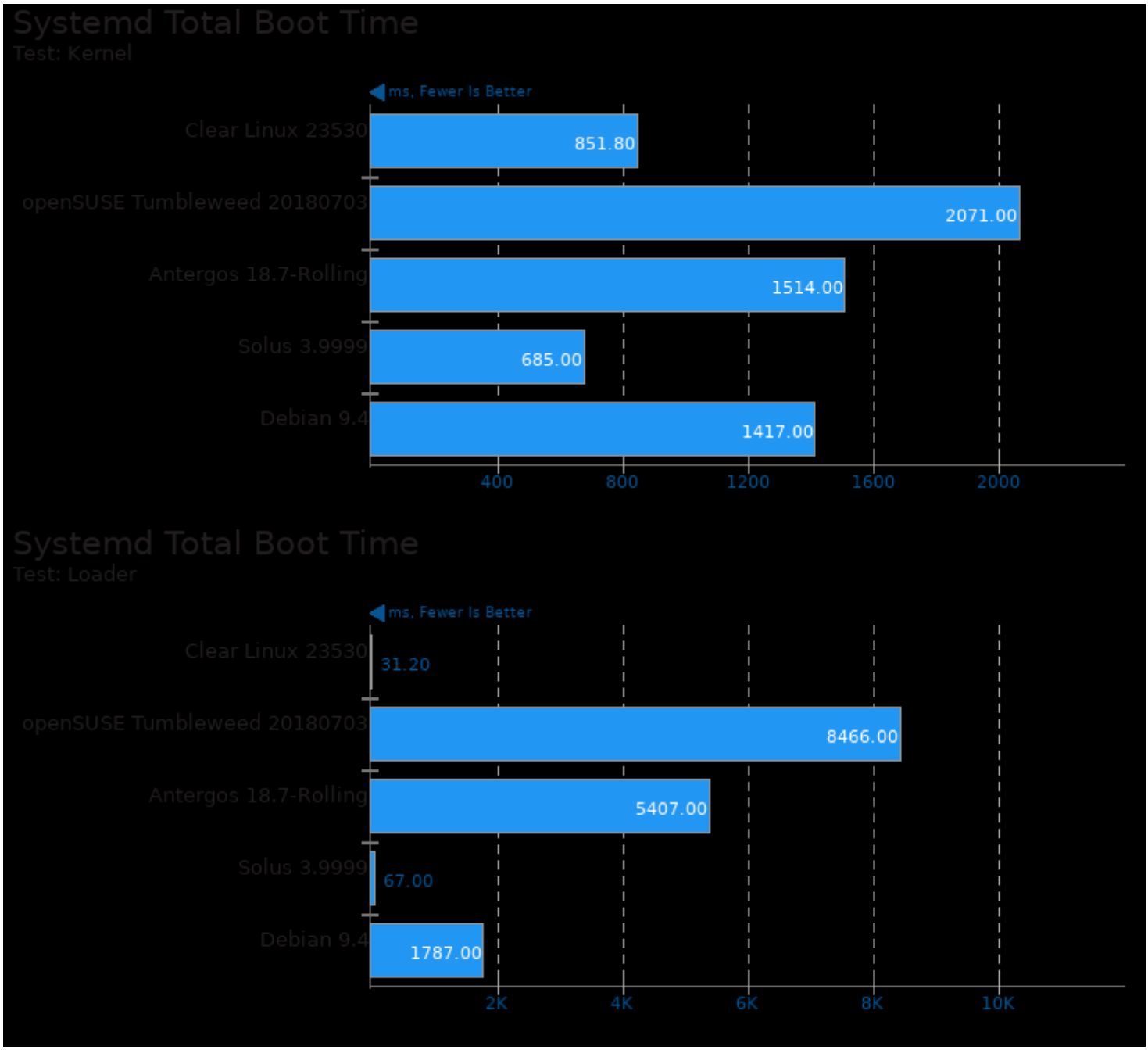

C-Ray 1.1
Total Time
Seconds, Fewer Is Better
Clear Linux 23530
SE +/- 0.00, N = 3
-pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
9.43
openSUSE Tumbleweed 20180703
SE +/- 0.01, N = 3
9.85
Antergos 18.7-Rolling
SE +/- 0.00, N = 3
9.78
Solus 3.9999
SE +/- 0.00, N = 3
11.09
Debian 9.4
SE +/- 0.00, N = 3
9.70
3
6
9
12
15
1. (CC) gcc options: -lm -lpthread -O3
FLAC Audio Encoding 1.3.2
WAV To FLAC
Seconds, Fewer Is Better
Clear Linux 23530
SE +/- 0.02, N = 5
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math -logg
7.19
openSUSE Tumbleweed 20180703
SE +/- 0.03, N = 5
-O2
7.81
Antergos 18.7-Rolling
SE +/- 0.02, N = 5
-O2 -logg
7.61
Solus 3.9999
SE +/- 0.01, N = 5
-O2
7.54
Debian 9.4
SE +/- 0.03, N = 5
-O2 -logg
7.23
2
4
6
8
10
1. (CXX) g++ options: -fvisibility=hidden -lm


LAME MP3 Encoding 3.100
WAV To MP3
Seconds, Fewer Is Better
Clear Linux 23530
SE +/- 0.00, N = 3
7.03
openSUSE Tumbleweed 20180703
SE +/- 0.01, N = 3
24.84
Antergos 18.7-Rolling
SE +/- 0.00, N = 3
-lncurses
24.23
Solus 3.9999
SE +/- 0.00, N = 3
-lncurses
8.89
Debian 9.4
SE +/- 0.11, N = 3
24.06
6
12
18
24
30
1. (CC) gcc options: -lm
Zstd Compression
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 19
Seconds, Fewer Is Better
Clear Linux 23530
SE +/- 0.02, N = 3
29.22
openSUSE Tumbleweed 20180703
SE +/- 0.08, N = 3
81.71
Antergos 18.7-Rolling
SE +/- 0.05, N = 3
107.47
Solus 3.9999
SE +/- 0.05, N = 3
87.51
Debian 9.4
SE +/- 0.29, N = 3
120.64
30
60
90
120
150

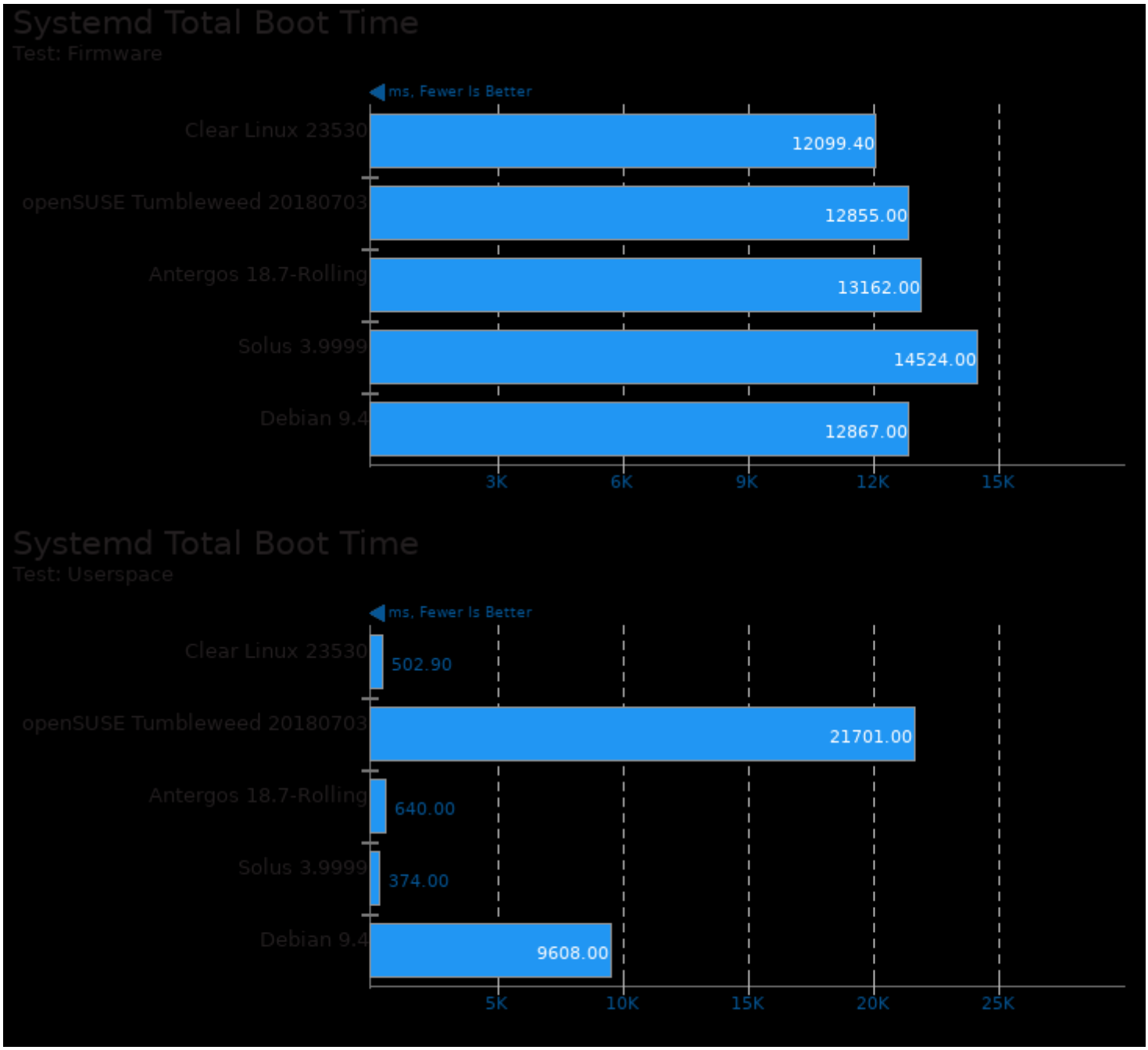
Clear Linux vs. openSUSE vs. Solus vs. Antergos

