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Intel Core i9 10980XE Linux Performance

Benchmarks by Michael Larabel for a future article

Automated Executive Summary

Clear Linux 31880 had the most wins, coming in first place for 41% of the tests.

Based on the geometric mean of all complete results, the fastest (Clear Linux 31880) was 1.353x the speed of the slowest (CentOS 7). CentOS 8 was 0.951x the speed of Clear Linux 31880, CentOS Stream was 1x the speed of CentOS 8, Debian 10.2 was 0.938x the speed of CentOS Stream, Ubuntu 18.04.3 LTS was 0.968x the speed of Debian 10.2, openSUSE Tumbleweed was 0.996x the speed of Ubuntu 18.04.3 LTS, Ubuntu 19.10 was 0.987x the speed of openSUSE Tumbleweed, Fedora Workstation 31 was 0.979x the speed of Ubuntu 19.10, Manjaro 18.1.4 was 0.999x the speed of Fedora Workstation 31, Solus 4 was 0.995x the speed of Manjaro 18.1.4, CentOS 7 was 0.895x the speed of Solus 4.

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

Smallpt (Global Illumination Renderer; 128 Samples) at 9.305x
ctx_clock (Context Switch Time) at 4.086x
DaCapo Benchmark (Java Test: Tradebeans) at 3.567x
NAS Parallel Benchmarks (Test / Class: LU.C) at 3.41x
NAS Parallel Benchmarks (Test / Class: EP.D) at 3.354x

NAS Parallel Benchmarks (Test / Class: EP.C) at 3.32x
NAS Parallel Benchmarks (Test / Class: BT.C) at 2.925x
VP9 libvpx Encoding (vpxenc VP9 1080p Video Encode) at 2.757x
DaCapo Benchmark (Java Test: H2) at 2.565x
NGINX Benchmark (Static Web Page Serving) at 2.541x.

Test Systems:

CentOS 7

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE 10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Device 2723

OS: CentOS Linux 7, Kernel: 3.10.0-1062.9.1.el7.x86_64 (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.20.4, Display Driver: modesetting 1.20.4, OpenGL: 4.5 Mesa 18.3.4 (LLVM 7.0.1), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: NONE / attr2,inode64,noquota,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Java Notes: OpenJDK Runtime Environment (build 1.8.0_232-b09)
Python Notes: Python 2.7.5 + Python 3.6.8
Security Notes: SELinux

CentOS 8

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE 10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Device 2723

OS: CentOS Linux 8, Kernel: 4.18.0-80.11.2.el8_0.x86_64 (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server + Wayland, OpenGL: 4.5 Mesa 18.3.1 (LLVM 7.0.1), Compiler: GCC 8.2.1 20180905, File-System: xfs, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-redhat-linux --disable-libmpx --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: NONE / attr2,inode64,noquota,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x5000029
Java Notes: OpenJDK Runtime Environment (build 1.8.0_232-b09)
Python Notes: + Python 3.6.8
Security Notes: SELinux + 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

CentOS Stream

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE

10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Device 2723

OS: CentOS Linux 8, Kernel: 4.18.0-147.6.el8.x86_64 (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server + Wayland, OpenGL: 4.5 Mesa 18.3.1 (LLVM 7.0.1), Compiler: GCC 8.2.1 20180905, File-System: xfs, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-redhat-linux --disable-libmpx --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: NONE / attr2,inode64,noquota,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x5000029
Java Notes: OpenJDK Runtime Environment (build 1.8.0_232-b09)
Python Notes: + Python 3.6.8
Security Notes: SELinux + 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

Clear Linux 31880

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE 10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Device 2723

OS: Clear Linux OS 31880, Kernel: 5.4.2-875.native (x86_64), Desktop: GNOME Shell 3.34.1, Display Server: X Server 1.20.5, Display Driver: amdgpu 19.1.0, OpenGL: 4.5 Mesa 20.0.0-devel (LLVM 9.0.0), Vulkan: 1.1.107, Compiler: GCC 9.2.1 20191210 gcc-9-branch@279166 + Clang 9.0.0 + LLVM 9.0.0, 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 -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" FFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -fstack-protector --param=ssp-buffer-size=32 -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 -Wa,-mbranches-within-32B-boundaries" 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 -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-trapping-math -Wl,-sort-common -Wl,--enable-new-dtags -mtune=skylake -Wa,-mbranches-within-32B-boundaries -fvisibility-inlines-hidden -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 -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-trapping-math -Wl,-sort-common -Wl,--enable-new-dtags -mtune=skylake -Wa,-mbranches-within-32B-boundaries" 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 --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-clocale=gnu --enable-default-pie --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-gcc-major-version-only --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Disk Notes: MQ-DEADLINE / relatime,rw
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x500002c
Graphics Notes: GLAMOR
Java Notes: OpenJDK Runtime Environment (build 1.8.0-u232-ga-b00)
Python Notes: Python 3.8.0
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/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled

Fedora Workstation 31

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE 10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Wi-Fi 6 AX200

OS: Fedora 31, Kernel: 5.3.15-300.fc31.x86_64 (x86_64), Desktop: GNOME Shell 3.34.1, Display Server: X Server +

Wayland, OpenGL: 4.5 Mesa 19.2.7 (LLVM 9.0.0), Compiler: GCC 9.2.1 20190827, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-redhat-linux --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,objc,obj-c++,ada,go,d,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: NONE / relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Java Notes: OpenJDK Runtime Environment (build 1.8.0_232-b09)
Python Notes: Python 3.7.5
Security Notes: SELinux + 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/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled

Manjaro 18.1.4

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE 10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Wi-Fi 6 AX200

OS: ManjaroLinux 18.1.4, Kernel: 5.4.2-1-MANJARO (x86_64), Desktop: Xfce 4.14, Display Server: X Server 1.20.6, Display Driver: amdgpu 19.1.0, OpenGL: 4.5 Mesa 19.2.7 (LLVM 9.0.0), Compiler: GCC 9.2.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --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++,d --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 / noatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Graphics Notes: GLAMOR
Java Notes: OpenJDK Runtime Environment (build 1.8.0_232-b09)
Python Notes: Python 3.8.0
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/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled

Solus 4

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE 10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Device 2723

OS: Solus 4.0, Kernel: 5.3.15-138.current (x86_64), Desktop: Budgie, Display Server: X Server 1.20.6, Display Driver: amdgpu 19.1.0, OpenGL: 4.5 Mesa 19.2.6 (LLVM 9.0.0), Compiler: GCC 9.2.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: amdgpu.si_support=1 amdgpu.cik_support=1
Environment Notes: __GL_MaxFramesAllowed=1
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-gcc-major-version-only --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 - CPU Microcode: 0x500002c
Graphics Notes: GLAMOR
Java Notes: OpenJDK Runtime Environment (build 1.8.0_232-solus-ga)
Python Notes: Python 2.7.17 + Python 3.6.9
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/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled

Ubuntu 18.04.3 LTS

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE 10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Device 2723

OS: Ubuntu 18.04, Kernel: 5.0.0-37-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.4, Display Driver: amdgpu 19.0.1, Compiler: GCC 7.4.0, File-System: ext4, Screen Resolution: 3840x2160

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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Disk Notes: NONE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Graphics Notes: GLAMOR
Java Notes: OpenJDK Runtime Environment (build 11.0.4+11-post-Ubuntu-1ubuntu218.04.3)
Python Notes: Python 2.7.15+ + Python 3.6.9
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/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled

Ubuntu 19.10

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE 10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Device 2723

OS: Ubuntu 19.10, Kernel: 5.3.0-24-generic (x86_64), Desktop: GNOME Shell 3.34.1, Display Server: X Server 1.20.5, Display Driver: amdgpu 19.0.1, OpenGL: 4.5 Mesa 19.2.1 (LLVM 9.0.0), Compiler: GCC 9.2.1 20191008, File-System: ext4, Screen Resolution: 3840x2160

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++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --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
Disk Notes: NONE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Graphics Notes: GLAMOR
Java Notes: OpenJDK Runtime Environment (build 11.0.5-ea+10-post-Ubuntu-0ubuntu1)
Python Notes: Python 2.7.17rc1 + Python 3.7.5
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/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled

openSUSE Tumbleweed

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE 10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Wi-Fi 6 AX200

OS: openSUSE Tumbleweed 20191206, Kernel: 5.3.12-1-default (x86_64), Desktop: KDE Plasma 5.17.3, Display Server: X Server 1.20.6, Display Driver: amdgpu 19.1.0, OpenGL: 4.5 Mesa 19.2.6 (LLVM 9.0.0), Compiler: GCC 9.2.1 20190903 [gcc-9-branch revision 275330], File-System: btrfs, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-suse-linux --disable-cet --disable-libcc1 --disable-libssp --disable-libstdcxx-pch --disable-libvtv --disable-werror --enable-gnu-indirect-function --enable-languages=c,c++,objc,fortran,obj-c++,ada,go,d --enable-libphobos --enable-libstdcxx-allocator=new --enable-link-mutex

--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-build-config=bootstrap-lto-lean --with-gcc-major-version-only --with-slibdir=/lib64 --with-tune=generic --without-cuda-driver --without-system-libunwind
Disk Notes: MQ-DEADLINE / relatime,rw,space_cache,ssd,subvol=/@/home,subvolid=264
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Graphics Notes: GLAMOR
Java Notes: OpenJDK Runtime Environment (build 11.0.5+10-suse-1.1-x8664)
Python Notes: Python 2.7.17 + Python 3.7.3
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/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + tsx_async_abort: Mitigation of TSX disabled

Debian 10.2

Processor: Intel Core i9-10980XE @ 4.60GHz (18 Cores / 36 Threads), Motherboard: Gigabyte X299X DESIGNARE 10G (F1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: Samsung SSD 970 PRO 512GB, Graphics: AMD Radeon RX 64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: ASUS VP28U, Network: 2 x Intel 10G X550T + Intel Device 2723

OS: Debian 10, Kernel: 4.19.0-6-amd64 (x86_64), Desktop: GNOME Shell 3.30.2, Display Server: X Server 1.20.4 + Wayland, Display Driver: modesetting 1.20.4, OpenGL: 4.5 Mesa 18.3.6 (LLVM 7.0.1), Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 3840x2160

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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Disk Notes: NONE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x5000029
Java Notes: OpenJDK Runtime Environment (build 11.0.5+10-post-Debian-1deb10u1)
Python Notes: Python 2.7.16 + Python 3.7.3
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/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + tsx_async_abort: Vulnerable: Clear buffers attempted no microcode; SMT vulnerable

	CentOS 7	CentOS 8	CentOS Stream	Clear Linux 31880	Fedora Workstation 31	Manjaro 18.1.4	Solus 4	Ubuntu 18.04.3 LTS	Ubuntu 19.10	openSUSE Tumbleweed	Debian 10.2
SQLite - 1 (sec)	67.359	64.466	64.688	48.578	47.990	49.317	55.439	46.943	47.032	**95.028**	**46.926**
Normalized	69.67%	72.79%	72.54%	96.6%	97.78%	95.15%	84.64%	99.96%	99.77%	49.38%	100%
Standard Deviation	0.2%	0.3%	0.2%	0.4%	0.8%	0.1%	0.2%	0.2%	0.2%	2.3%	0.1%
SQLite Speedtest - Timed Time - Size 1,000 (sec)	**69.073**	54.579	55.081	56.573	56.905	59.215	56.373	57.850	58.450	65.626	**52.225**
Normalized	75.61%	95.69%	94.81%	92.31%	91.78%	88.2%	92.64%	90.28%	89.35%	79.58%	100%
Standard Deviation	1.4%	0.8%	0.5%	0.5%	0.5%	0.6%	0.9%	0.1%	0.3%	0.4%	1.2%
IOR - Write Test (MB/s)	220.64	**232.01**	**232.01**	224.82	**217.71**	218.43		220.11	222.49		219.67
Normalized	95.1%	100%	100%	96.9%	93.84%	94.15%		94.87%	95.9%		94.68%
Standard Deviation	0.6%	1.8%	1.9%	1.9%	0.3%	0.7%		2.1%	2.2%		1.7%
IOR - Read Test (MB/s)	**1227**	**1475**	1466	1453	1326	1352		1335	1361		1352
Normalized	83.24%	100%	99.42%	98.55%	89.92%	91.69%		90.54%	92.32%		91.7%

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Standard Deviation	0.6%	0.4%	0.9%	0.9%	1.2%	1.5%		0.6%	1.1%		0.5%
ParaView - Many Spheres - 1920 x 1080 (Frames / Sec)	39.57	**40.28**	40.05	38.96	38.18	37.68	**37.27**	39.45	38.02	38.07	39.51
Normalized	98.24%	100%	99.43%	96.72%	94.79%	93.55%	92.53%	97.94%	94.39%	94.51%	98.09%
Standard Deviation	0.1%	0.1%	0.2%	0.1%	0.1%	0.5%	2.9%	0.5%	0.1%	0.3%	0.5%
ParaView - Many Spheres - 1920 x 1080 (MiPolys / Sec)	3967	**4039**	4015	3906	3828	3777	**3736**	3955	3812	3817	3961
Normalized	98.24%	100%	99.42%	96.71%	94.78%	93.53%	92.51%	97.94%	94.38%	94.51%	98.08%
Standard Deviation	0.1%	0.2%	0.2%	0.1%	0.1%	0.5%	2.9%	0.5%	0.1%	0.3%	0.5%
ParaView - Many Spheres - 3840 x 2160 (Frames / Sec)	**37.89**	37.83	37.46	36.31	36.41	35.72	**33.23**	37.23	36.01	36.46	37.68
Normalized	100%	99.84%	98.87%	95.83%	96.09%	94.27%	87.7%	98.26%	95.04%	96.23%	99.45%
Standard Deviation	0.1%	0.1%	0.3%	0.4%	0.4%	0.8%	0.5%	1.1%	0.3%	0.2%	0.4%
ParaView - Many Spheres - 3840 x 2160 (MiPolys / Sec)	**3799**	3793	3756	3640	3650	3581	**3332**	3733	3610	3655	3777
Normalized	100%	99.85%	98.87%	95.83%	96.1%	94.28%	87.71%	98.26%	95.03%	96.23%	99.44%
Standard Deviation	0.2%	0.1%	0.3%	0.4%	0.4%	0.8%	0.5%	1.1%	0.3%	0.2%	0.4%
ParaView - Wavelet Volume - 1920 x 1080 (Frames / Sec)	144.38	229.30	206.90	**248.28**	139.45	137.16	**123.24**	145.73	127.66	149.96	147.26
Normalized	58.15%	92.36%	83.33%	100%	56.17%	55.24%	49.64%	58.7%	51.42%	60.4%	59.31%
Standard Deviation	1.1%	2.2%	4.5%	1%	2.8%	2.8%	1.9%	1.1%	1.2%	4.2%	2.9%
ParaView - Wavelet Volume - 1920 x 1080 (MiVoxels / Sec)	2310	3669	3310	**3973**	2231	2195	**1972**	2332	2042	2399	2356
Normalized	58.15%	92.35%	83.33%	100%	56.17%	55.24%	49.64%	58.7%	51.41%	60.4%	59.31%
Standard Deviation	1.1%	2.2%	4.5%	1%	2.8%	2.8%	1.9%	1.1%	1.2%	4.2%	2.9%
ParaView - Wavelet Volume - 3840 x 2160 (Frames / Sec)	78.90	135.25	132.20	**139.34**	76.16	76.75	75.19	78.34	**75.17**	81.94	82.74
Normalized	56.62%	97.06%	94.88%	100%	54.66%	55.08%	53.96%	56.22%	53.95%	58.81%	59.38%
Standard Deviation	4%	0.7%	4.7%	1.3%	0.8%	0.4%	1.3%	0.7%	0.6%	1.6%	4%
ParaView - Wavelet Volume - 3840 x 2160 (MiVoxels / Sec)	1262	2164	2115	**2230**	1219	1228	1203	1253	**1203**	1311	1324
Normalized	56.62%	97.06%	94.87%	100%	54.66%	55.08%	53.96%	56.22%	53.95%	58.8%	59.38%
Standard Deviation	4%	0.7%	4.7%	1.3%	0.8%	0.4%	1.3%	0.6%	0.6%	1.6%	4%