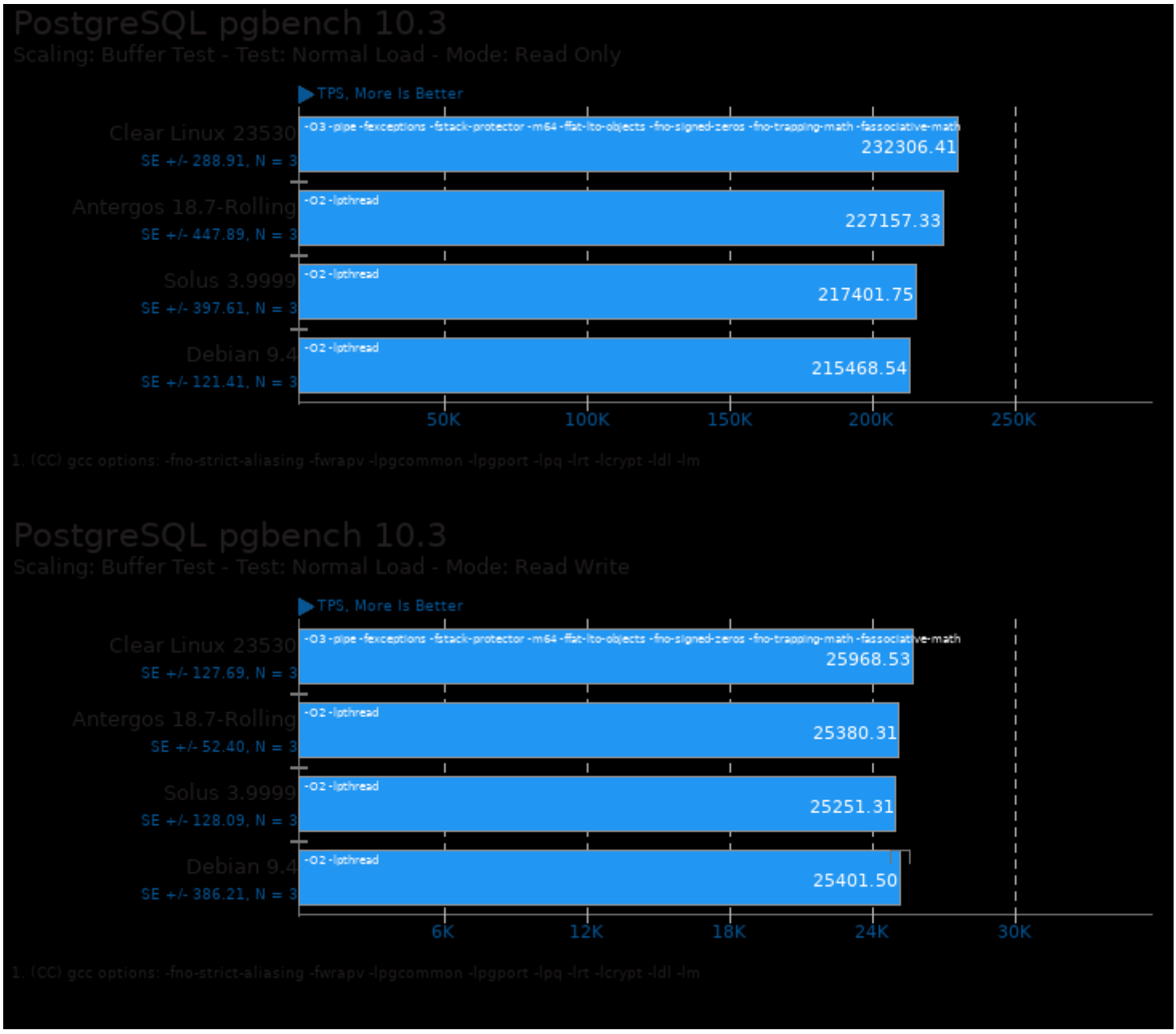


Clear Linux vs. openSUSE vs. Solus vs. Antergos

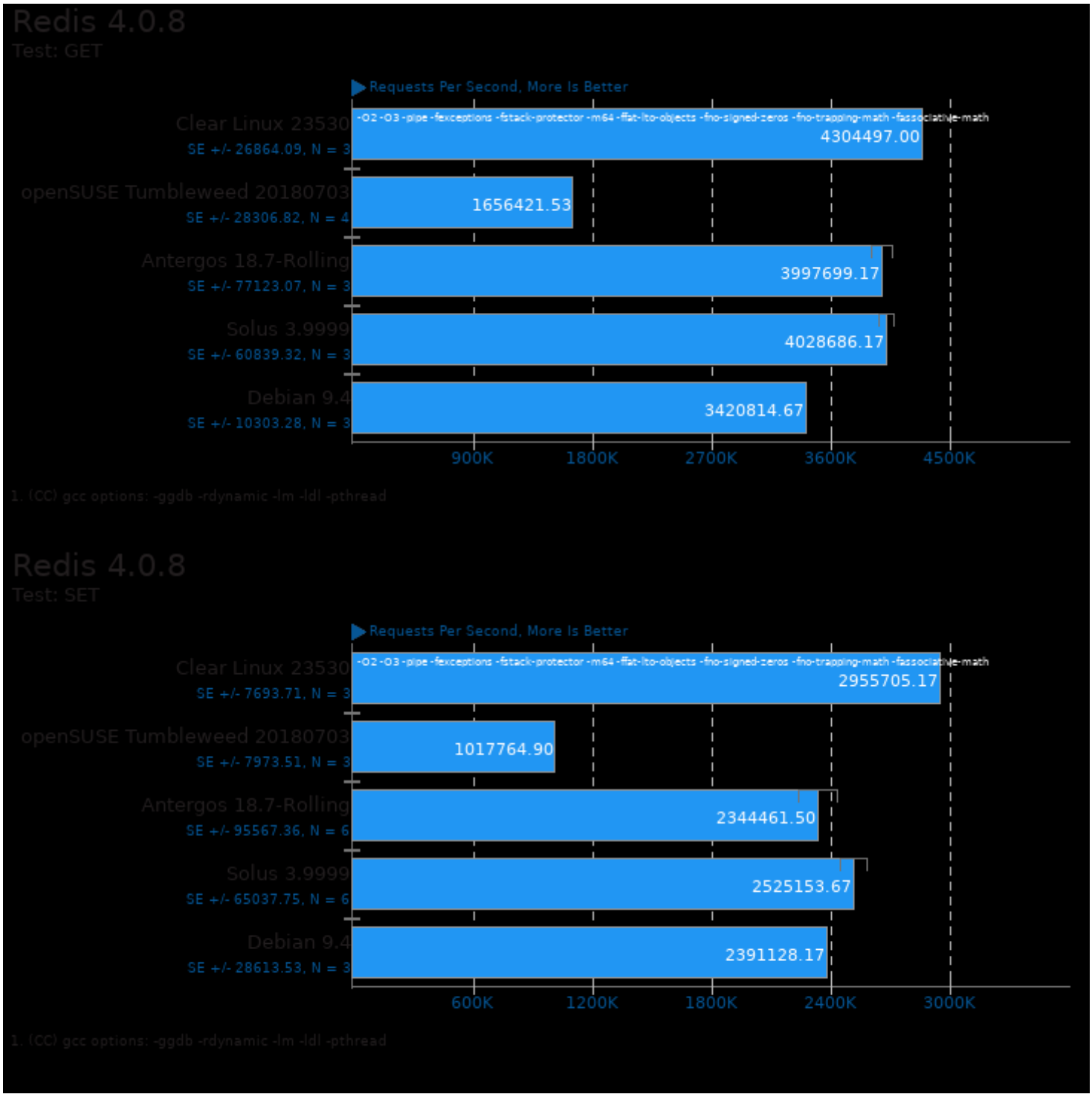


Clear Linux vs. openSUSE vs. Solus vs. Antergos

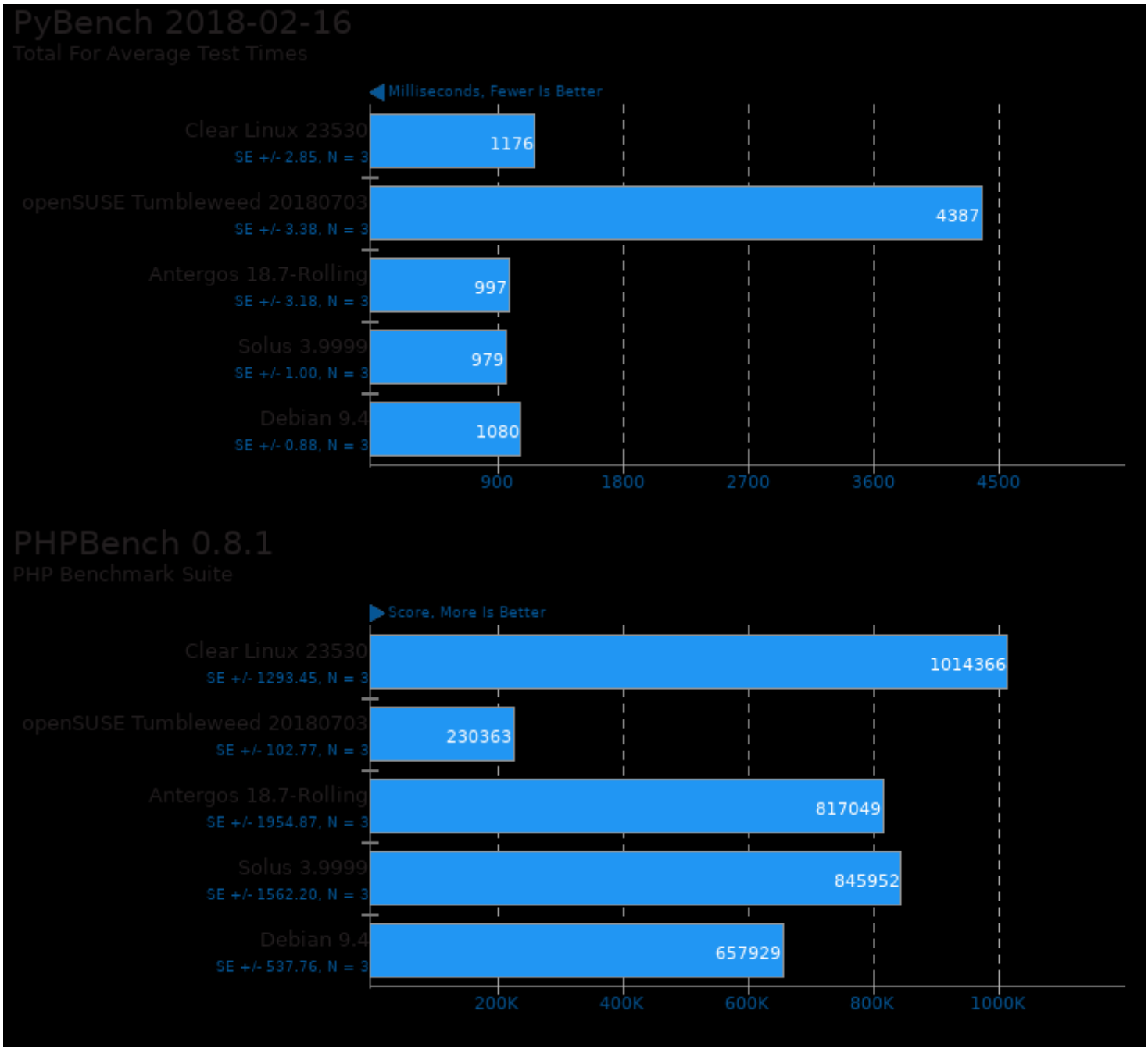



PostgreSQL pgbench 10.3
Scaling: Buffer Test - Test: Normal Load - Mode: Read Only
TPS, More Is Better
Clear Linux 23530
SE +/- 288.91, N = 3
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
232306.41
Antergos 18.7-Rolling
SE +/- 447.89, N = 3
-O2 -lpthread
227157.33
Solus 3.9999
SE +/- 397.61, N = 3
-O2 -lpthread
217401.75
Debian 9.4
SE +/- 121.41, N = 3
-O2 -lpthread
215468.54
50K
100K
150K
200K
250K
1. (CC) gcc options: -fno-strict-aliasing -fwrapv -lpgcommon -lpgport -lpq -lrt -lcrypt -ldl -lm
PostgreSQL pgbench 10.3
Scaling: Buffer Test - Test: Normal Load - Mode: Read Write
TPS, More Is Better
Clear Linux 23530
SE +/- 127.69, N = 3
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
25968.53
Antergos 18.7-Rolling
SE +/- 52.40, N = 3
-O2 -lpthread
25380.31
Solus 3.9999
SE +/- 128.09, N = 3
-O2 -lpthread
25251.31
Debian 9.4
SE +/- 386.21, N = 3
-O2 -lpthread
25401.50
6K
12K
18K
24K
30K
1. (CC) gcc options: -fno-strict-aliasing -fwrapv -lpgcommon -lpgport -lpq -lrt -lcrypt -ldl -lm

Clear Linux vs. openSUSE vs. Solus vs. Antergos

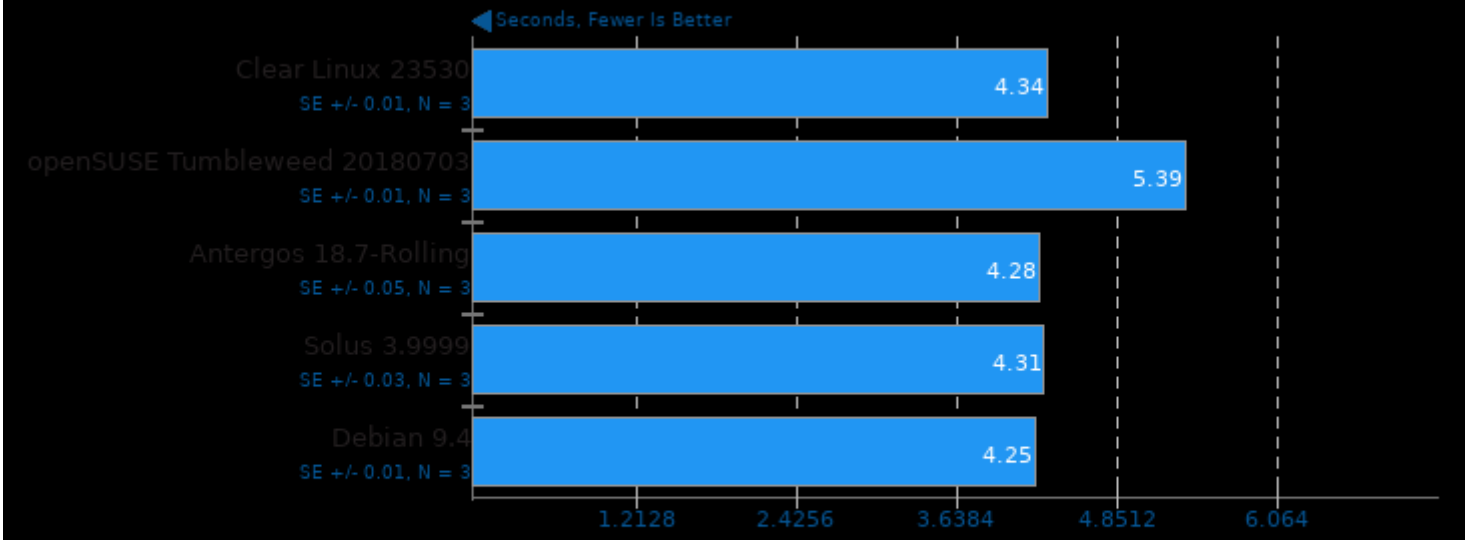


Clear Linux vs. openSUSE vs. Solus vs. Antergos



Git

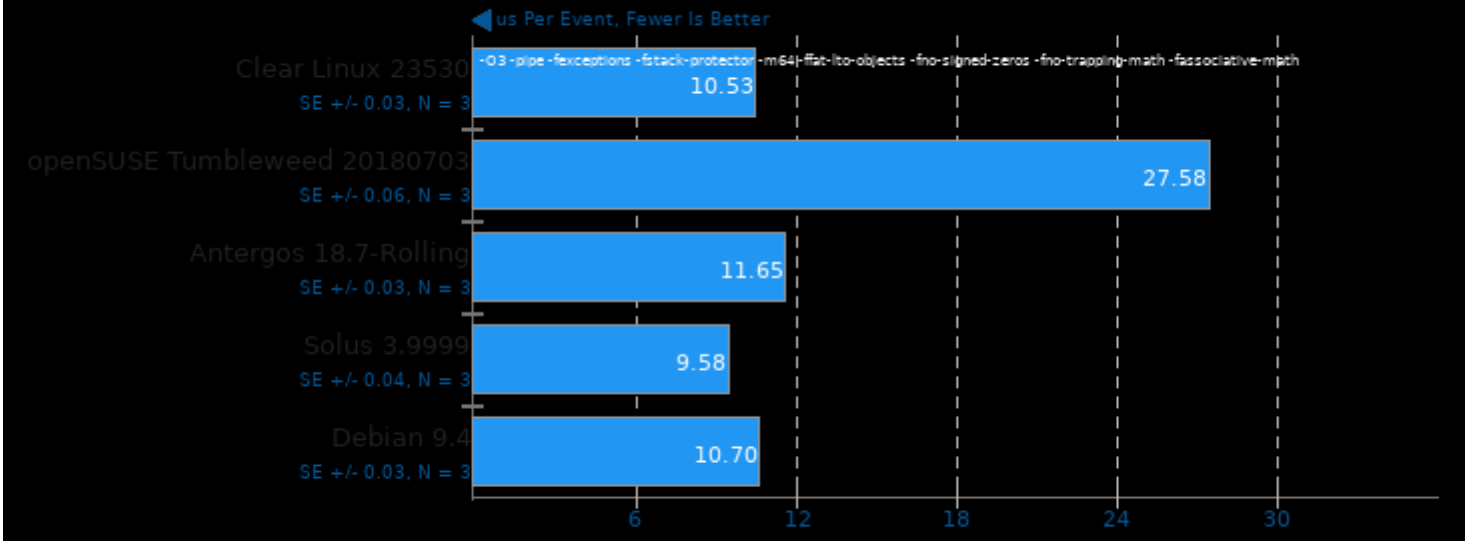
Time To Complete Common Git Commands



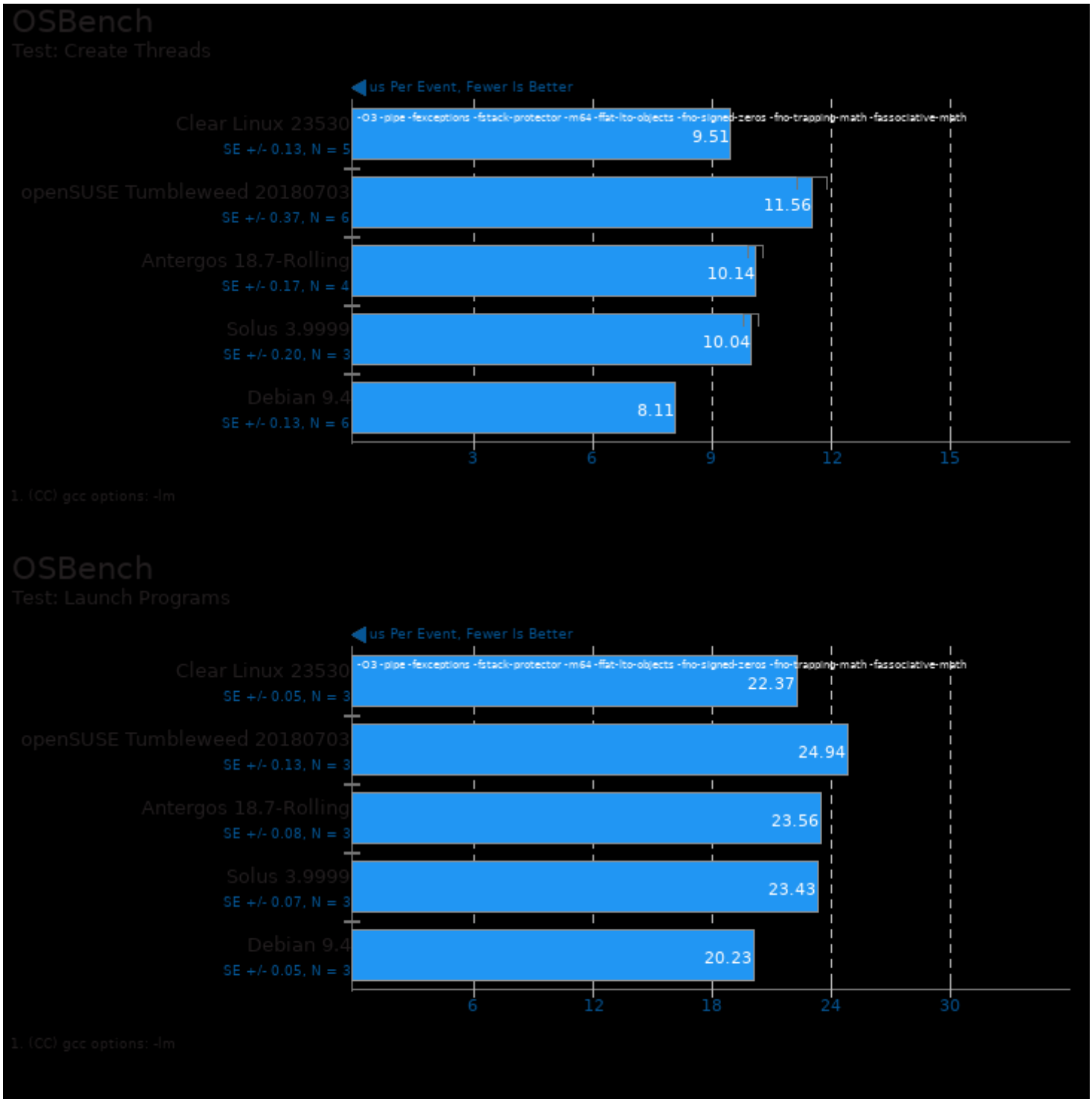
1. Clear Linux 23530: git version 2.18.0
2. openSUSE Tumbleweed 20180703: git version 2.18.0
3. Antergos 18.7-Rolling: git version 2.18.0
4. Solus 3.9999: git version 2.18.0
5. Debian 9.4: git version 2.11.0