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ParaView - Wavelet Contour - 1920 x 1080 (Frames / Sec)	219.83	228.08	**242.23**	220.45	226.95	213.63	220.90	223.93	**211.64**	222.88	217.55
Normalized	90.75%	94.16%	100%	91.01%	93.69%	88.19%	91.19%	92.45%	87.37%	92.01%	89.81%
Standard Deviation	1.9%	0.8%	3%	0.8%	2.7%	3.1%	1.6%	2.5%	5%	1.7%	2.7%
ParaView - Wavelet Contour - 1920 x 1080 (MiPolys / Sec)	2291	2377	**2524**	2297	2365	2226	2302	2334	**2206**	2323	2267
Normalized	90.75%	94.16%	100%	91.01%	93.69%	88.19%	91.19%	92.45%	87.37%	92.01%	89.81%
Standard Deviation	1.9%	0.8%	3%	0.8%	2.7%	3.1%	1.6%	2.5%	5%	1.7%	2.7%
ParaView - Wavelet Contour - 3840 x 2160 (Frames / Sec)	132.23	129.34	**136.68**	129.43	129.29	129.00	**125.97**	129.54	129.02	136.42	131.87
Normalized	96.74%	94.63%	100%	94.7%	94.59%	94.38%	92.16%	94.78%	94.4%	99.81%	96.48%
Standard Deviation	1.1%	0.4%	0.3%	2.2%	1%	2%	1.2%	0.7%	0.4%	0.1%	2.2%
ParaView - Wavelet Contour - 3840 x 2160 (MiPolys / Sec)	1378	1348	**1424**	1349	1347	1344	**1313**	1350	1345	1422	1374
Normalized	96.75%	94.63%	100%	94.69%	94.59%	94.38%	92.17%	94.77%	94.39%	99.81%	96.48%
Standard Deviation	1.1%	0.4%	0.3%	2.2%	1%	2%	1.2%	0.7%	0.4%	0.1%	2.2%
NAS Parallel Benchmarks - BT.C (Mop/s)		14423	14411	39666	14381	**14369**		40118	41122		**42022**
Normalized		34.32%	34.29%	94.39%	34.22%	34.19%		95.47%	97.86%		100%
Standard Deviation		0.2%	0.1%	0.1%	0.1%	0.3%		0.1%	0%		0%
NAS Parallel Benchmarks - EP.C (Mop/s)		**756.70**	757.42	**2512**	1418	1346		991.11	2420		1062
Normalized		30.12%	30.15%	100%	56.43%	53.57%		39.45%	96.32%		42.27%
Standard Deviation		0.3%	0.2%	0.1%	0.1%	0.4%		0.3%	2.9%		0.4%
NAS Parallel Benchmarks - EP.D (Mop/s)		759.55	**750.68**	2490	1434	1350		996.65	**2518**		1068
Normalized		30.16%	29.81%	98.88%	56.96%	53.61%		39.58%	100%		42.43%
Standard Deviation		0.1%	3.5%	2.9%	0%	0.8%		0.3%	0.1%		0.2%
NAS Parallel Benchmarks - FT.C (Mop/s)		9756	**9738**	18549	9850	9903		17999	**18569**		18338
Normalized		52.54%	52.44%	99.9%	53.05%	53.33%		96.93%	100%		98.76%
Standard Deviation		0.2%	0.1%	0.2%	0.1%	0%		0.1%	0.2%		0.1%
NAS Parallel Benchmarks - LU.C (Mop/s)		12965	12930	41106	12942	**12796**		41210	42870		**43635**
Normalized		29.71%	29.63%	94.21%	29.66%	29.33%		94.44%	98.25%		100%
Standard Deviation		0.1%	0.2%	0.2%	0.1%	0.4%		0%	0%		0.2%

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NAS Parallel Benchmarks - MG.C (Mop/s)		11687	11697	16329	**10807**	11402		**16702**	16522		16668
Normalized		69.97%	70.03%	97.77%	64.71%	68.27%		100%	98.92%		99.79%
Standard Deviation		0.3%	0.2%	0%	0.2%	0.5%		0.2%	0.1%		0.3%
NAS Parallel Benchmarks - SP.B (Mop/s)		6063	6048	10944	**5940**	6042		10915	10992		**11234**
Normalized		53.98%	53.84%	97.43%	52.88%	53.79%		97.16%	97.85%		100%
Standard Deviation		0.1%	0.1%	0.4%	0.1%	0.2%		0.1%	0.2%		0.6%
DaCapo Benchmark - H2 (msec)	8340	**3339**	3385	3340	**8566**	8218	8337	6721	6629	6245	6080
Normalized	40.04%	100%	98.64%	99.97%	38.98%	40.63%	40.05%	49.68%	50.37%	53.47%	54.92%
Standard Deviation	0.7%	2.9%	2.8%	2.7%	2.1%	0.8%	2.7%	1.9%	1.1%	1%	0.4%
DaCapo Benchmark - Jython (msec)	4083	3377	3398	**3275**	4059	3614	3726	4207	**4250**	4061	3841
Normalized	80.21%	96.98%	96.38%	100%	80.68%	90.62%	87.9%	77.85%	77.06%	80.65%	85.26%
Standard Deviation	5.5%	0.4%	0.6%	0.9%	0.7%	0.5%	1%	1.1%	1%		1.5%
DaCapo Benchmark - Tradesoap (msec)	4712	3301	3214	**3065**	**5082**	4813	4925	4921	4788		5021
Normalized	65.05%	92.85%	95.36%	100%	60.31%	63.68%	62.23%	62.28%	64.01%		61.04%
Standard Deviation	1.4%	2.9%	1.8%	2.5%	1.5%	2.2%	1.4%	0.7%	1.5%		2.1%
DaCapo Benchmark - Tradebeans	7695	5113	5083	**2824**	9945	9532	9809	**10072**	9791		9876
Normalized	36.7%	55.23%	55.56%	100%	28.4%	29.63%	28.79%	28.04%	28.84%		28.59%
Standard Deviation	1.6%	2.1%	1.5%	0.9%	0.8%	0.5%	1.8%	1%	1%		0.5%
Renaissance - Apache Spark ALS (ms)	**7542**	5970	5989	**4945**	5691	5409	5482	6236	6165		5884
Normalized	65.57%	82.84%	82.57%	100%	86.9%	91.43%	90.21%	79.31%	80.22%		84.05%
Standard Deviation	2.9%	4.3%	4.7%	3.7%	2.8%	1.7%	1.5%	3.3%	2.3%		1.5%
Renaissance - I.M.D.S (ms)	9153	4678	**4624**	4732	9025	8804	8978	9224	9339	8619	**9826**
Normalized	50.52%	98.86%	100%	97.73%	51.24%	52.53%	51.51%	50.14%	49.52%	53.66%	47.06%
Standard Deviation	2.5%	3.3%	3.7%	1.7%	2.7%	3%	2.8%	2.3%	2.1%	2.7%	3.6%
Renaissance - A.U.C.T (ms)	11918	11042	**10917**	**12280**	11550	11411	11476	12263	11989	11082	11555
Normalized	91.6%	98.87%	100%	88.9%	94.52%	95.67%	95.13%	89.02%	91.05%	98.51%	94.47%
Standard Deviation	2.6%	2.4%	4.6%	2.9%	2.2%	1.7%	1.3%	4.8%	3%	3%	2.2%
GraphicsMagick - Rotate (Iterations/min)	**778**	1050	**1071**	966	788	790	793	811	803	1013	1026
Normalized	72.64%	98.04%	100%	90.2%	73.58%	73.76%	74.04%	75.72%	74.98%	94.58%	95.8%
Standard Deviation	2.8%	1.4%	2.9%	3%	4.2%	3%	3.5%	0.3%	2.6%	5.2%	2.2%

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GraphicsMagick - Enhanced (Iterations/min)	366	375	375	368	365	366	367	364	366	374	375
Normalized	97.6%	100%	100%	98.13%	97.33%	97.6%	97.87%	97.07%	97.6%	99.73%	100%
Standard Deviation				0.2%							
GraphicsMagick - Resizing (Iterations/min)	992	1661	1669	1416	1510	1456	1507	1503	1504	1670	1642
Normalized	59.4%	99.46%	99.94%	84.79%	90.42%	87.19%	90.24%	90%	90.06%	100%	98.32%
Standard Deviation	1.2%	0.3%	0.3%	2.8%	0.2%	0.1%	0.1%	0.2%	0.4%	1.9%	0.5%
dav1d - Chimera 1080p (FPS)		640.54	640.41	675.74	278.82	277.26	279.86		275.93	278.83	272.90
Normalized		94.79%	94.77%	100%	41.26%	41.03%	41.42%		40.83%	41.26%	40.39%
Standard Deviation		0.7%	0.8%	0.6%	0.3%	0.7%	0.3%		0.3%	0.2%	0.4%
dav1d - Summer Nature 4K (FPS)		211.28	210.71	215.24	173.03	169.52	173.53		170.66	170.59	165.18
Normalized		98.16%	97.9%	100%	80.39%	78.76%	80.62%		79.29%	79.26%	76.74%
Standard Deviation		0.3%	0.2%	0.2%	0.4%	0.9%	0.9%		0.4%	0.5%	0.7%
dav1d - S.N.1 (FPS)		606.16	604.05	626.34	306.48	300.86	307.13		298.43	299.50	289.31
Normalized		96.78%	96.44%	100%	48.93%	48.03%	49.04%		47.65%	47.82%	46.19%
Standard Deviation		0.9%	0.8%	0.6%	0%	0.6%	1.2%		0.6%	0.4%	0.4%
Embree - Pathtracer - Crown (FPS)	19.7587	19.9955	20.0079	19.7285	18.9348	18.9070	18.9258	18.5387	18.9089	19.7044	19.9209
Normalized	98.75%	99.94%	100%	98.6%	94.64%	94.5%	94.59%	92.66%	94.51%	98.48%	99.57%
Standard Deviation	0.2%	0.1%	0.7%	0.3%	0.2%	0.2%	0%	2.9%	0.4%	0.3%	0.5%
Embree - Pathtracer ISPC - Crown (FPS)	21.7300	21.6201	21.8406	21.6816	20.8155	20.8689	20.8496	20.8756	20.8968	21.8080	21.8952
Normalized	99.25%	98.74%	99.75%	99.02%	95.07%	95.31%	95.22%	95.34%	95.44%	99.6%	100%
Standard Deviation	0.6%	2.2%	0.1%	0.3%	0.2%	0%	0.1%	0.1%	0.1%	0.4%	0.5%
SVT-AV1 - Enc Mode 8 - 1080p (FPS)				56.673		49.347	45.656	46.754	47.393	49.629	48.314
Normalized				100%		87.07%	80.56%	82.5%	83.63%	87.57%	85.25%
Standard Deviation				0.8%		0.8%	0.2%	0.2%	0.1%	0.5%	0.8%
SVT-HEVC - 1.8.b.Y.T.H.V.E (FPS)				95.56		91.06	87.92	87.47	90.91	91.26	93.30
Normalized				100%		95.29%	92.01%	91.53%	95.13%	95.5%	97.63%
Standard Deviation				0.3%		0%	0.5%	0.3%	0.1%	0.4%	0%
SVT-VP9 - V.Q.O - Bosphorus 1080p (FPS)				270.94		249.27	252.59		250.81	255.40	255.30
Normalized				100%		92%	93.23%		92.57%	94.26%	94.23%
Standard Deviation				1%		2%	2.8%		1.6%	1.7%	2.3%
VP9 libvpx Encoding - v.V.1.V.E (FPS)				223.52		81.50	81.82	84.11	81.08	89.60	91.76
Normalized				100%		36.46%	36.61%	37.63%	36.27%	40.09%	41.05%
Standard Deviation				0.9%		1.4%	1.5%	0.9%	1.2%	2.7%	1.2%

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x264 - H.2.V.E (FPS)				**145.99**		130.32	135.13	125.80	131.39	132.61	**124.86**
Normalized				100%		89.27%	92.56%	86.17%	90%	90.83%	85.53%
Standard Deviation				0.9%		3.9%	0.8%	1.8%	2.1%	1%	1.1%
x265 - H.2.1.V.E (FPS)				**72.49**		42.03	42.71	41.32	41.58	42.34	**41.30**
Normalized				100%		57.98%	58.92%	57%	57.36%	58.41%	56.97%
Standard Deviation				0.1%		1.2%	0.4%	1.1%	0.5%	0.3%	1.1%
Timed GCC Compilation - Time To Compile	867.245	609.826	608.969	**478.103**	953.237	**971.151**	773.194	877.330	929.179	915.289	854.255
Normalized	55.13%	78.4%	78.51%	100%	50.16%	49.23%	61.83%	54.5%	51.45%	52.24%	55.97%
Standard Deviation	0.4%	0.1%	0.1%	0.1%	0.1%	0.2%	0.3%	0%	0.1%	0.1%	0.1%
Timed Linux Kernel Compilation -	**40.372**	42.677	42.543	40.597	46.257	**55.075**	47.541	45.487	43.350		40.507
Normalized	100%	94.6%	94.9%	99.45%	87.28%	73.3%	84.92%	88.76%	93.13%		99.67%
Standard Deviation	2.6%	2.8%	3%	0.7%	2.9%	2.9%	3%	3%	2.9%		2.8%
Smallpt - G.I.R.1.S (sec)	**48.816**	5.733	5.723	**5.246**	5.872	5.804	5.658	6.195	5.821	5.697	5.739
Normalized	10.75%	91.51%	91.67%	100%	89.34%	90.39%	92.72%	84.68%	90.12%	92.08%	91.41%
Standard Deviation	3.9%	0.1%	0.3%	0.2%	1.1%	0.6%	0.6%	0.3%	0.7%	0.4%	0.4%
XZ Compression - C.u.1.0.3.s.i.i.C.L.9 (sec)	20.158	19.571	19.434	**17.305**	**20.446**	20.321	20.298	20.082	19.819	19.920	19.447
Normalized	85.85%	88.42%	89.04%	100%	84.64%	85.16%	85.25%	86.17%	87.32%	86.87%	88.99%
Standard Deviation	0.9%	0.5%	0.9%	1.2%	0.6%	1.1%	0.7%	0.3%	0.9%	1.4%	1.1%
Zstd Compression - C.u.1.0.3.s.i.i.C.L.1	**11.512**	11.491	11.481	**11.255**	11.328	11.447	11.357	11.424	11.318	11.362	11.507
Normalized	97.77%	97.95%	98.03%	100%	99.36%	98.32%	99.1%	98.52%	99.44%	99.06%	97.81%
Standard Deviation	0.1%	0.9%	0.5%	0.6%	0.2%	0.8%	0.4%	0.8%	0.2%	0.3%	0.6%
DeepSpeech - CPU (sec)	**125.22**	106.305 79	106.759 26	**105.626 53**	121.539 89	120.815 52	122.255 92	120.749 14	121.060 44	118.507 79	120.551 85
Normalized	84.35%	99.36%	98.94%	100%	86.91%	87.43%	86.4%	87.48%	87.25%	89.13%	87.62%
Standard Deviation	0.9%	0%	0.2%	0.3%	1.1%	1.3%	1%	0.8%	1.7%	0.5%	1%
Radiance Benchmark - Serial (sec)	**705.916**	646.274	644.339	622.121	623.207		**606.315**	648.931	614.539	609.232	
Normalized	85.89%	93.82%	94.1%	97.46%	97.29%		100%	93.43%	98.66%	99.52%	
Radiance Benchmark - SMP Parallel (sec)	**218.563**	204.086	208.883	200.302	207.769		201.346	217.689	**195.315**	198.456	
Normalized	89.36%	95.7%	93.5%	97.51%	94.01%		97%	89.72%	100%	98.42%	
ASKAP - tConvolve MPI - Gridding (Million Grid Points/sec)	1584	1646	**1563**	**1845**	1618	1599		1580	1576		1569
Normalized	85.87%	89.21%	84.74%	100%	87.72%	86.67%		85.63%	85.41%		85.06%
Standard Deviation	0.1%	0%	0.3%	0%	0%	0.2%		0%	0.2%		0.2%

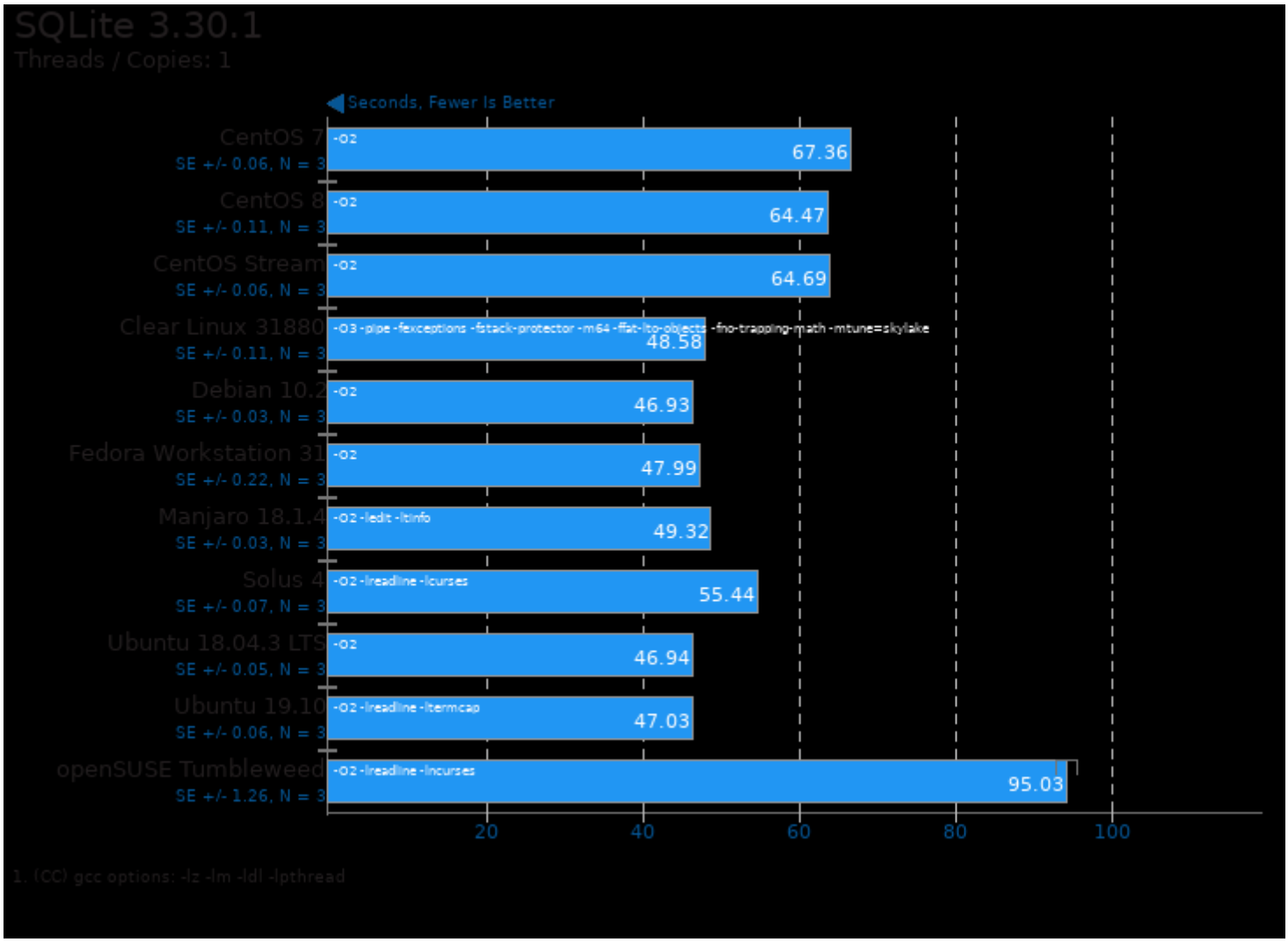
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ASKAP - tConvolve MPI - Degridding (Million Grid	2391	2504	2388	2501	2453	2420		2396	2390	2397
Normalized	95.49%	100%	95.38%	99.9%	97.97%	96.63%		95.68%	95.46%	95.73%
Standard Deviation	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%		0%	0.2%	0.2%
GROMACS - Water Benchmark (Ns/Day)		1.489	1.485	1.529	1.442	1.514		1.517	1.497	1.525
Normalized		97.38%	97.12%	100%	94.31%	99.02%		99.22%	97.91%	99.74%
Standard Deviation		0.2%	0.2%	0.2%	0.2%	0.1%		0.2%	1.4%	0.5%
PostgreSQL pgbench - Buffer Test - Normal Load - Read Only	459212	586296	583683	465551	469021	463460	457521	474489	465964	539142
Normalized	78.32%	100%	99.55%	79.41%	80%	79.05%	78.04%	80.93%	79.48%	91.96%
Standard Deviation	0.2%	0.1%	0.2%	0.1%	0.1%	0.3%	0.1%	1.2%	0.2%	0%
PostgreSQL pgbench - Buffer Test - Normal Load - Read Write	9592	11886	11771	11114	9547	9363	8053	9697	9561	9794
Normalized	80.7%	100%	99.03%	93.5%	80.32%	78.77%	67.75%	81.58%	80.44%	82.39%
Standard Deviation	0.3%	0.7%	0.6%	0.6%	0%	0.1%	0.7%	0.6%	0.3%	0.7%
Redis - GET (Reqs/sec)	2233926	2913378	2904364	3191841	2494024	2351278	2370787	2872292	2785101	2650500	3050566
Normalized	69.99%	91.28%	90.99%	100%	78.14%	73.67%	74.28%	89.99%	87.26%	83.04%	95.57%
Standard Deviation	0.9%	2%	1%	1.3%	1.2%	7.6%	8%	3%	3.8%	4.7%	3%
Redis - SET (Reqs/sec)	1735150	2201996	2190179	2325980	1954548	1800421	2088568	2118980	2157461	2076599	2221773
Normalized	74.6%	94.67%	94.16%	100%	84.03%	77.4%	89.79%	91.1%	92.75%	89.28%	95.52%
Standard Deviation	0.6%	2.6%	1.7%	1.6%	1.1%	6.7%	2.5%	3%	2.3%	1.8%	5.7%
ctx_clock - C.S.T (Clocks)	474	170	166	116	118	186	167	118	120	148	138
Normalized	24.47%	68.24%	69.88%	100%	98.31%	62.37%	69.46%	98.31%	96.67%	78.38%	84.06%
Standard Deviation	0.4%	2.4%		1%	2%		1.9%	1%	1%	0.8%	0.8%
Sysbench - CPU (Events/sec)	38882	36305	36296	38220	36086	39135	39200	39307	37472	39262	36391
Normalized	98.92%	92.36%	92.34%	97.23%	91.81%	99.56%	99.73%	100%	95.33%	99.89%	92.58%
Standard Deviation	0.1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Apache Cassandra -	181739	176721	174083	201658	186065	186958	192282	163402	163301	167519	173479
Normalized	90.12%	87.63%	86.33%	100%	92.27%	92.71%	95.35%	81.03%	80.98%	83.07%	86.03%
Standard Deviation	1.6%	9%	1.4%	6.2%	9.4%	9.5%	7.9%	0.6%	1.3%	0.6%	5.2%
Facebook RocksDB - Rand Fill (Op/s)		1729439	1690827	1494583	1624419	1573573		1160208	1375004		1581160
Normalized		100%	97.77%	86.42%	93.93%	90.99%		67.09%	79.51%		91.43%
Standard Deviation		2.1%	0.2%	0.4%	0.6%	2.8%		3%	1.2%		0.6%

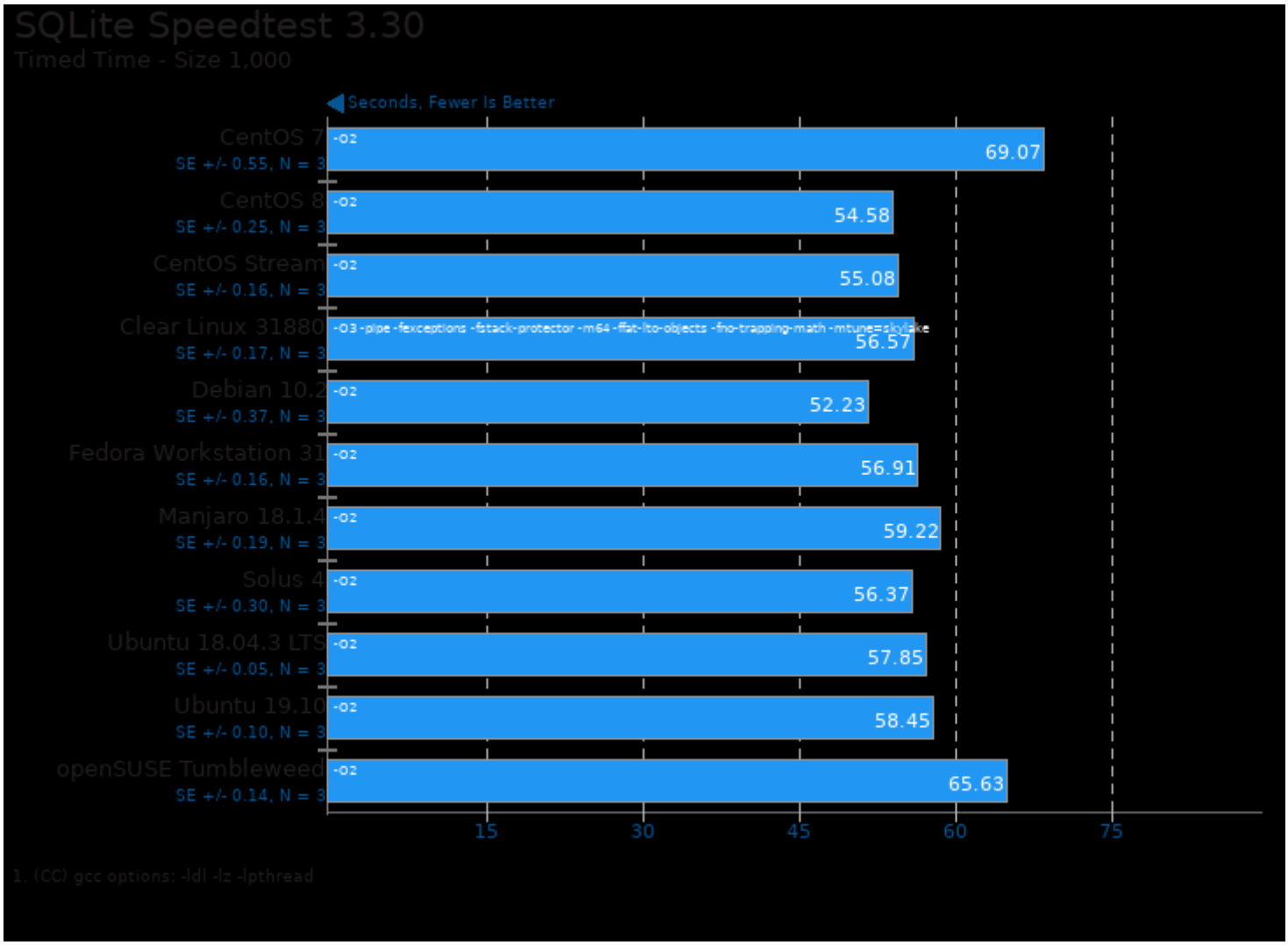
Intel Core i9 10980XE Linux Performance

Facebook RocksDB - Rand Read (Op/s)		1053060 26	**1053636 74**	9272191 4	1052220 31	9942629 4		**8314374 8**	9729634 6		1026143 88
Normalized		99.95%	100%	88%	99.87%	94.36%		78.91%	92.34%		97.39%
Standard Deviation		0.1%	0.1%	0.6%	0.2%	0.6%		0.3%	0.5%		0%
PyBench - T.F.A.T.T (Milliseconds)	**1246**	1123	1122	890	1163	1030	1113	950	910	1121	**840**
Normalized	67.42%	74.8%	74.87%	94.38%	72.23%	81.55%	75.47%	88.42%	92.31%	74.93%	100%
Standard Deviation	0.2%	0.2%		0.3%	0.2%	0.3%	0.4%	0.3%	0.1%	0.2%	0.4%
NGINX Benchmark - S.W.P.S	**23030**	28095	28235	51575	25925	41136	35007	50237	46741	**58520**	52936
Normalized	39.35%	48.01%	48.25%	88.13%	44.3%	70.29%	59.82%	85.84%	79.87%	100%	90.46%
Standard Deviation	0.5%	0.4%	0.5%	0.8%	1.3%	0.5%	0.9%	0.7%	0.5%	0.1%	1.2%
Apache Benchmark - S.W.P.S	**17233**	21462	21750	34929	17299	19976		32164	28514		**35485**
Normalized	48.56%	60.48%	61.29%	98.43%	48.75%	56.29%		90.64%	80.35%		100%
Standard Deviation	2%	0.1%	0.1%	0.6%	0.2%	2.9%		1.6%	2.8%		1.3%
Systemd Total Boot Time -	**2559**			2589	3349	4680	3280	5139	5499	4133	**5727**
Normalized	100%			98.84%	76.41%	54.68%	78.02%	49.8%	46.54%	61.92%	44.68%
Blender - BMW27 - CPU-Only (sec)	91.71	89.67	89.45	90.89	**93.26**	93.23	93.08	93.15	92.73	90.96	**89.43**
Normalized	97.51%	99.73%	99.98%	98.39%	95.89%	95.92%	96.08%	96.01%	96.44%	98.32%	100%
Standard Deviation	0.4%	0.2%	0.2%	0.2%	0.6%	0.1%	0.2%	0.1%	0.2%	0.2%	0.2%
Blender - Classroom - CPU-Only (sec)	**275.15**	259.17	259.34	267.61	269.52	268.55	268.82	268.85	267.70	265.75	**258.38**
Normalized	93.91%	99.7%	99.63%	96.55%	95.87%	96.21%	96.12%	96.11%	96.52%	97.23%	100%
Standard Deviation	0.4%	0.2%	0.2%	0.1%	0.5%	0.1%	0.1%	0.5%	0.1%	0.2%	0.1%
Blender - Barbershop - CPU-Only (sec)	**377.18**	368.85	367.69	**360.31**	375.81	373.85	373.88	374.44	373.27	371.52	364.57
Normalized	95.53%	97.68%	97.99%	100%	95.88%	96.38%	96.37%	96.23%	96.53%	96.98%	98.83%
Standard Deviation	0.2%	0.3%	0.1%	0.3%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%
Appleseed - Emily (sec)		212.900 763	**211.532 922**	214.687 713	230.944 034	**231.954 227**	230.508 23	231.289 51	228.194 458	223.178 013	224.250 148
Normalized		99.36%	100%	98.53%	91.59%	91.2%	91.77%	91.46%	92.7%	94.78%	94.33%