OSBench

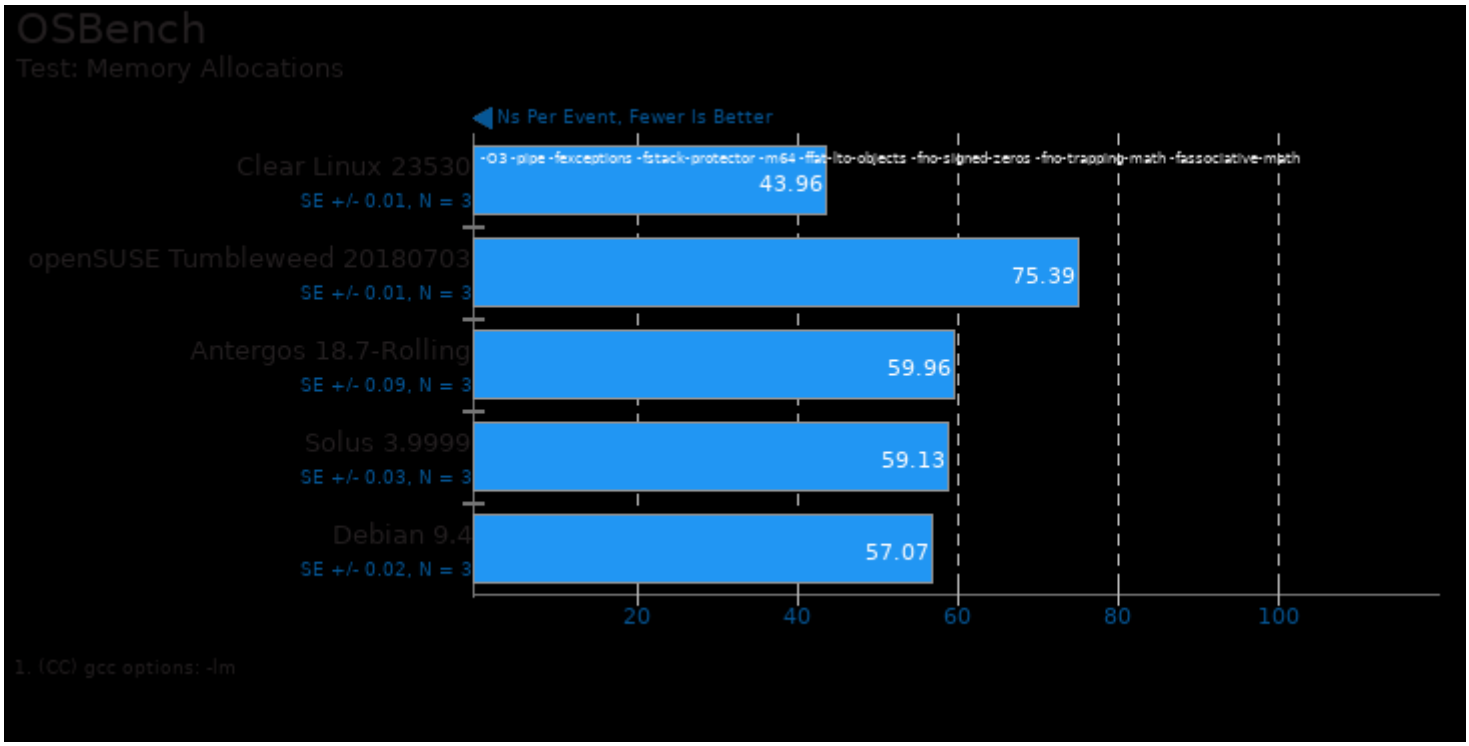
Test: Create Files



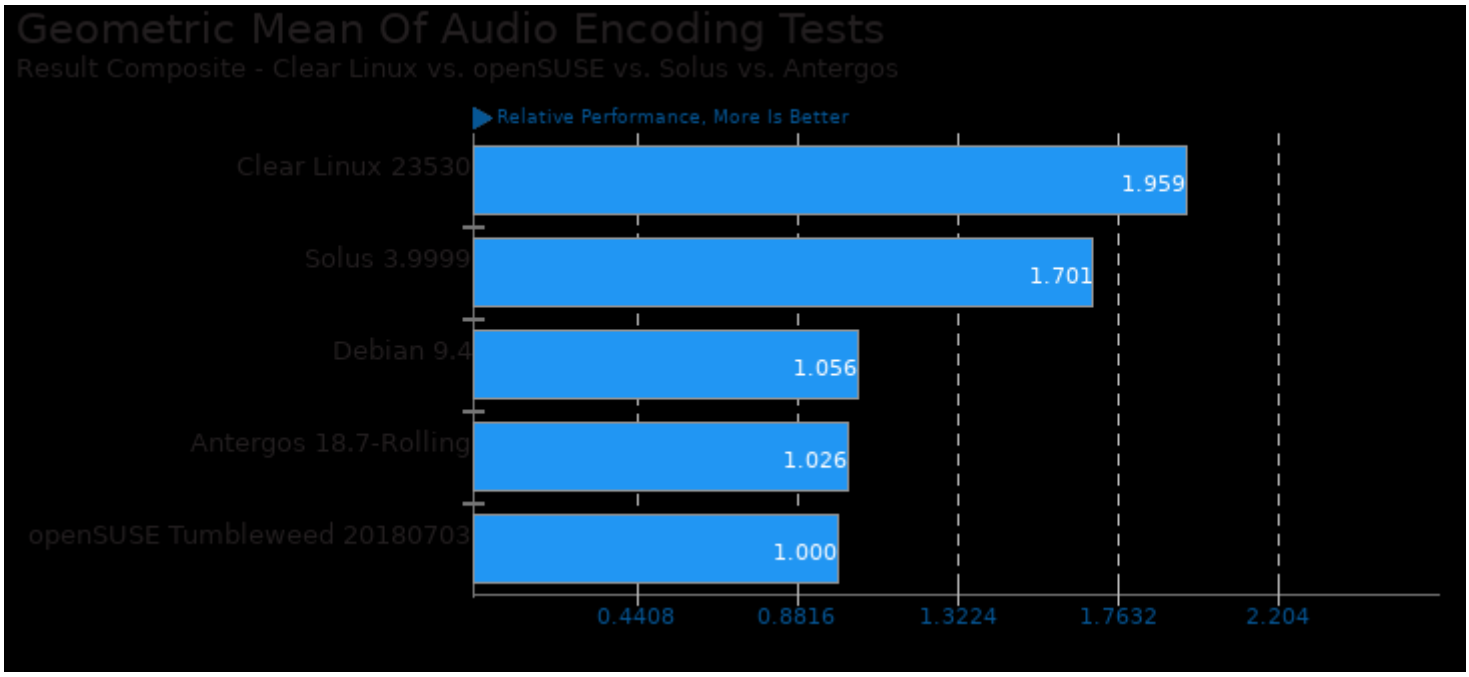
1. (CC) gcc options: -lm


OSBench
Test: Create Threads
us Per Event, Fewer Is Better
-O3 -pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
Clear Linux 23530
SE +/- 0.13, N = 5
9.51
openSUSE Tumbleweed 20180703
SE +/- 0.37, N = 6
11.56
Antergos 18.7-Rolling
SE +/- 0.17, N = 4
10.14
Solus 3.9999
SE +/- 0.20, N = 3
10.04
Debian 9.4
SE +/- 0.13, N = 6
8.11
3
6
9
12
15
1. (CC) gcc options: -lm
OSBench
Test: Launch Programs
us Per Event, Fewer Is Better
-O3 -pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
Clear Linux 23530
SE +/- 0.05, N = 3
22.37
openSUSE Tumbleweed 20180703
SE +/- 0.13, N = 3
24.94
Antergos 18.7-Rolling
SE +/- 0.08, N = 3
23.56
Solus 3.9999
SE +/- 0.07, N = 3
23.43
Debian 9.4
SE +/- 0.05, N = 3
20.23
6
12
18
24
30
1. (CC) gcc options: -lm

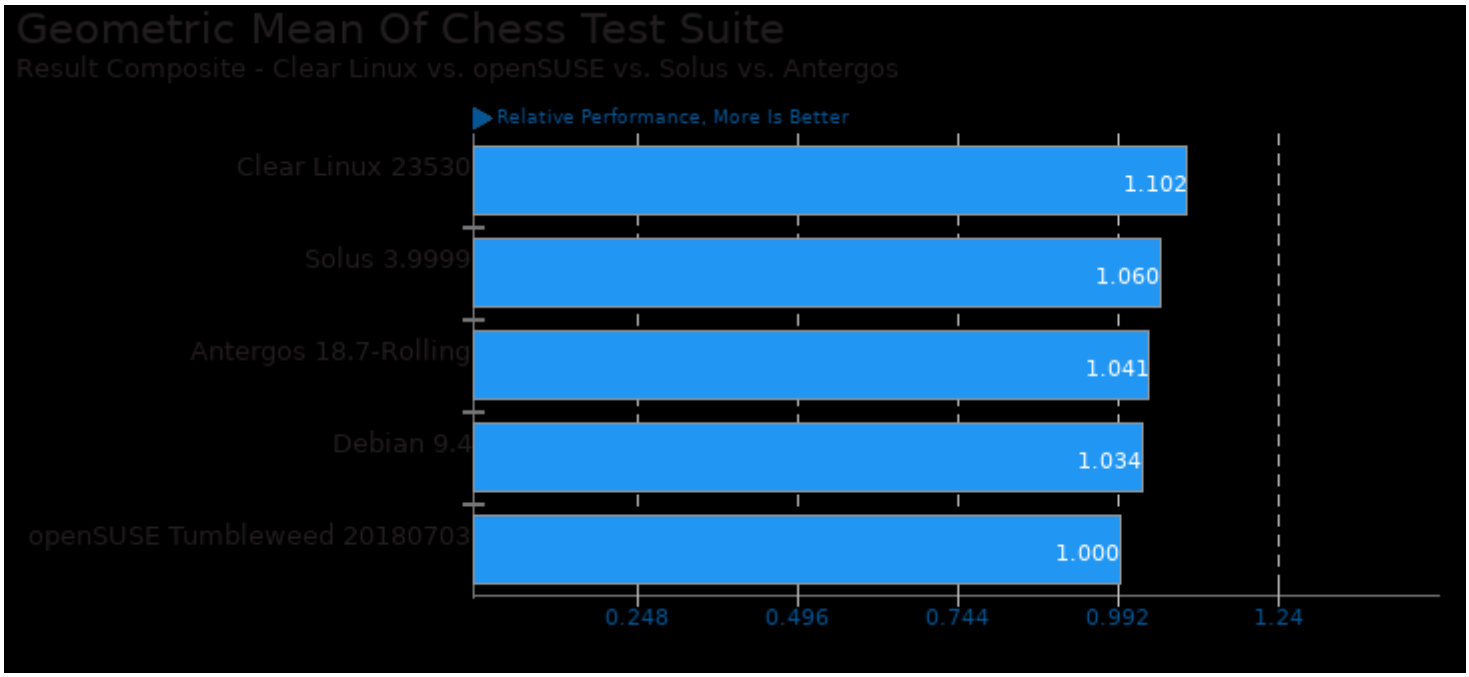
Clear Linux vs. openSUSE vs. Solus vs. Antergos