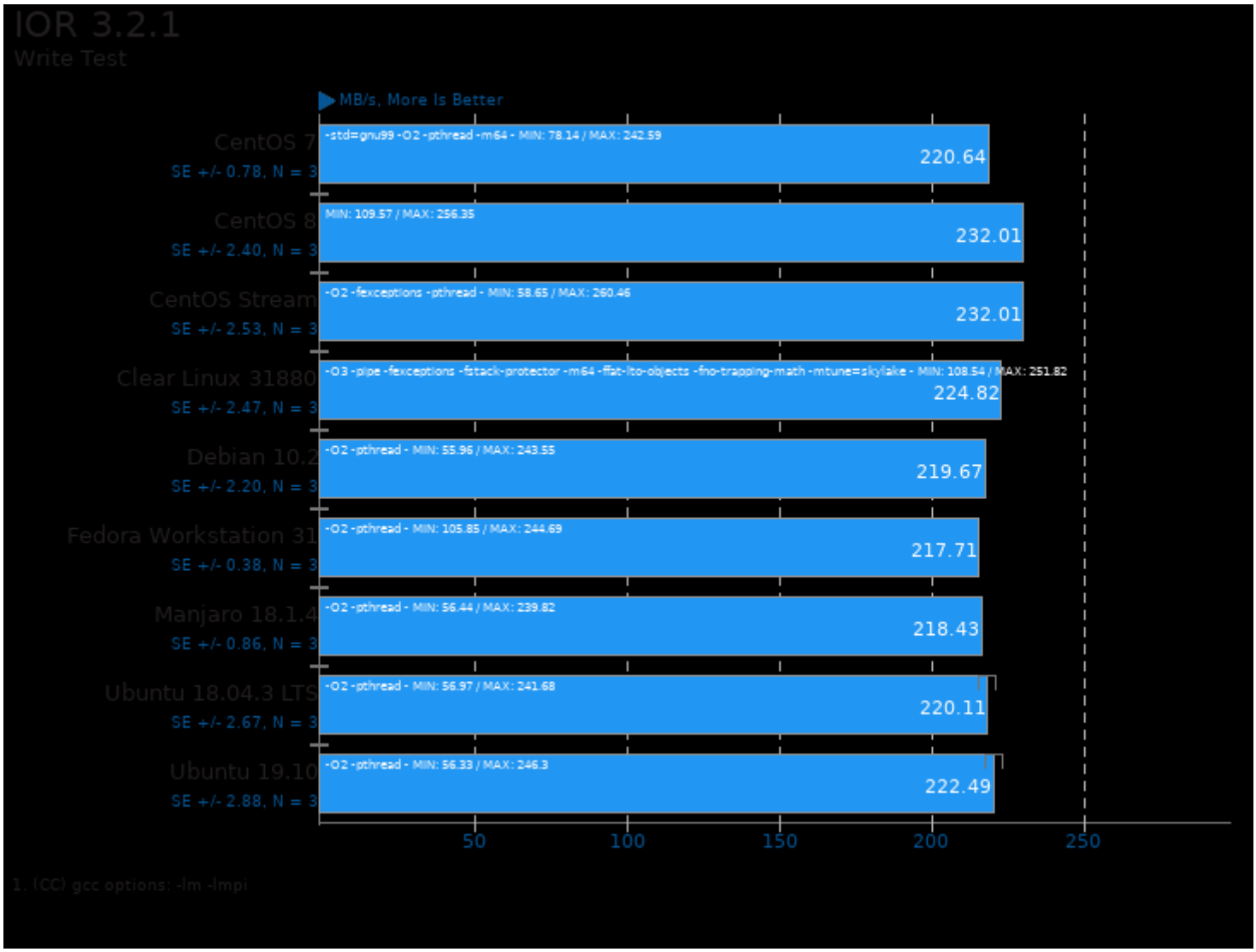
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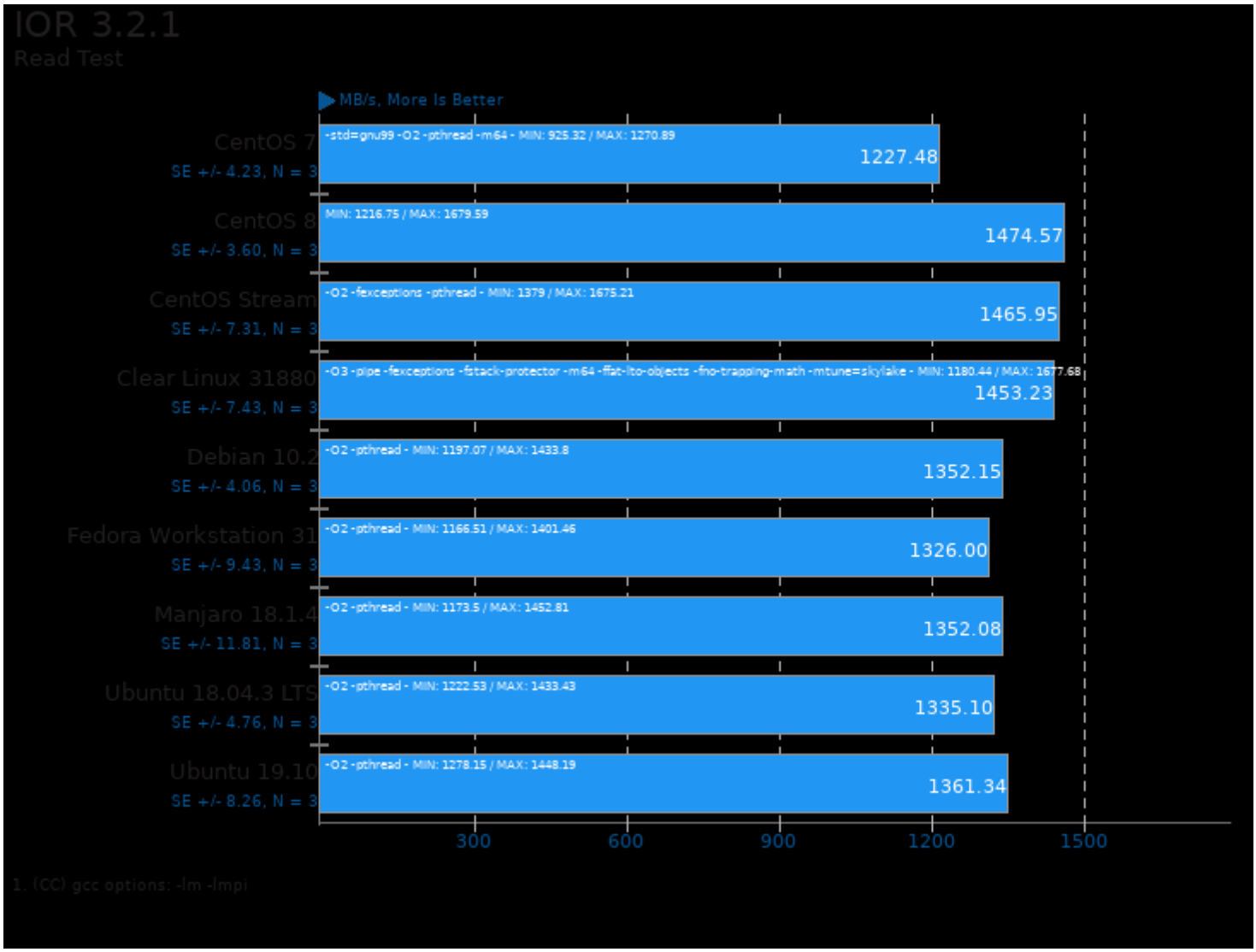
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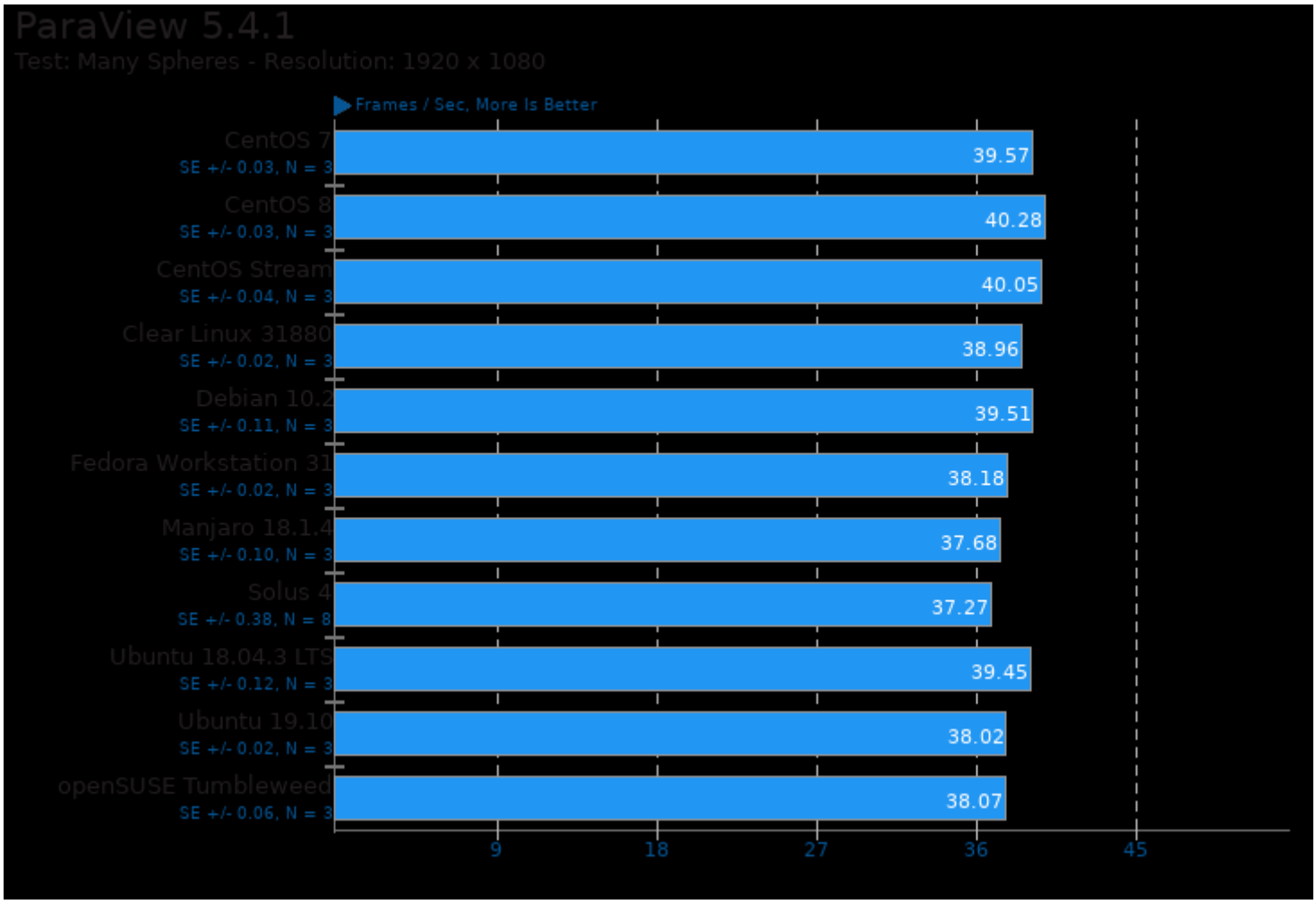
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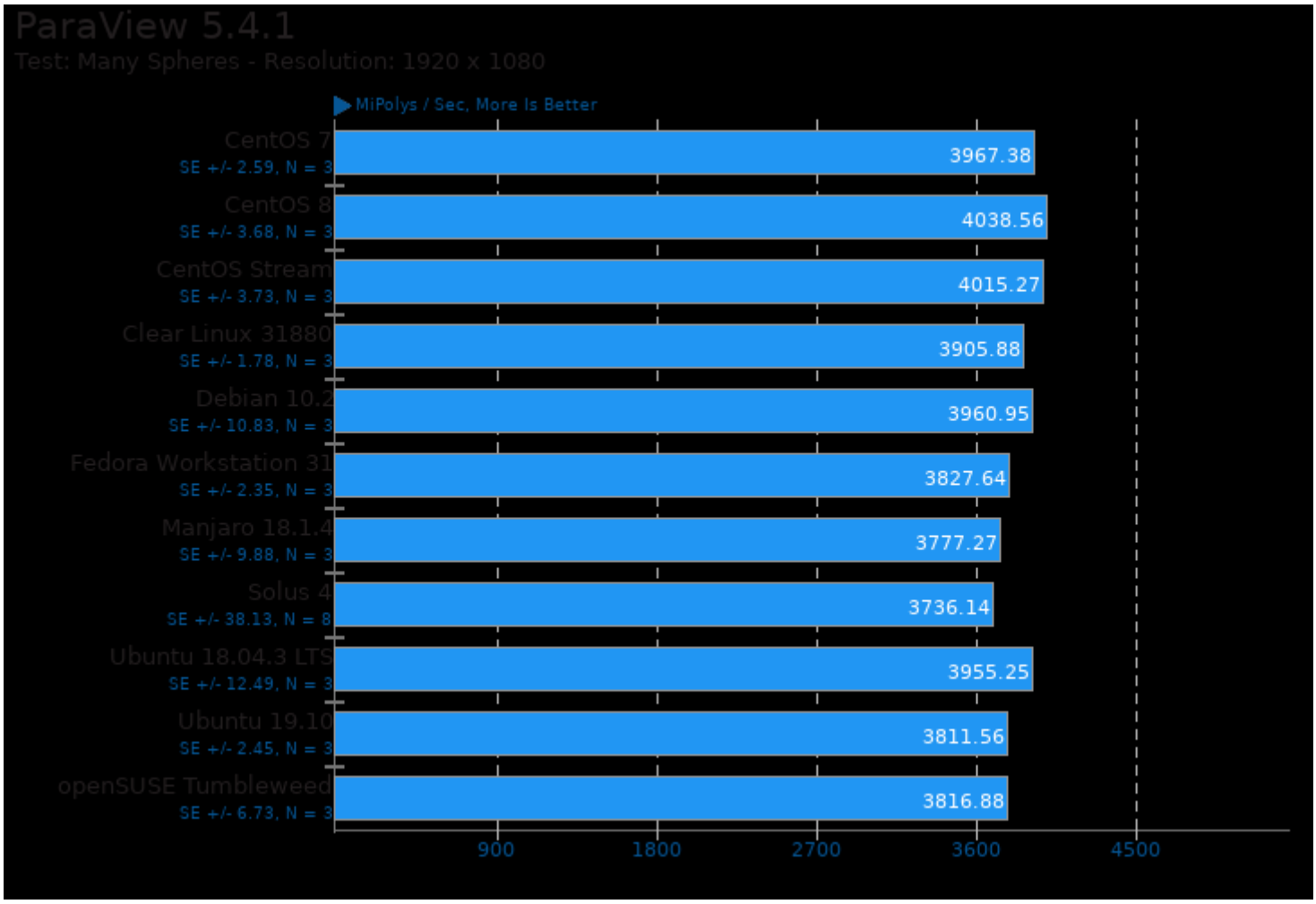
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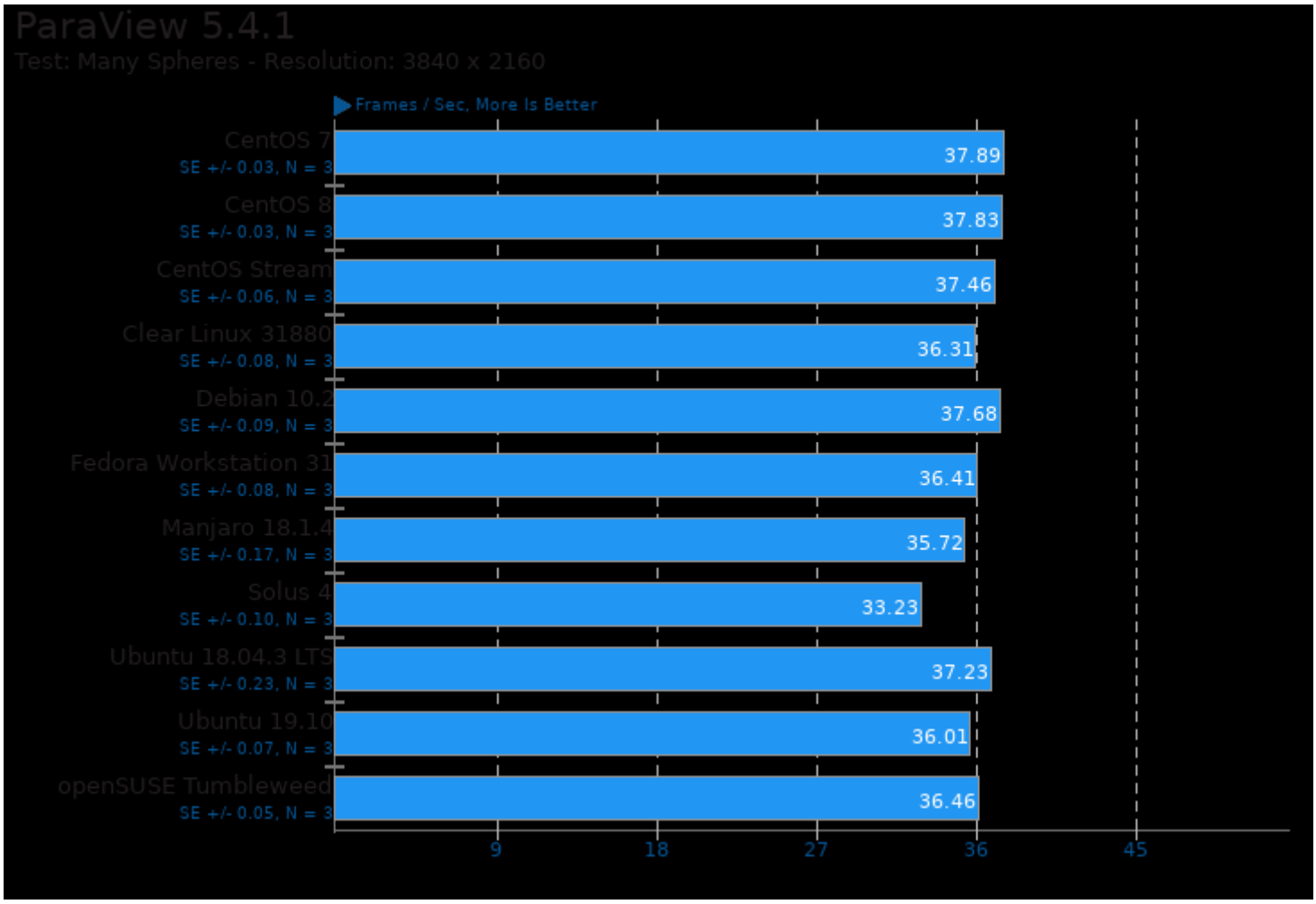
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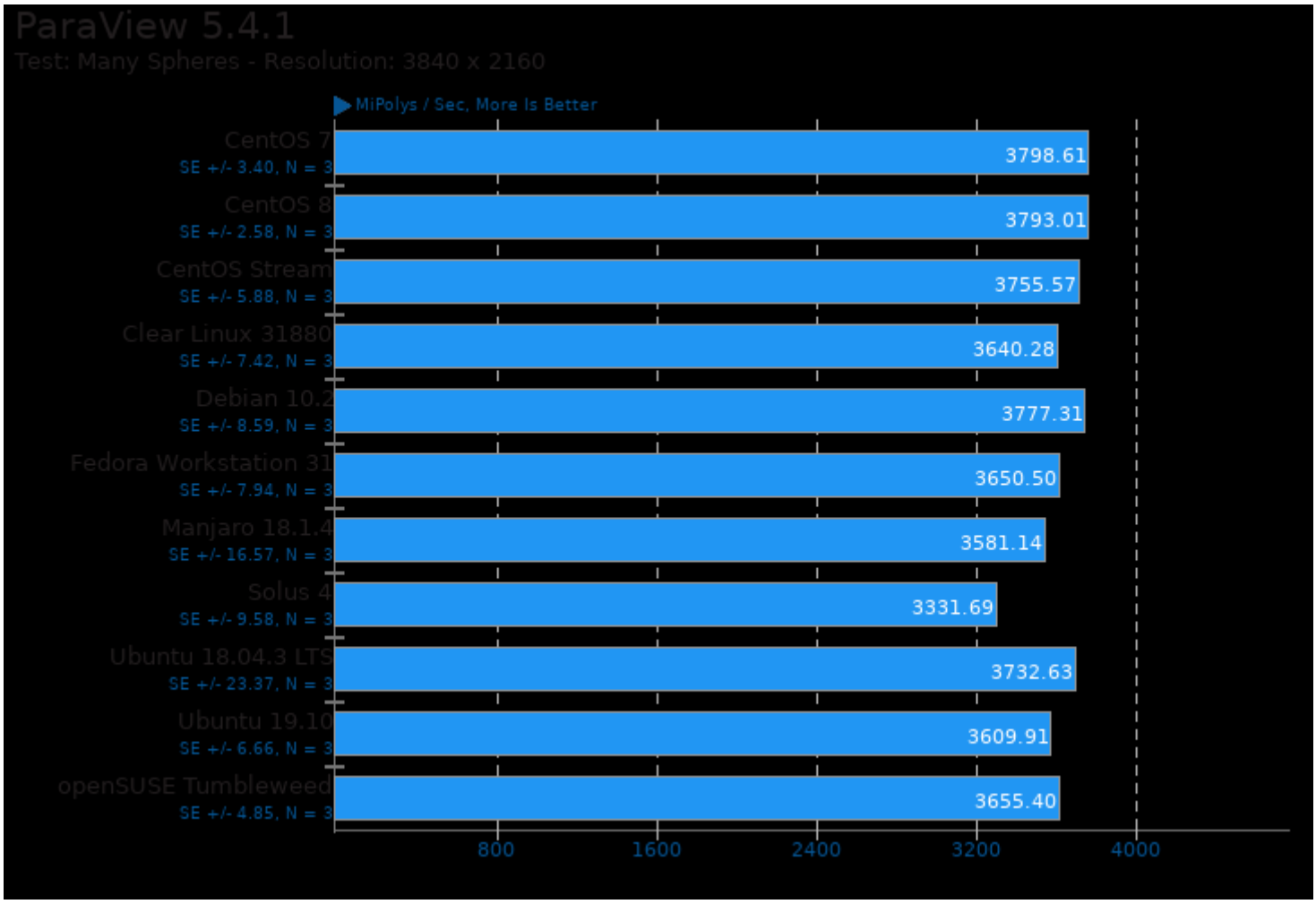
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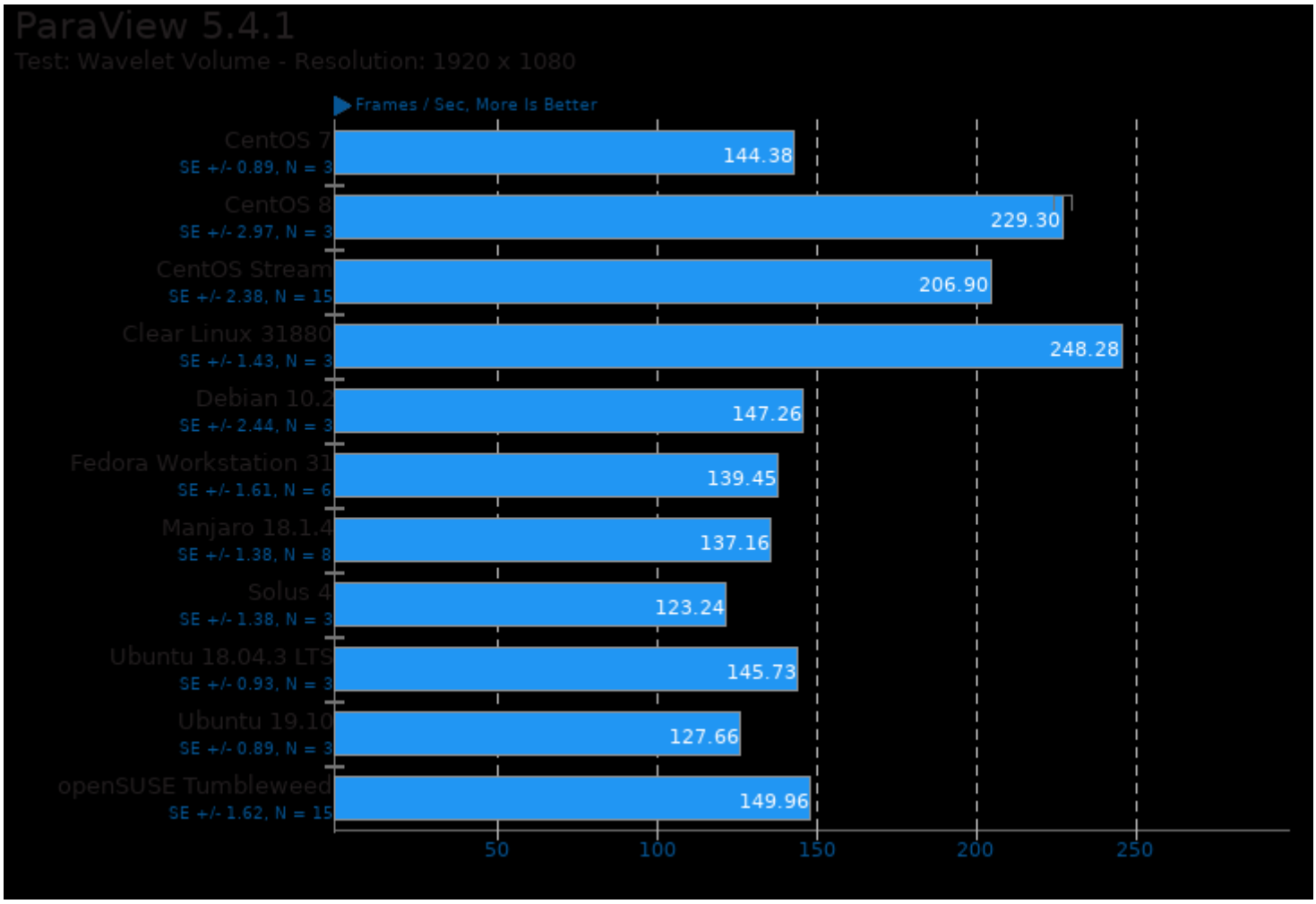
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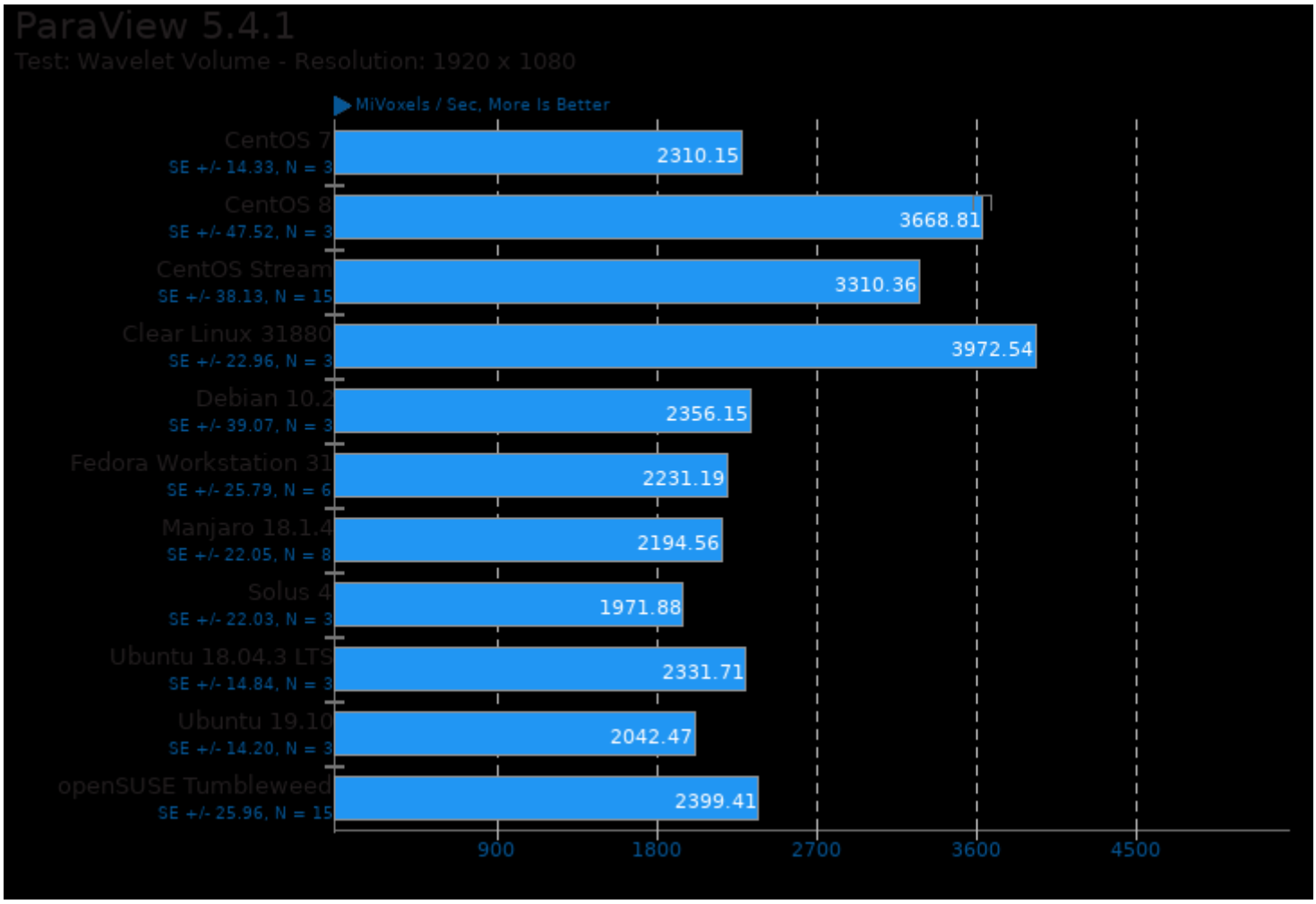
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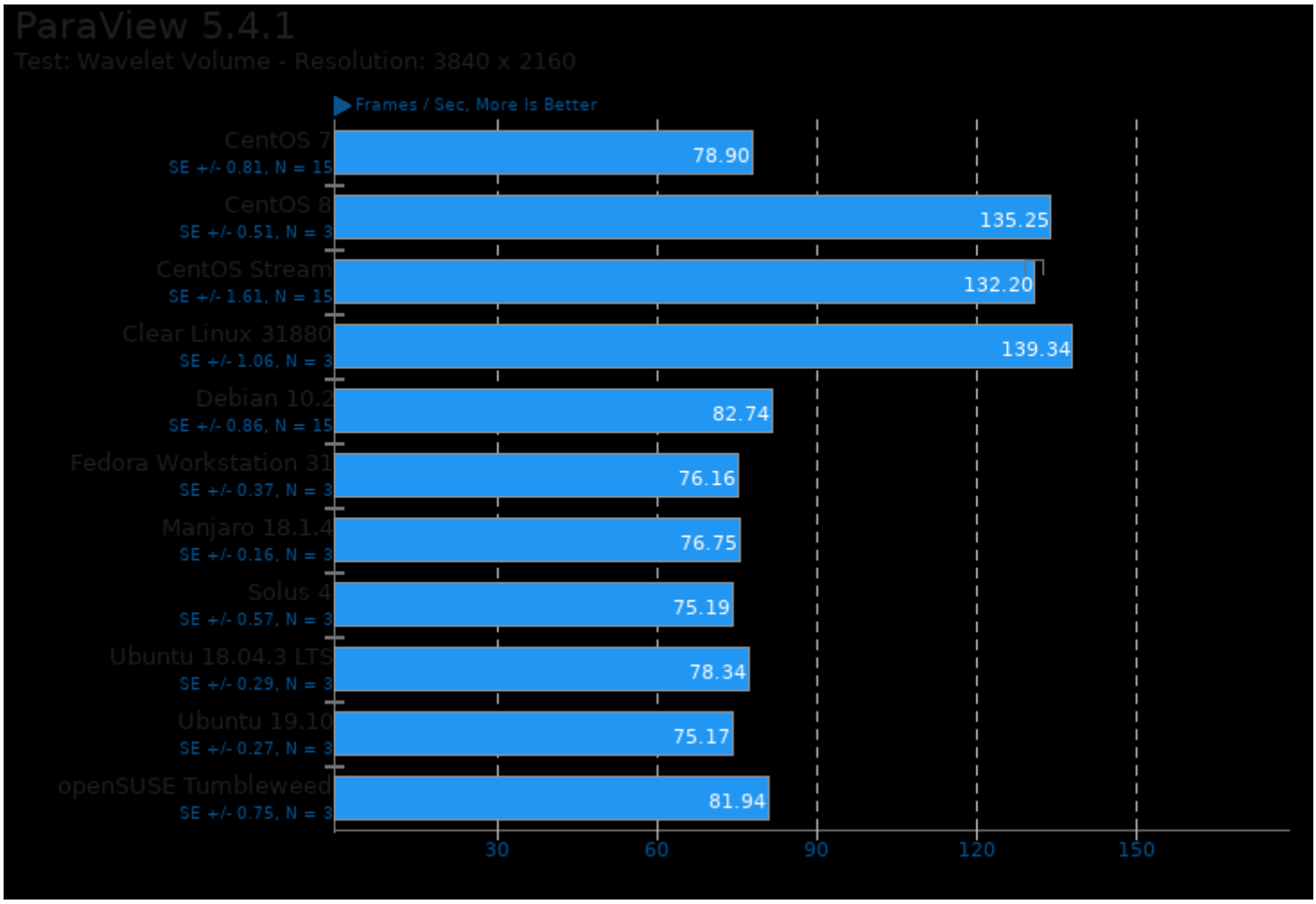


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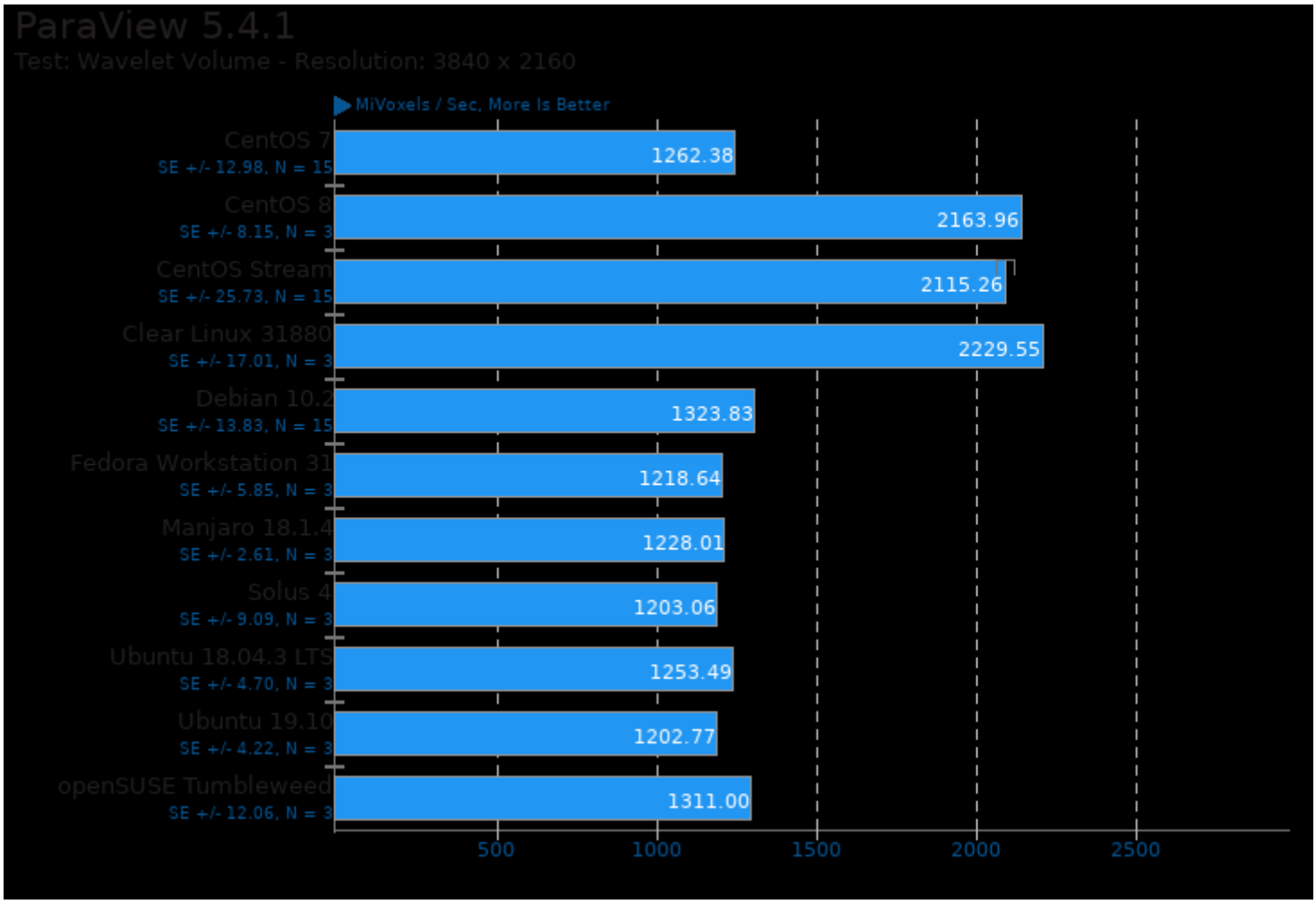