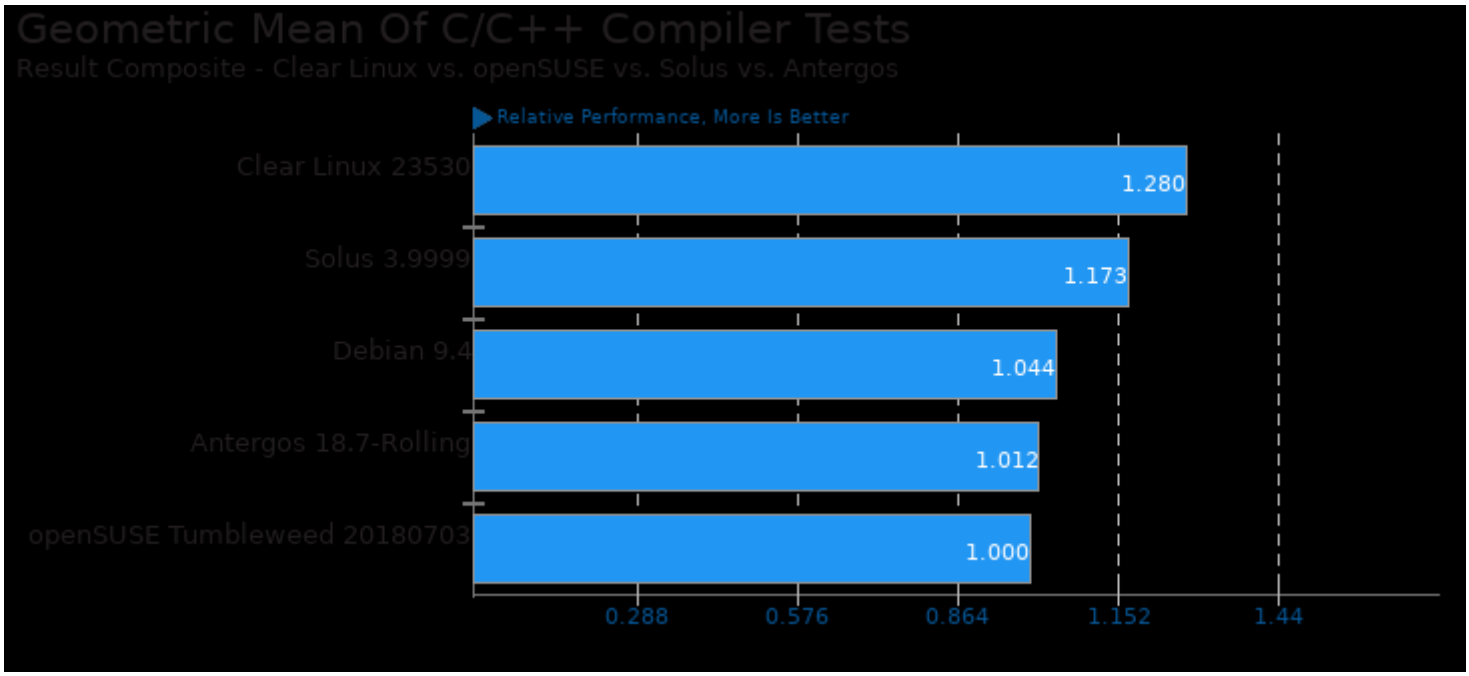
These geometric means are based upon test groupings / test suites for this result file.



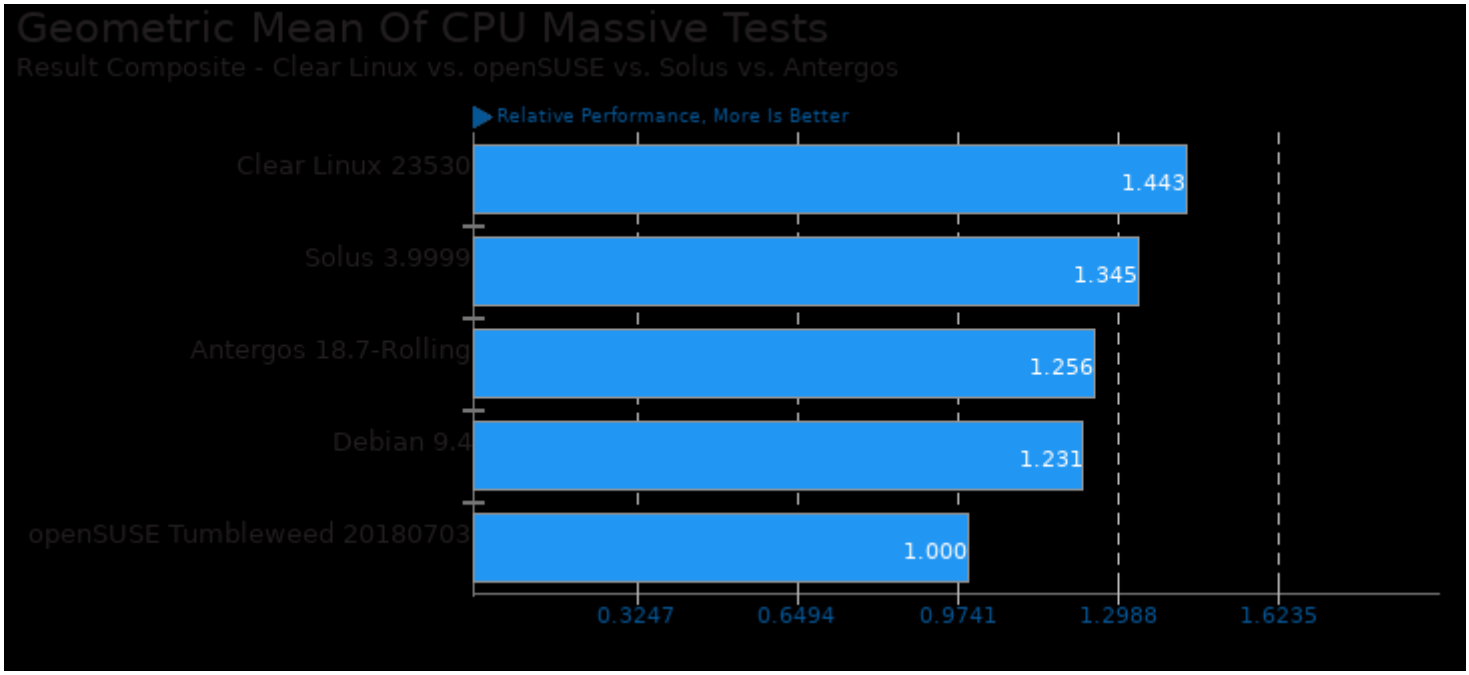
Geometric mean based upon tests: pts/encode-mp3 and pts/encode-flac



Geometric mean based upon tests: pts/crafty and pts/stockfish

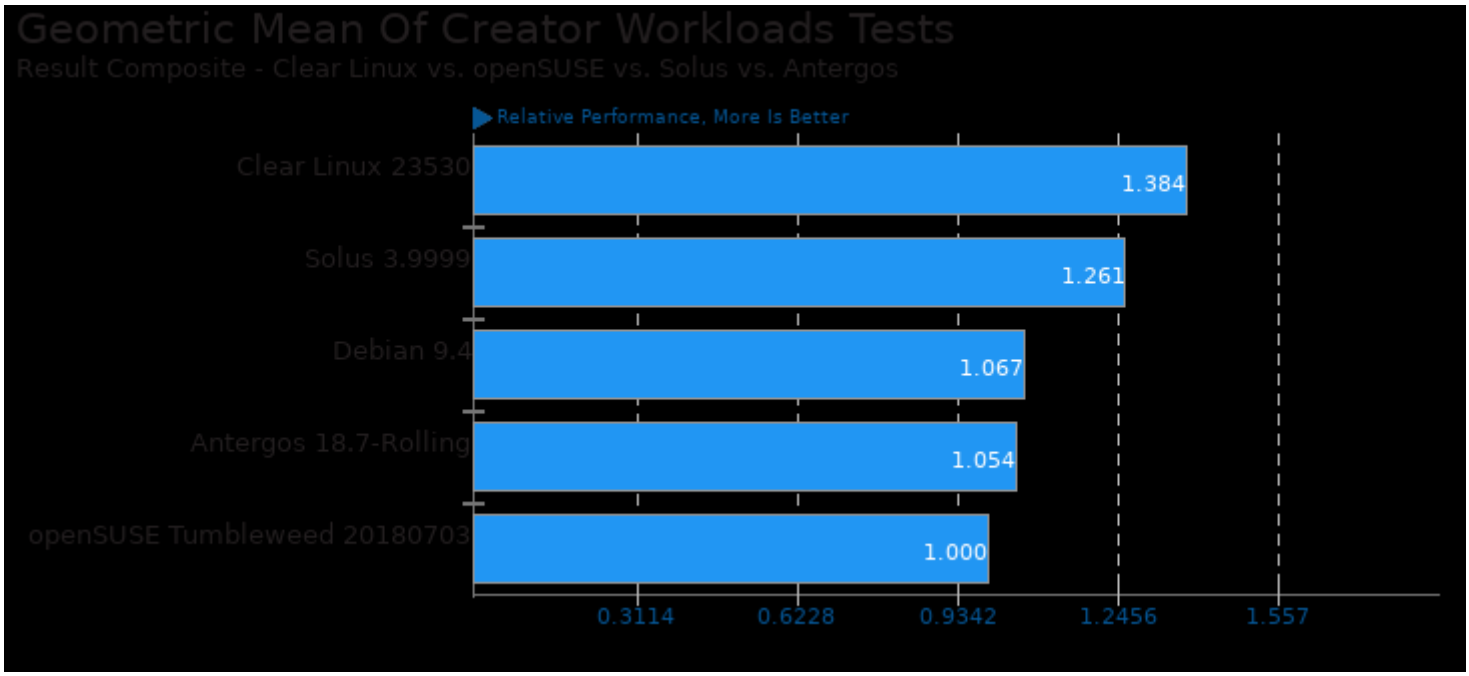


Geometric mean based upon tests: pts/vpxenc, pts/himeno, pts/stockfish, pts/c-ray, pts/encode-mp3, pts/encode-flac and pts/pgbench