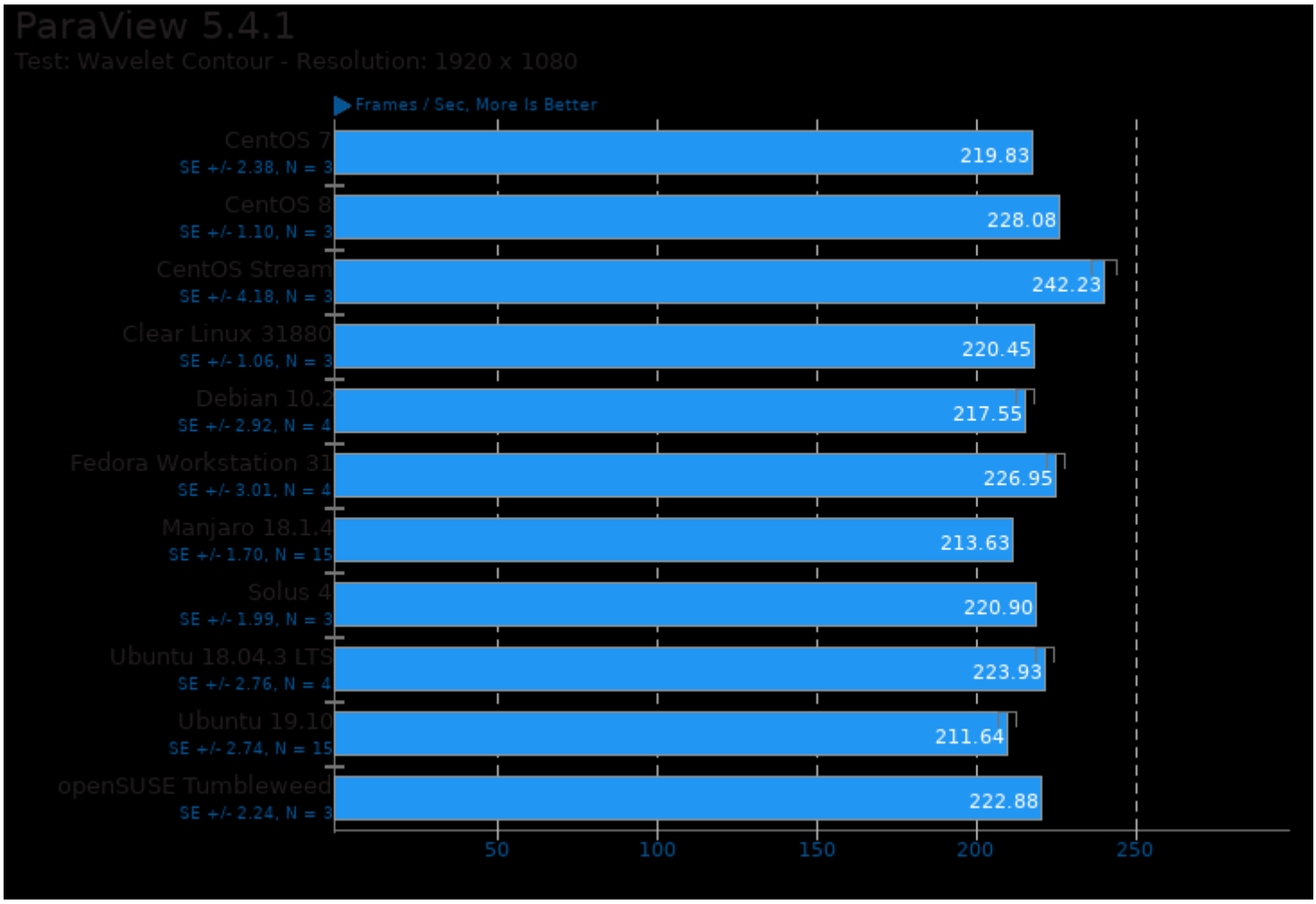
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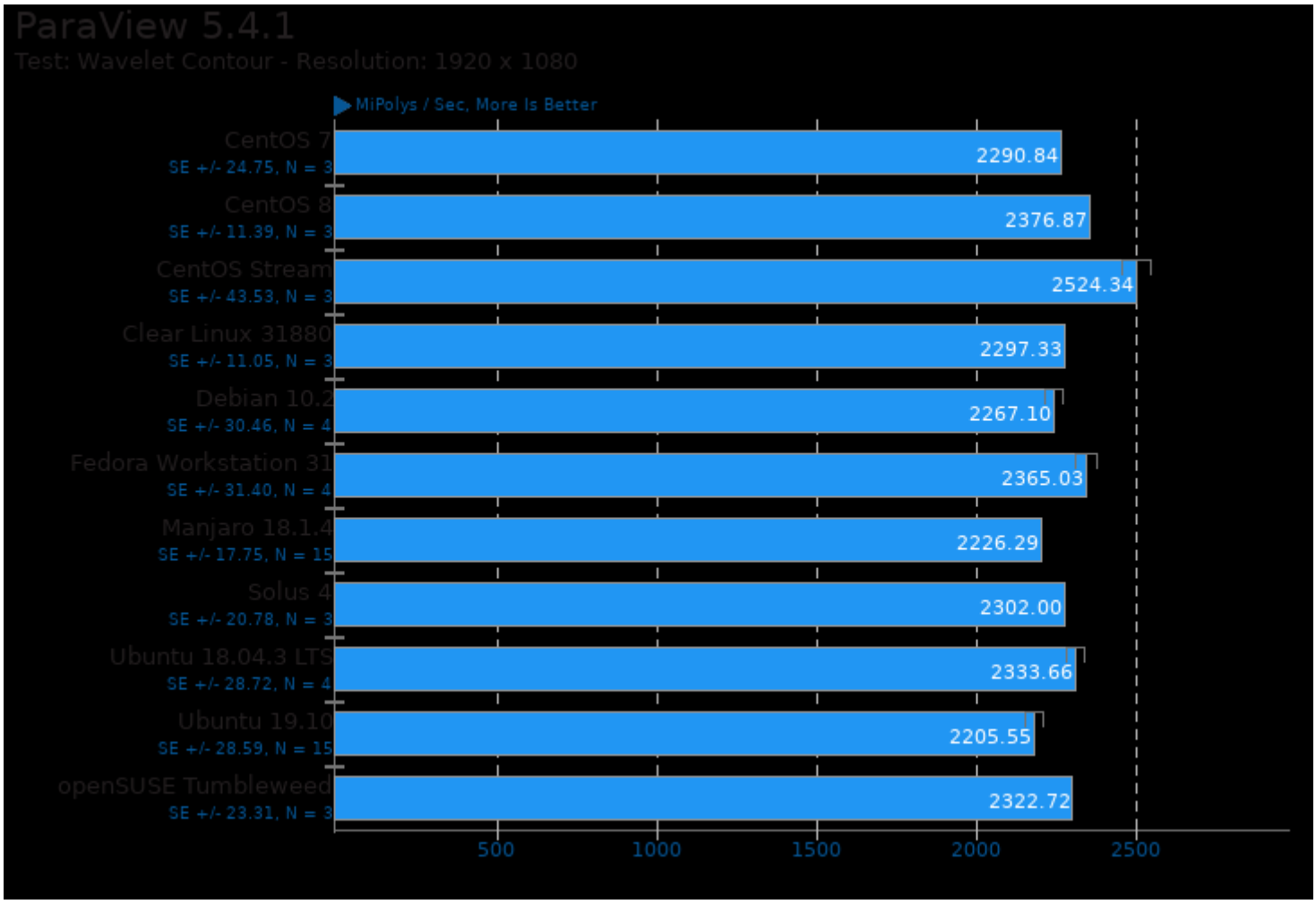

ParaView 5.4.1
Test: Wavelet Volume - Resolution: 3840 x 2160
Frames / Sec, More Is Better
CentOS 7
SE +/- 0.81, N = 15
78.90
CentOS 8
SE +/- 0.51, N = 3
135.25
CentOS Stream
SE +/- 1.61, N = 15
132.20
Clear Linux 31880
SE +/- 1.06, N = 3
139.34
Debian 10.2
SE +/- 0.86, N = 15
82.74
Fedora Workstation 31
SE +/- 0.37, N = 3
76.16
Manjaro 18.1.4
SE +/- 0.16, N = 3
76.75
Solus 4
SE +/- 0.57, N = 3
75.19
Ubuntu 18.04.3 LTS
SE +/- 0.29, N = 3
78.34
Ubuntu 19.10
SE +/- 0.27, N = 3
75.17
openSUSE Tumbleweed
SE +/- 0.75, N = 3
81.94
30
60
90
120
150

Intel Core i9 10980XE Linux Performance

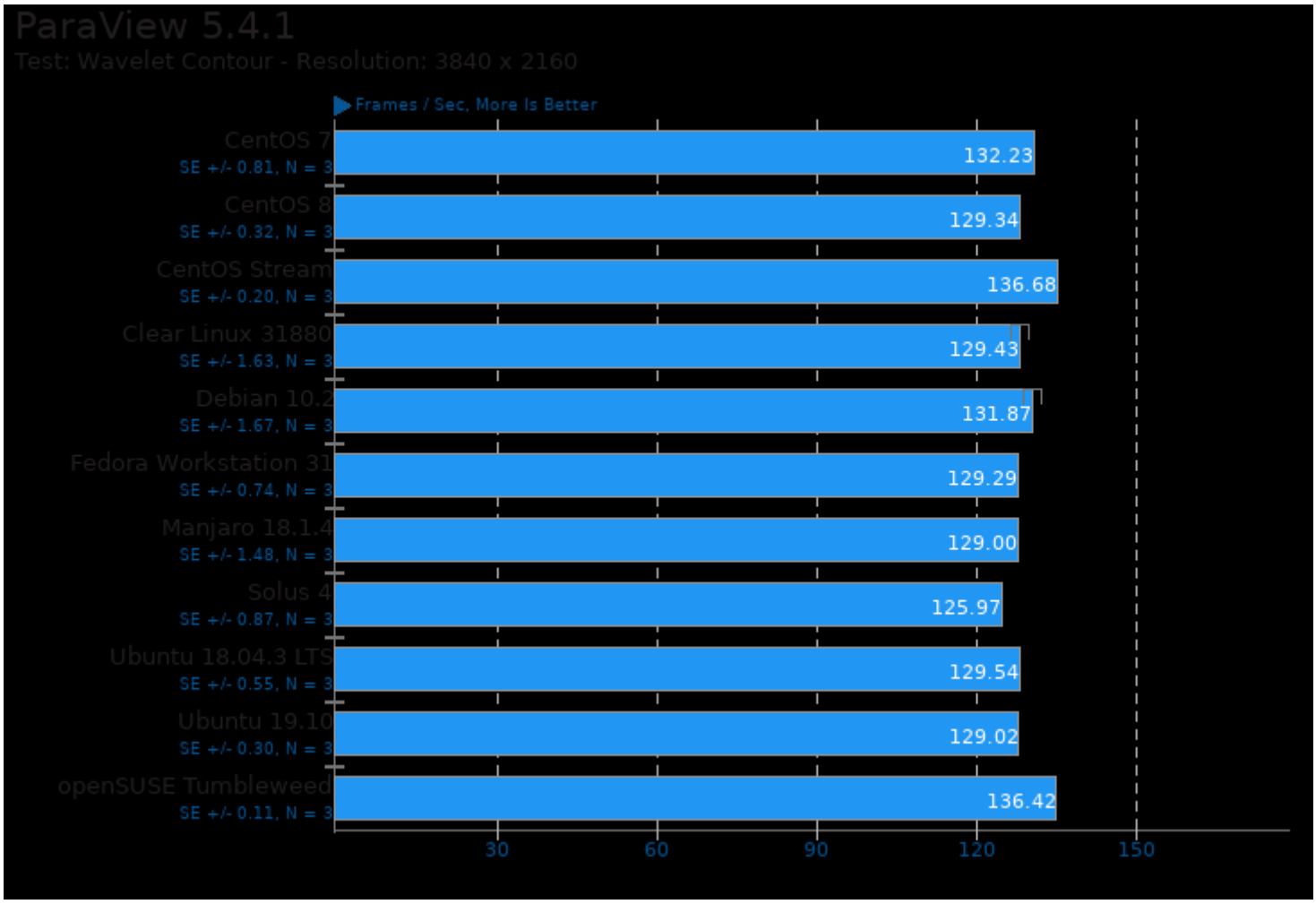



ParaView 5.4.1
Test: Wavelet Contour - Resolution: 1920 x 1080
Frames / Sec, More Is Better
CentOS 7
SE +/- 2.38, N = 3
219.83
CentOS 8
SE +/- 1.10, N = 3
228.08
CentOS Stream
SE +/- 4.18, N = 3
242.23
Clear Linux 31880
SE +/- 1.06, N = 3
220.45
Debian 10.2
SE +/- 2.92, N = 4
217.55
Fedora Workstation 31
SE +/- 3.01, N = 4
226.95
Manjaro 18.1.4
SE +/- 1.70, N = 15
213.63
Solus 4
SE +/- 1.99, N = 3
220.90
Ubuntu 18.04.3 LTS
SE +/- 2.76, N = 4
223.93
Ubuntu 19.10
SE +/- 2.74, N = 15
211.64
openSUSE Tumbleweed
SE +/- 2.24, N = 3
222.88
50
100
150
200
250

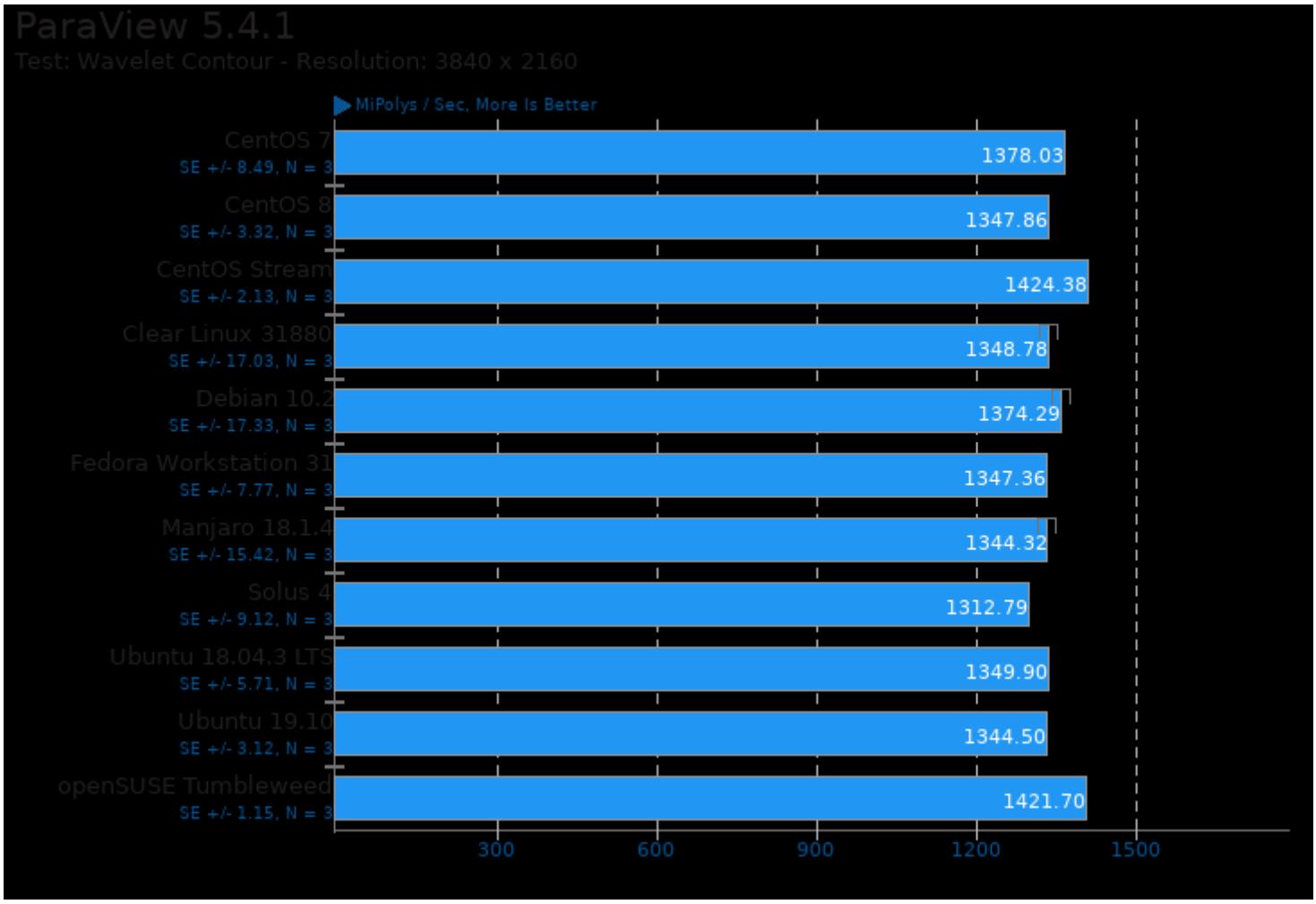
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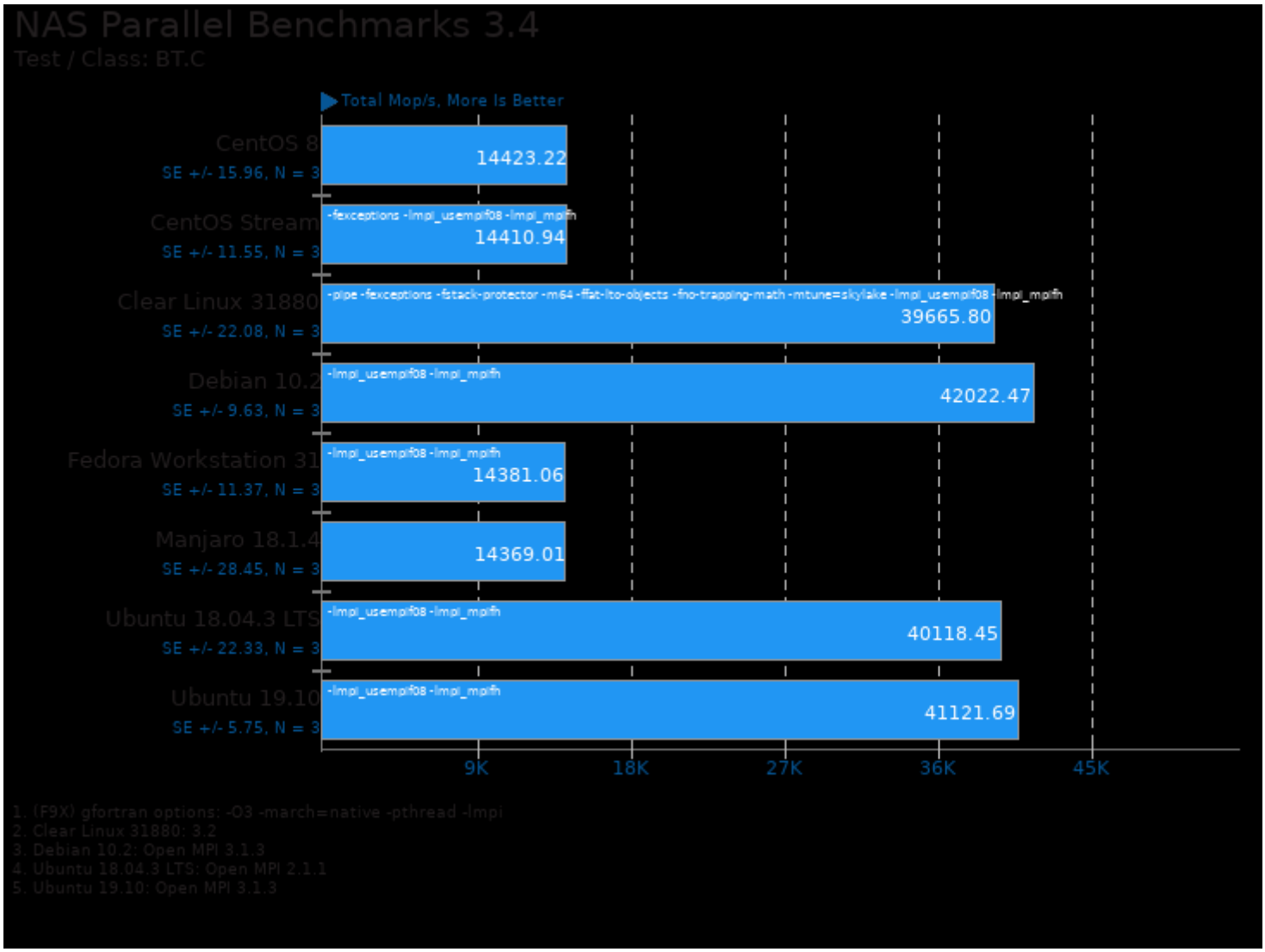
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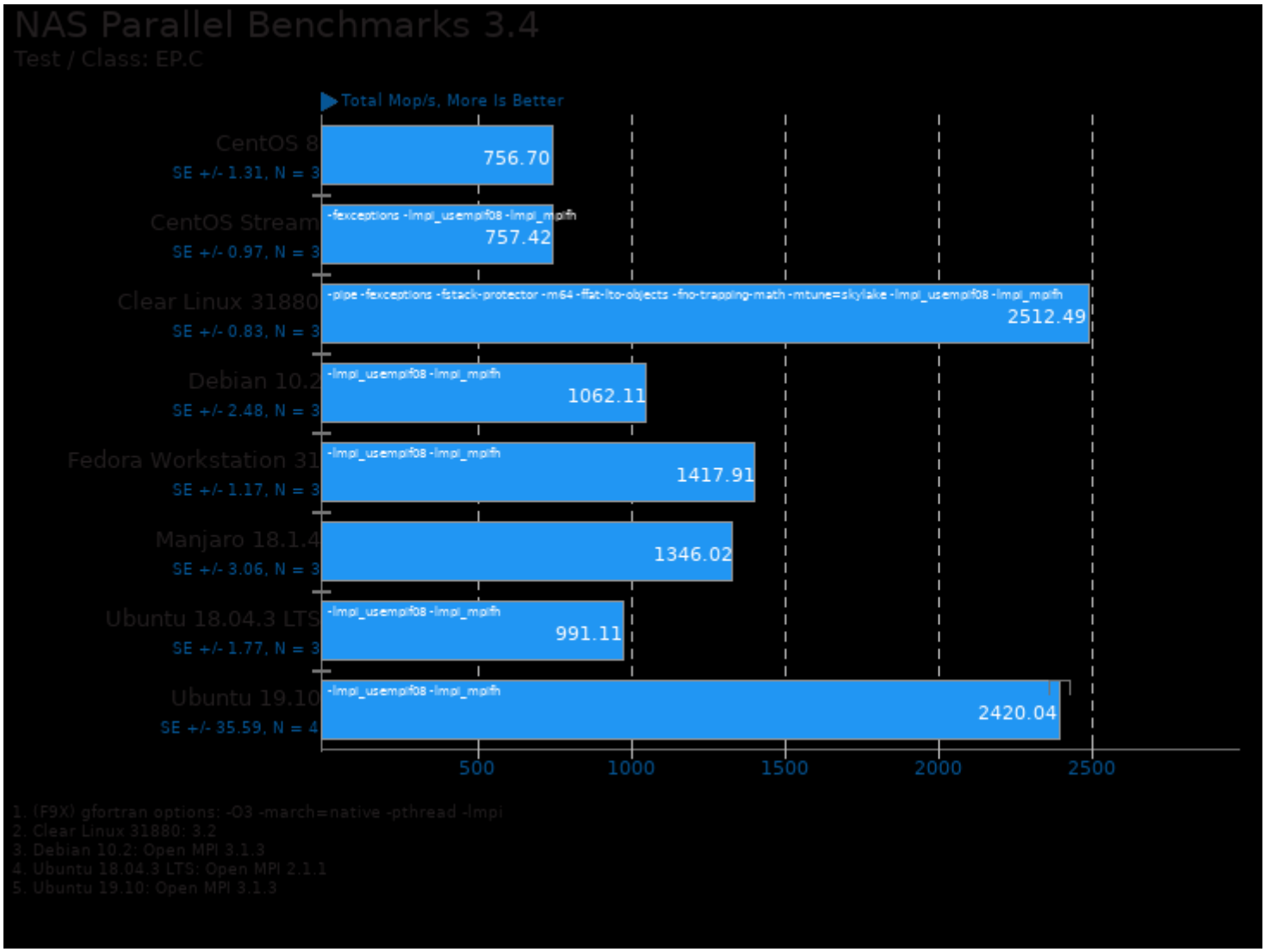
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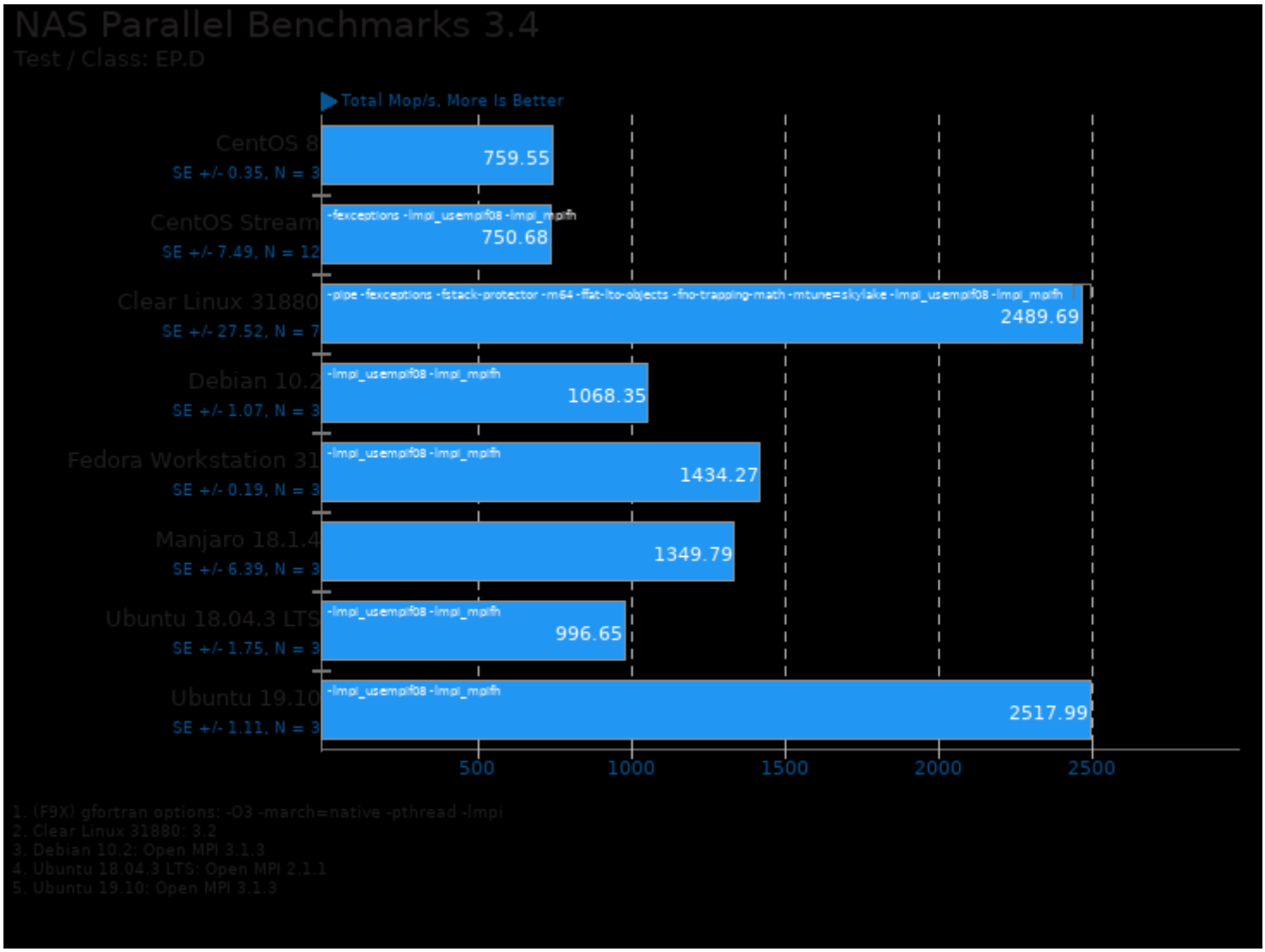
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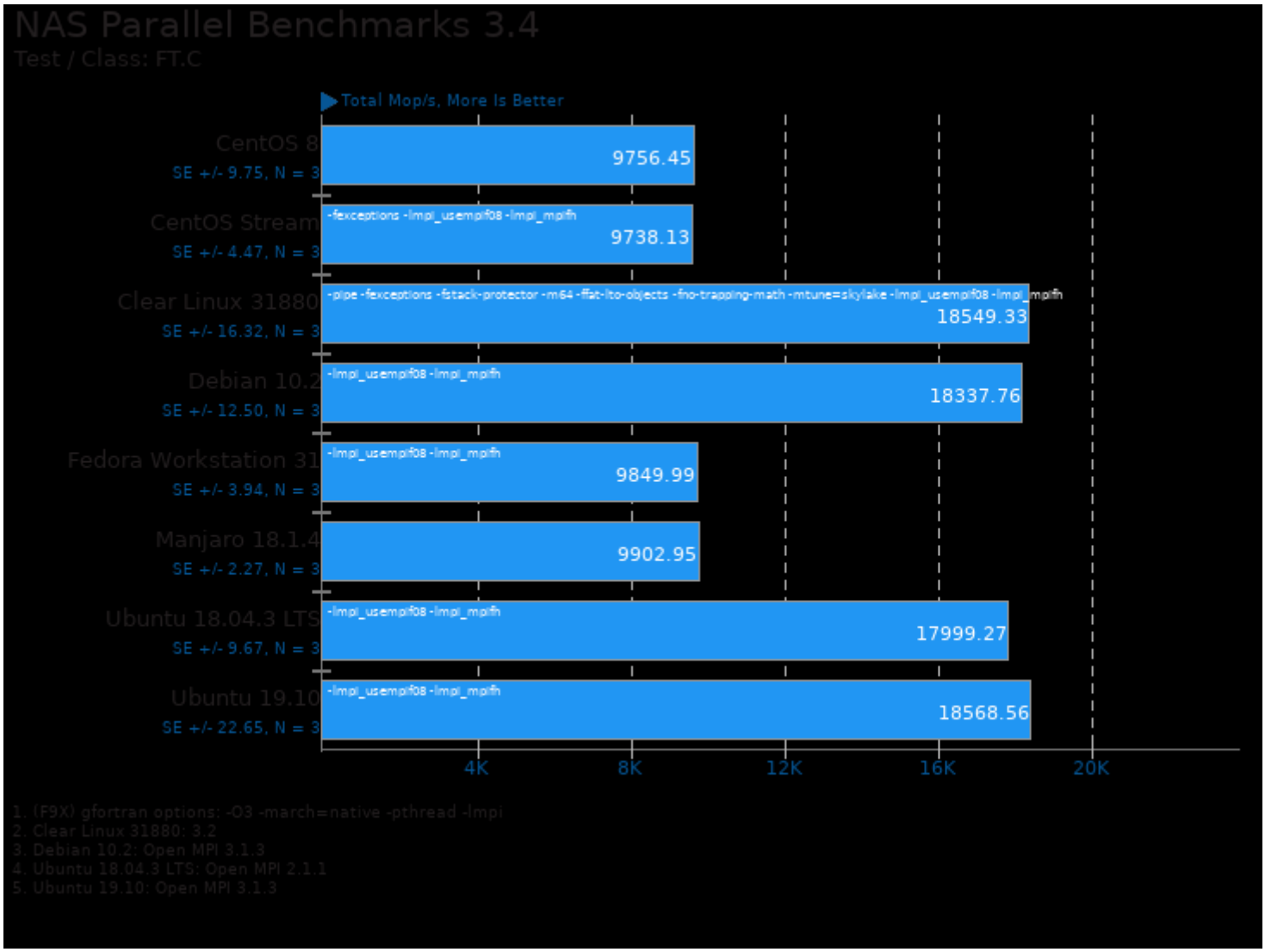
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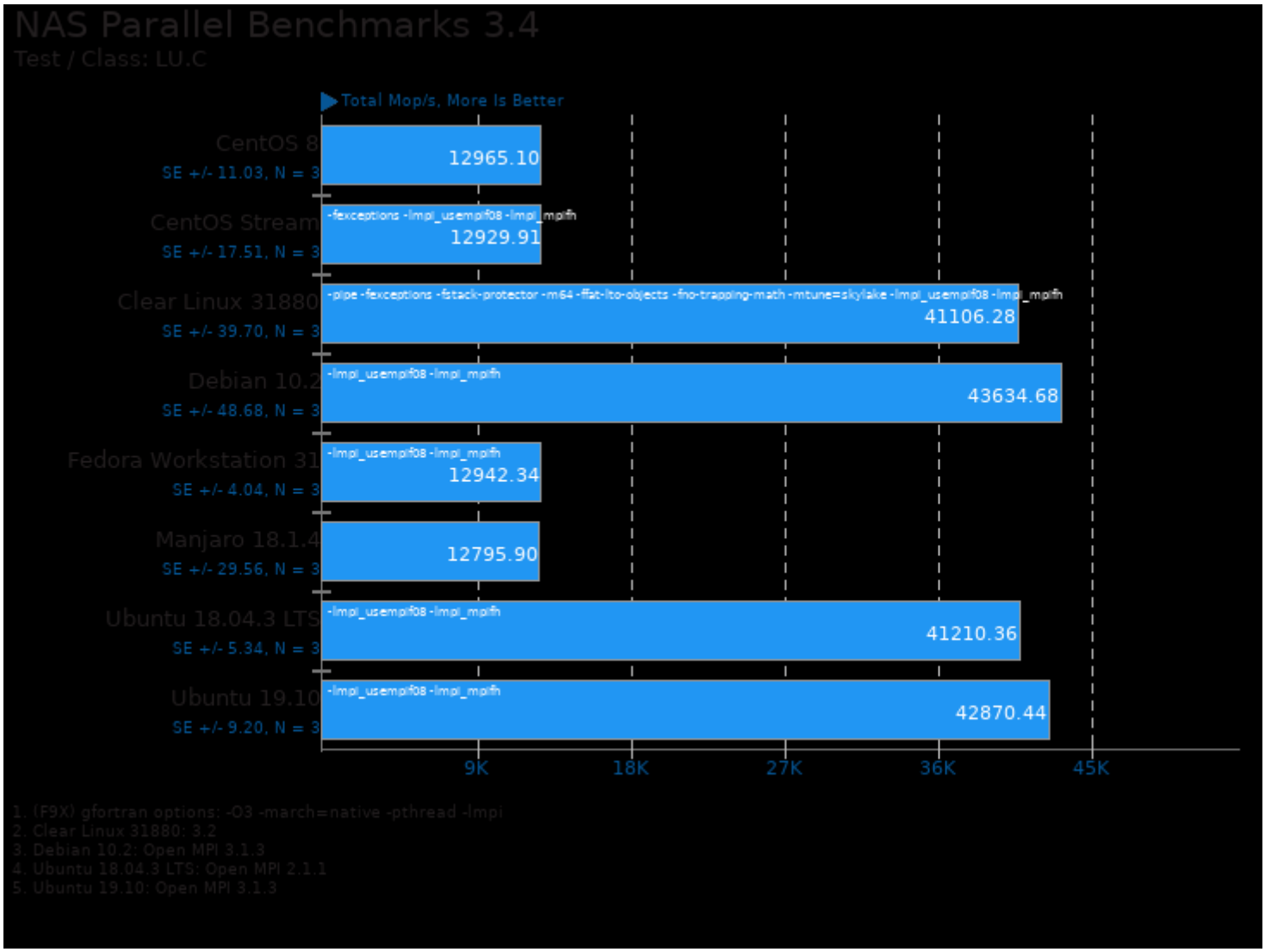
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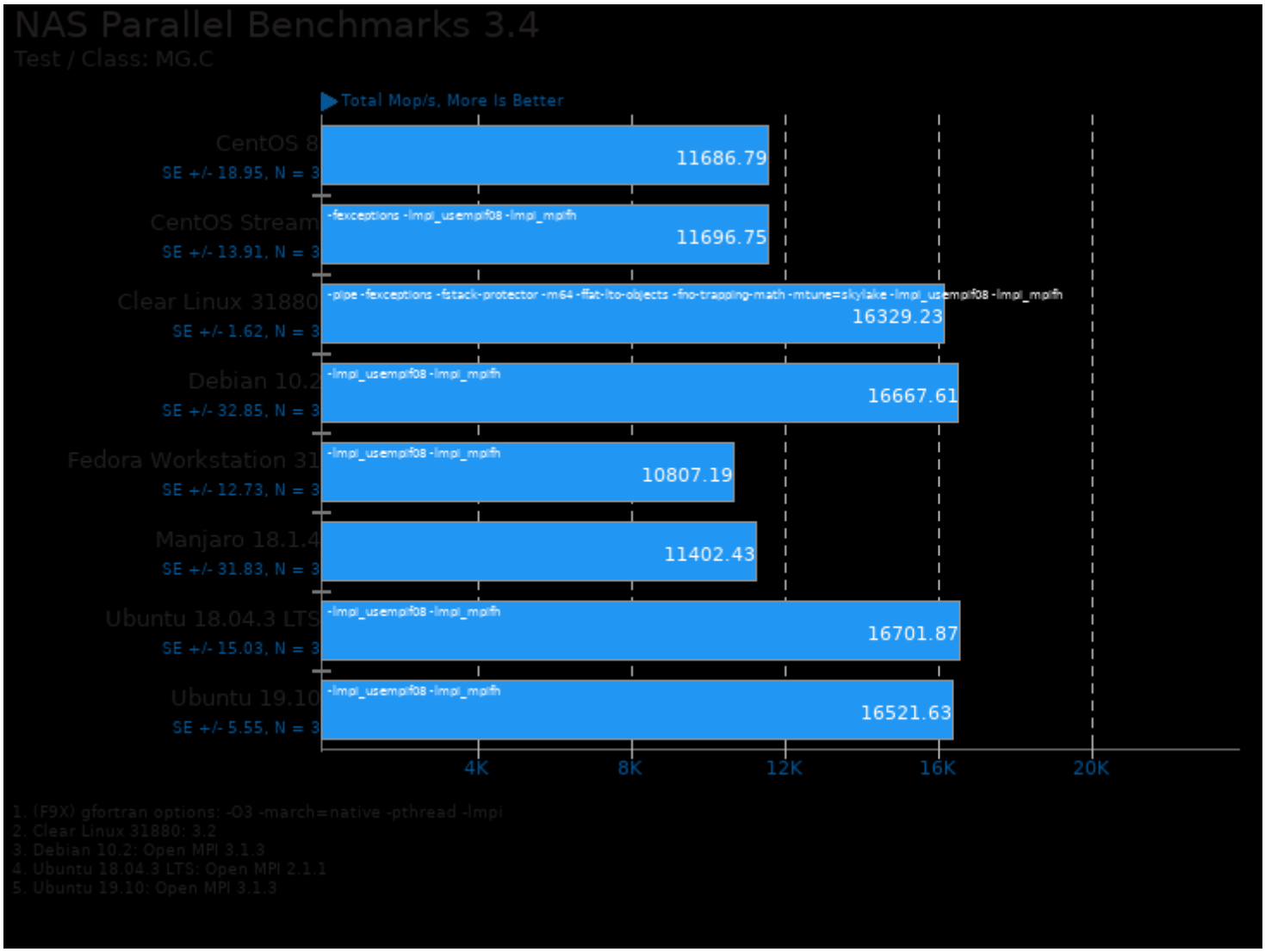
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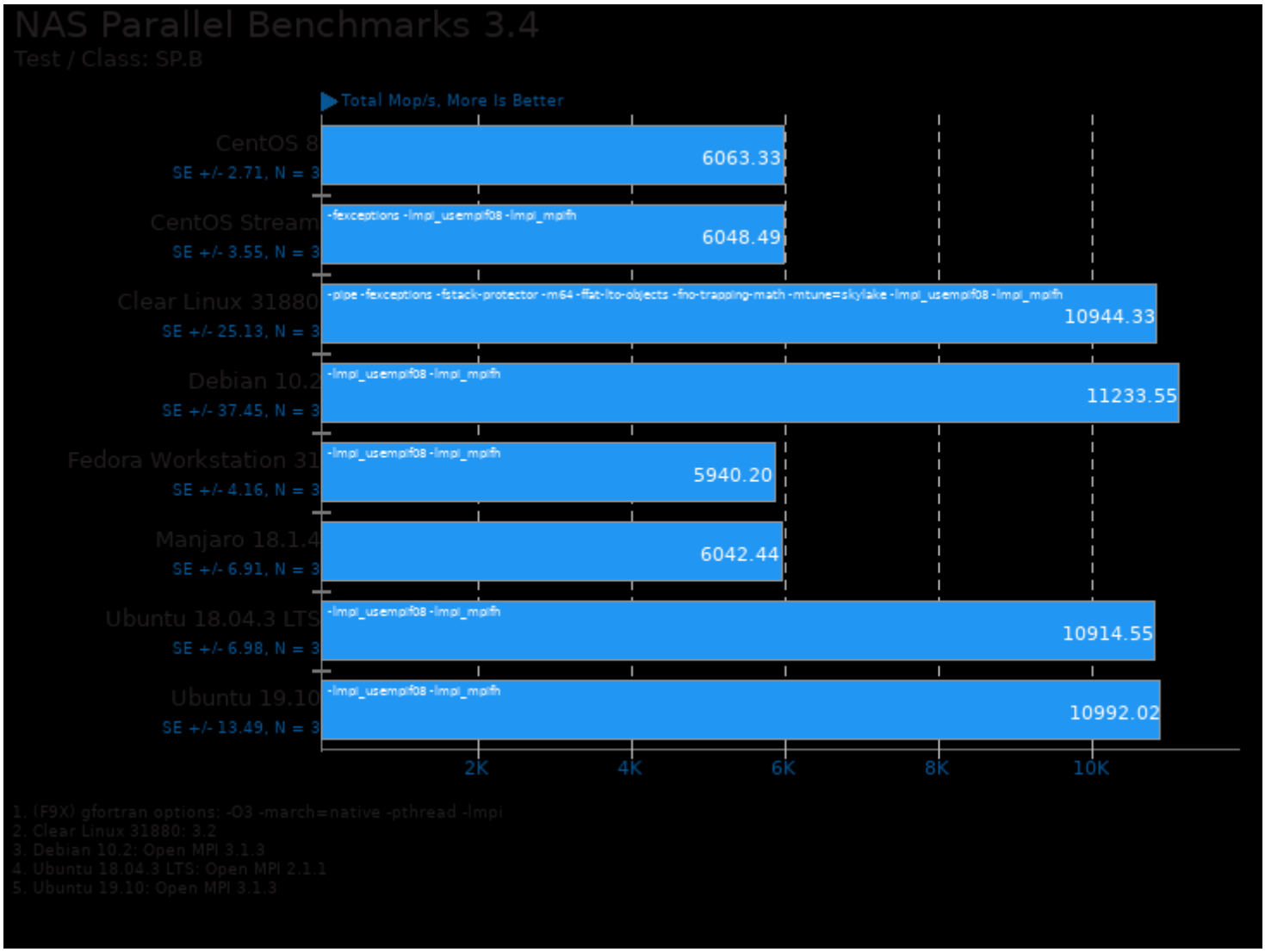
Intel Core i9 10980XE Linux Performance