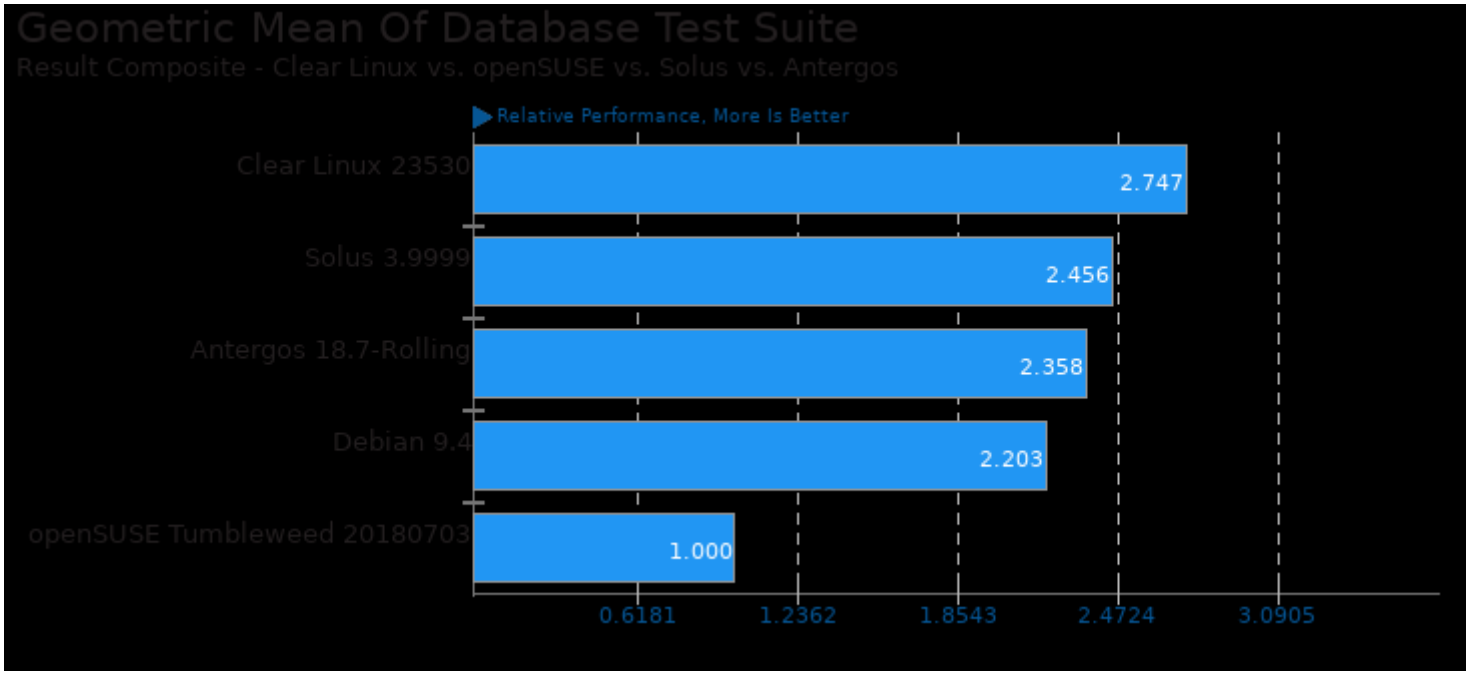


Geometric mean based upon tests: pts/build-linux-kernel, pts/c-ray, pts/crafty, pts/vpxenc, pts/encode-flac, pts/encode-mp3, pts/himeno, pts/pgbench, pts/phpbench, pts/redis, pts/rodinia, pts/sockperf, pts/stockfish and pts/tinymembench

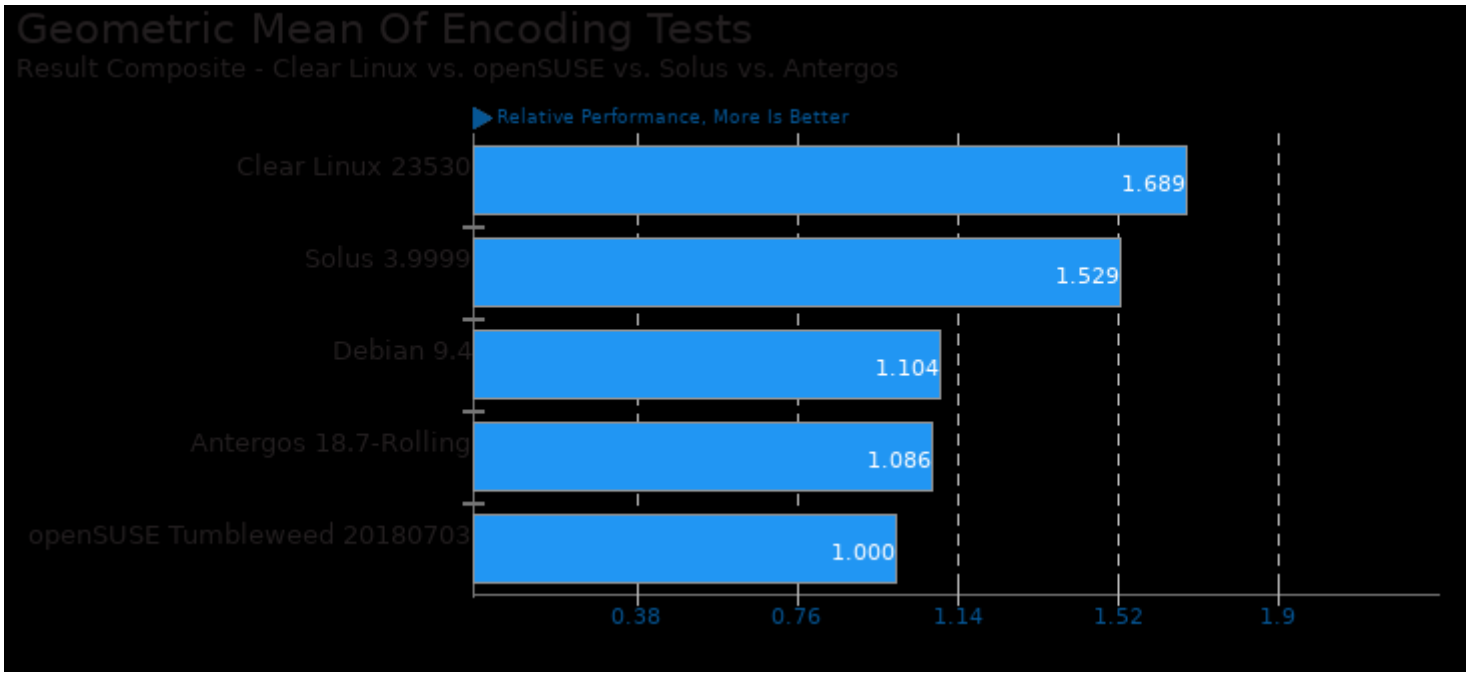
Clear Linux vs. openSUSE vs. Solus vs. Antergos



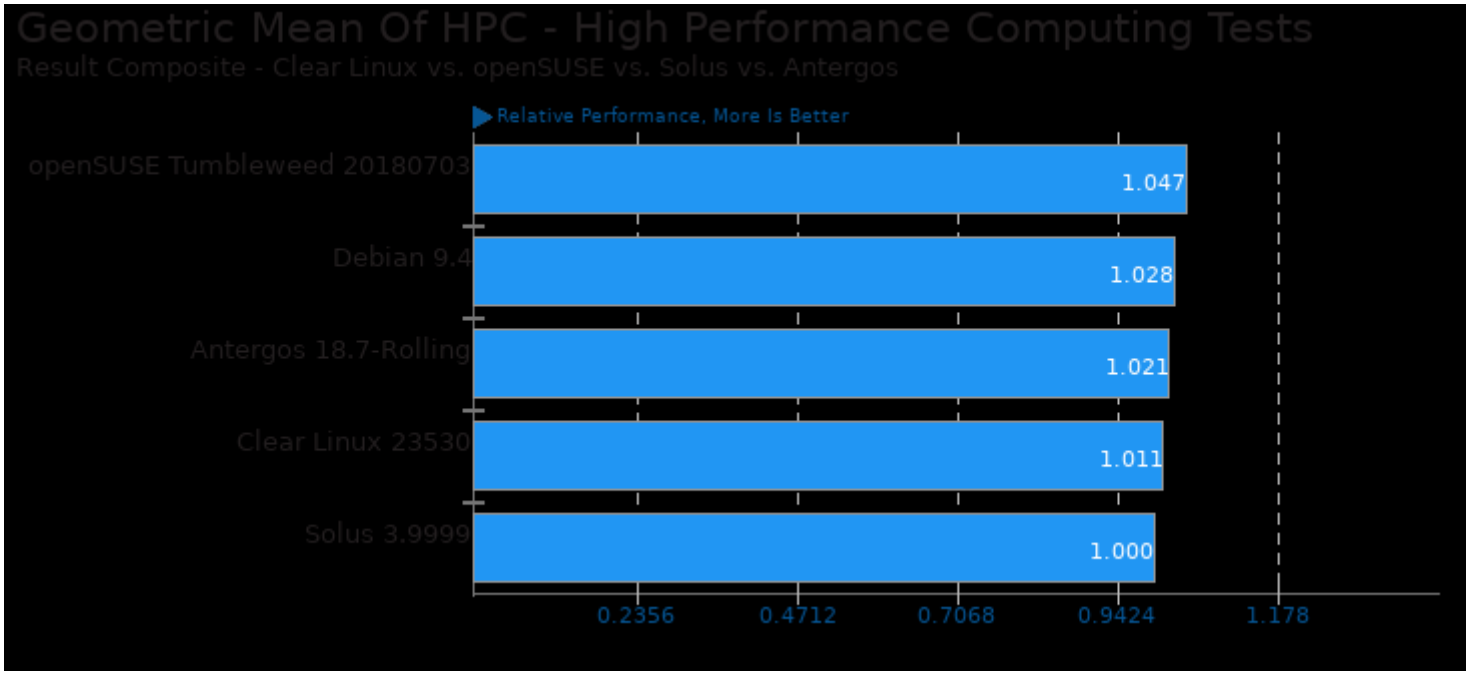
Geometric mean based upon tests: pts/c-ray, pts/vpxenc, pts/encode-mp3, pts/encode-flac and pts/luajit



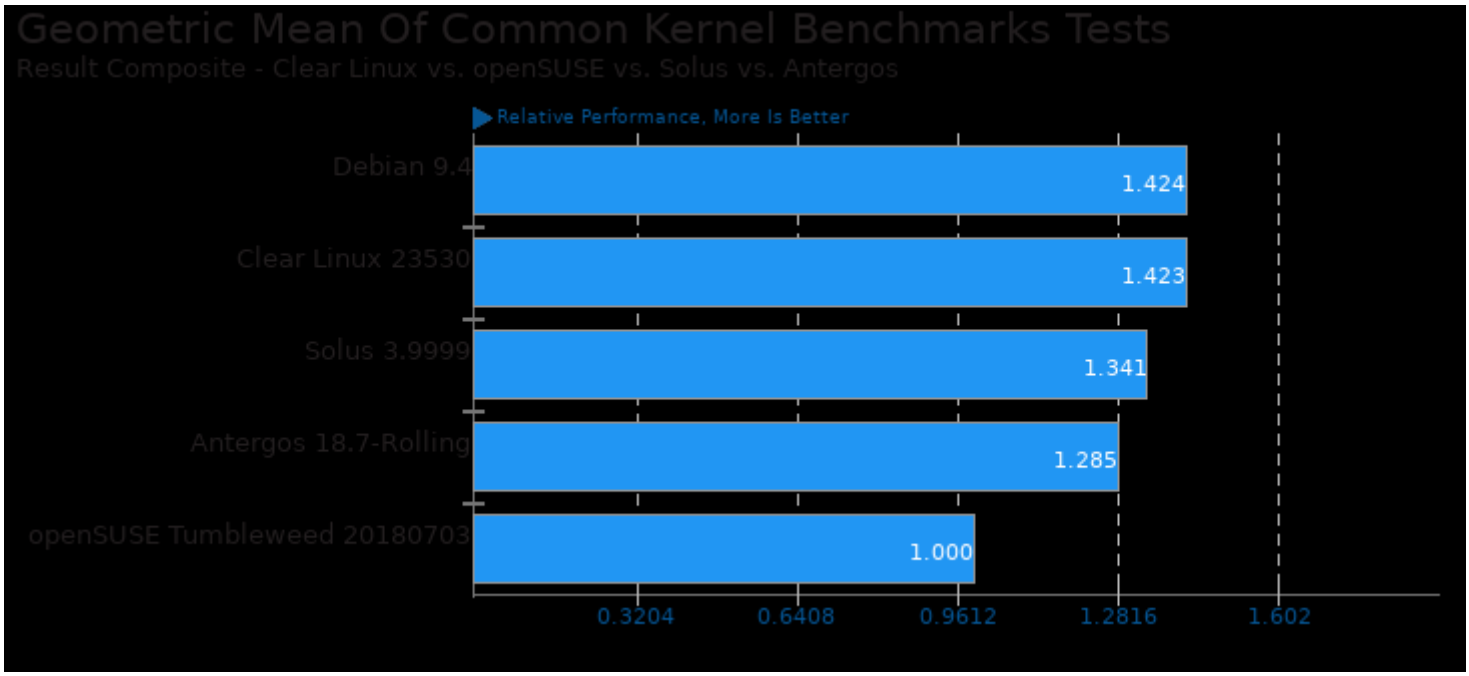
Geometric mean based upon tests: pts/redis and pts/pgbench



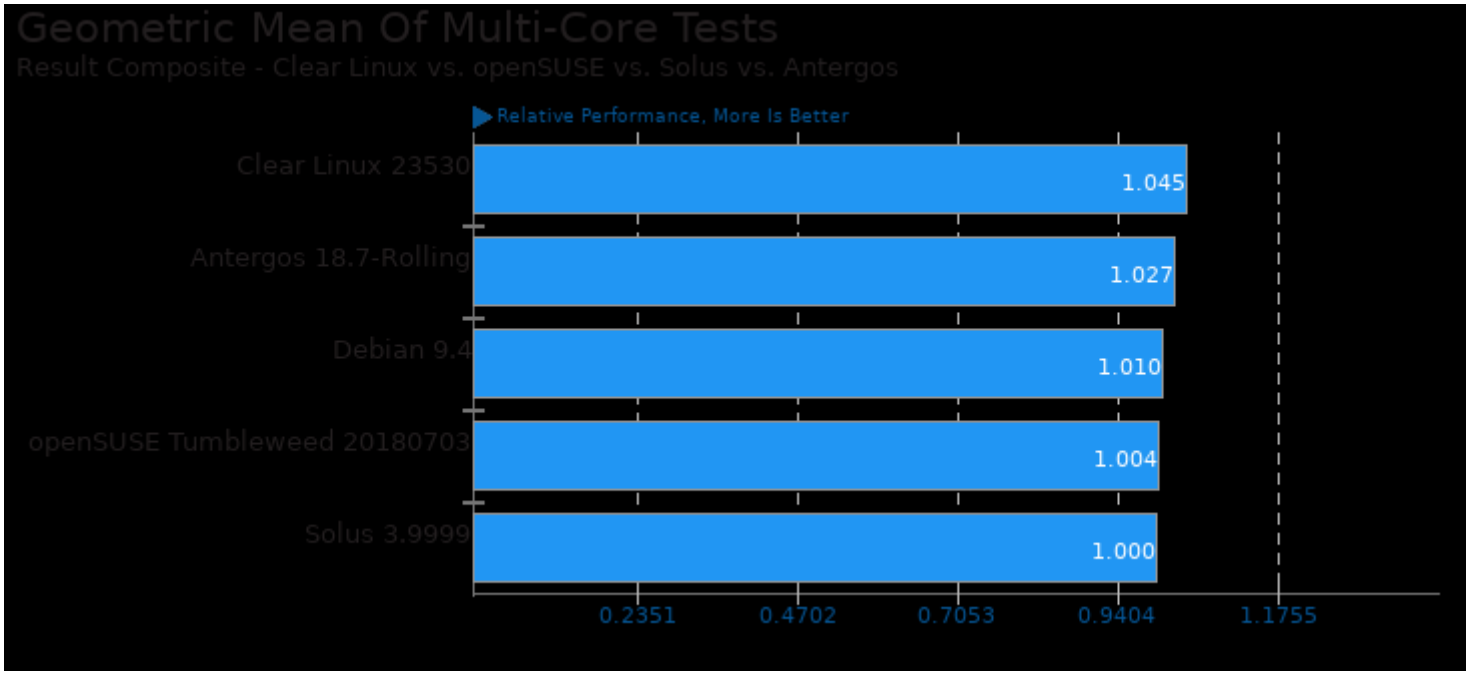
Geometric mean based upon tests: pts/encode-mp3, pts/encode-flac and pts/vpxenc



Geometric mean based upon tests: pts/rodinia and pts/himeno

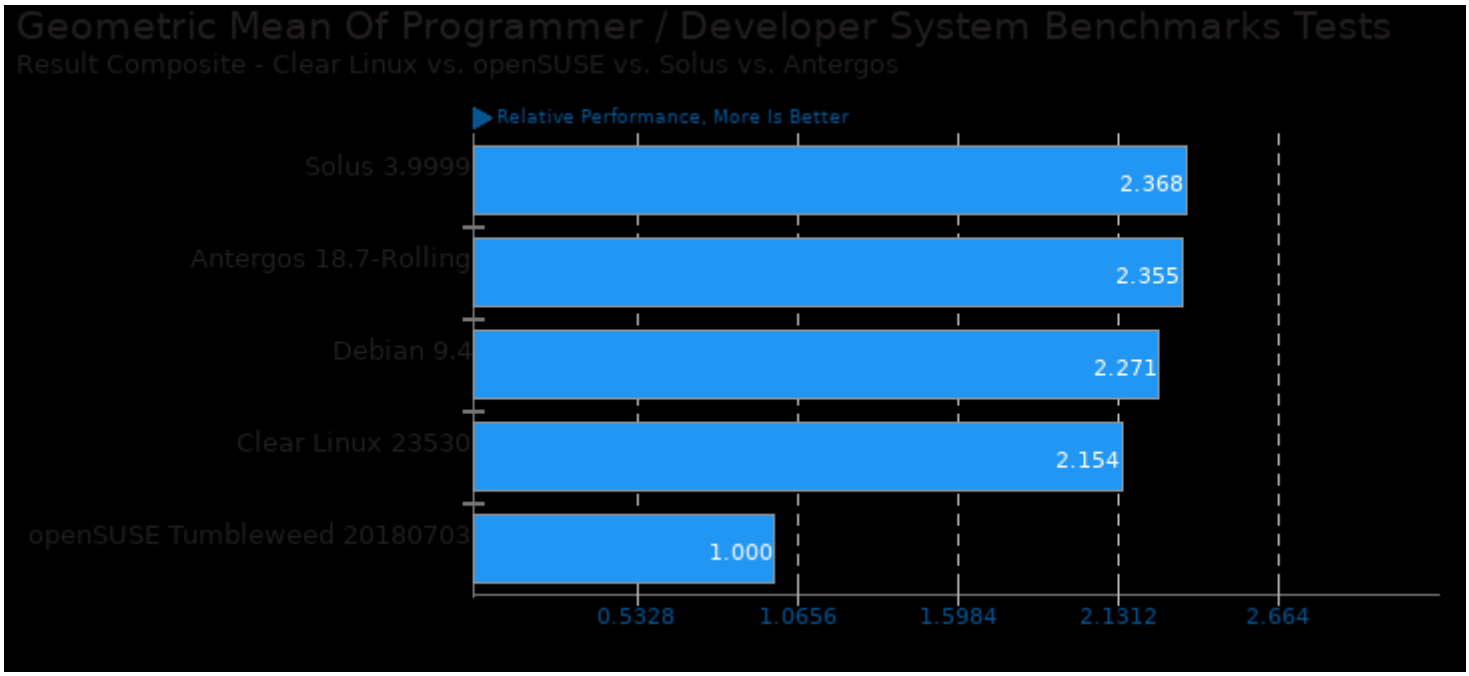


Geometric mean based upon tests: pts/pgbench, pts/tinymembench and pts/osbench

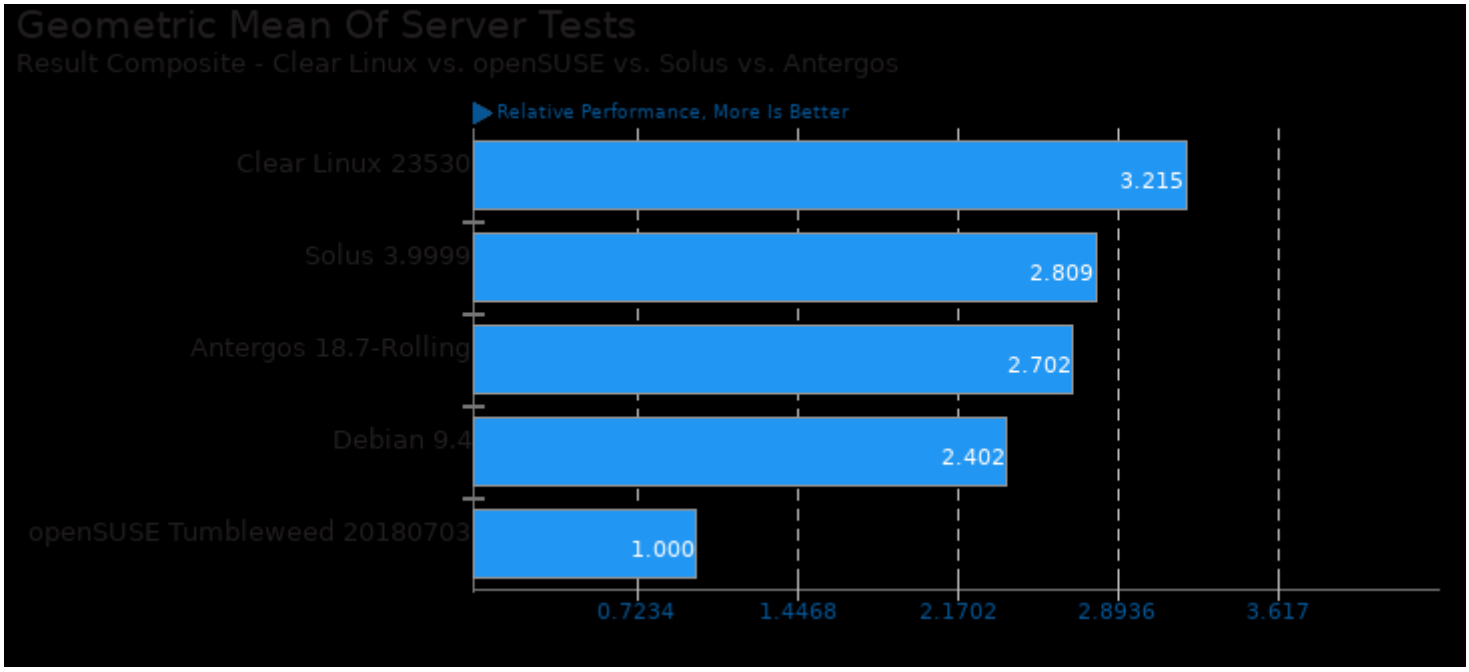


Geometric mean based upon tests: pts/c-ray, pts/stockfish, pts/vpxenc, pts/rodinia, pts/build-linux-kernel and pts/pgbench

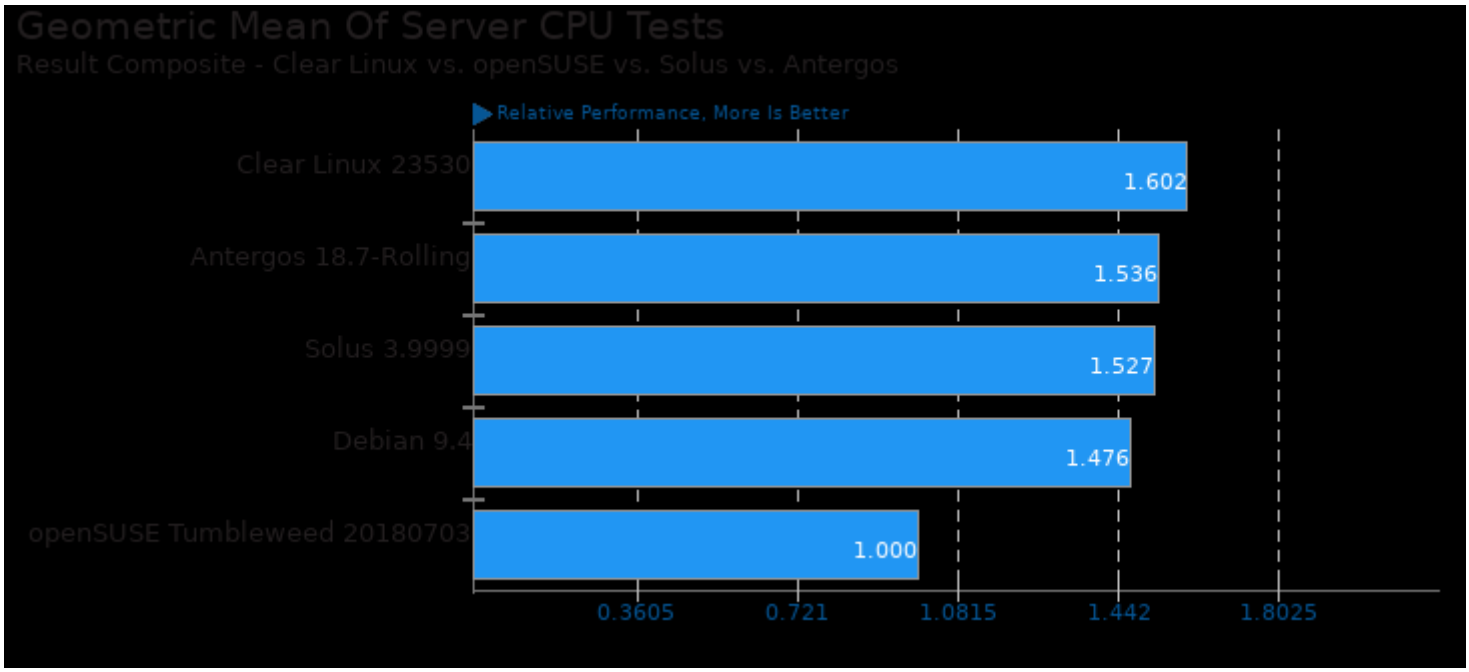
Clear Linux vs. openSUSE vs. Solus vs. Antergos



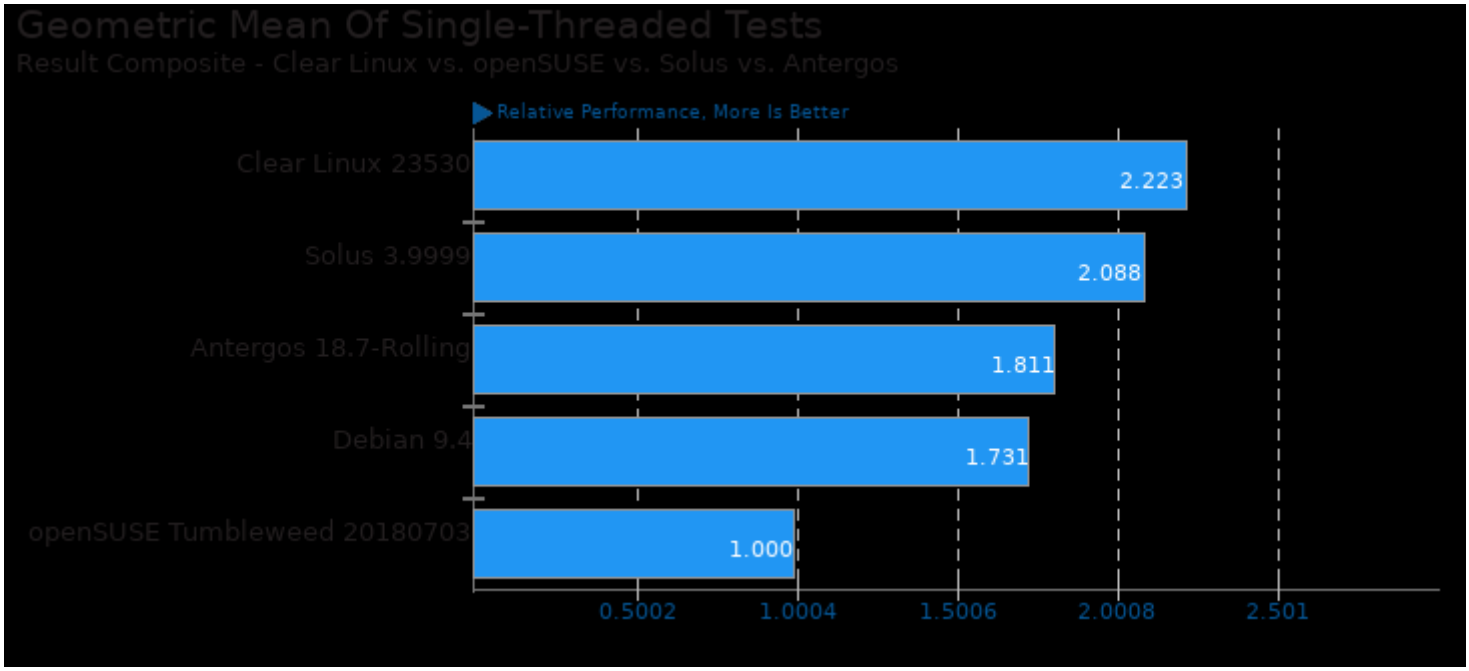
Geometric mean based upon tests: pts/git, pts/pybench and pts/build-linux-kernel



Geometric mean based upon tests: pts/pgbench, pts/redis and pts/phpbench

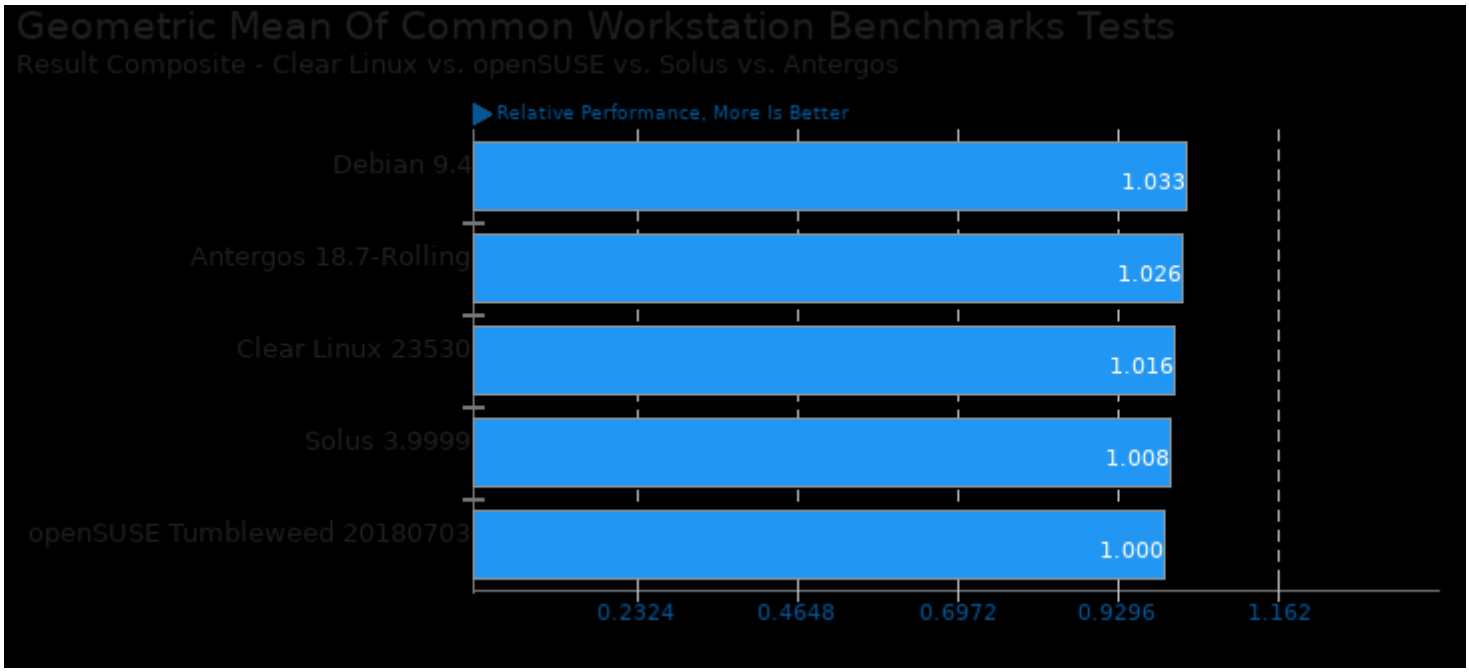


Geometric mean based upon tests: pts/rodinia, pts/himeno, pts/stockfish, pts/build-linux-kernel, pts/c-ray, pts/redis, pts/pybench and pts/phpbench



Geometric mean based upon tests: pts/luajit, pts/encode-flac, pts/encode-mp3, pts/system-libxml2, pts/redis, pts/pybench, pts/phpbench and pts/git

Clear Linux vs. openSUSE vs. Solus vs. Antergos



Geometric mean based upon tests: pts/rodinia, pts/himeno, pts/paraview and pts/git

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 05:19.