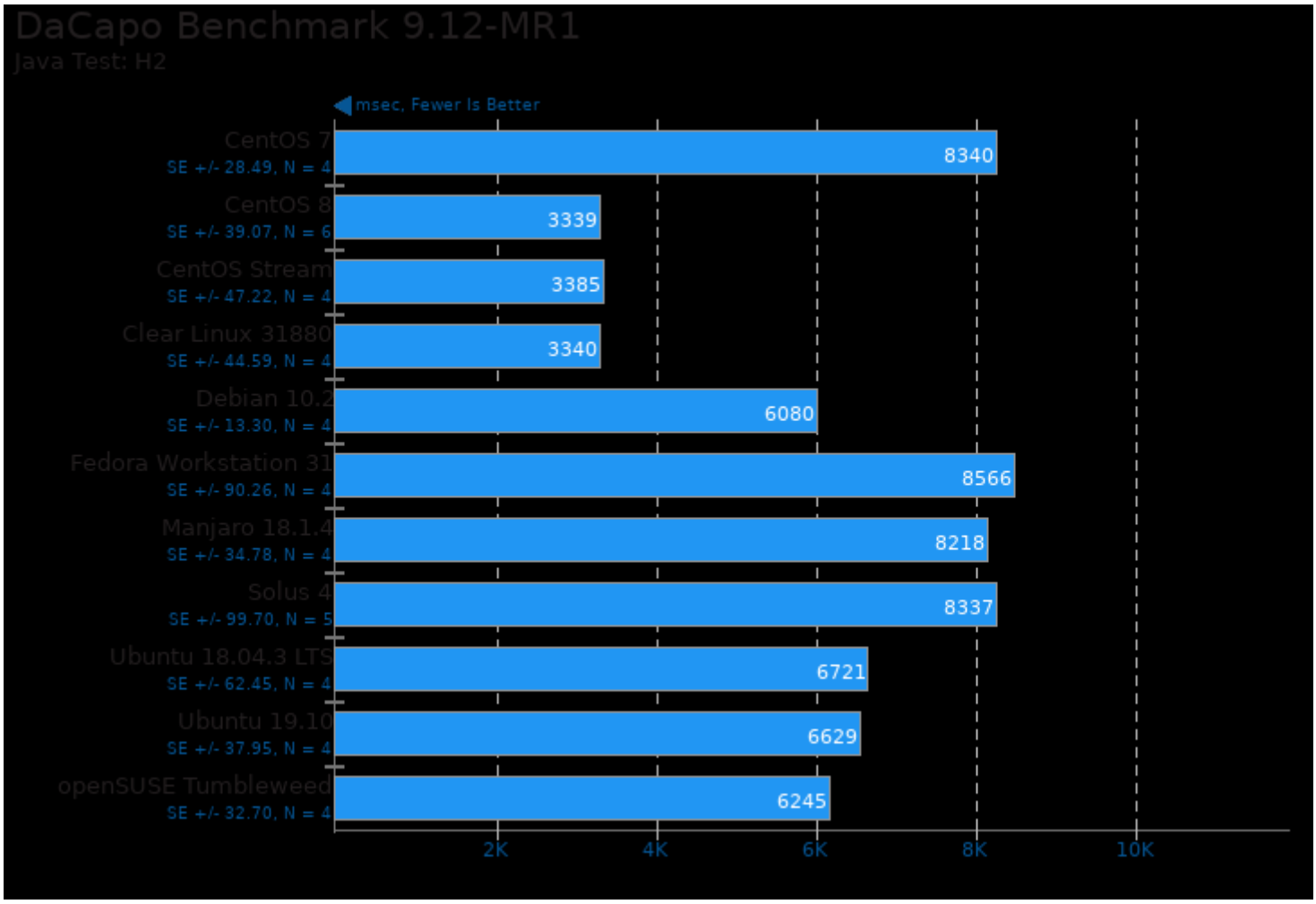


Intel Core i9 10980XE Linux Performance

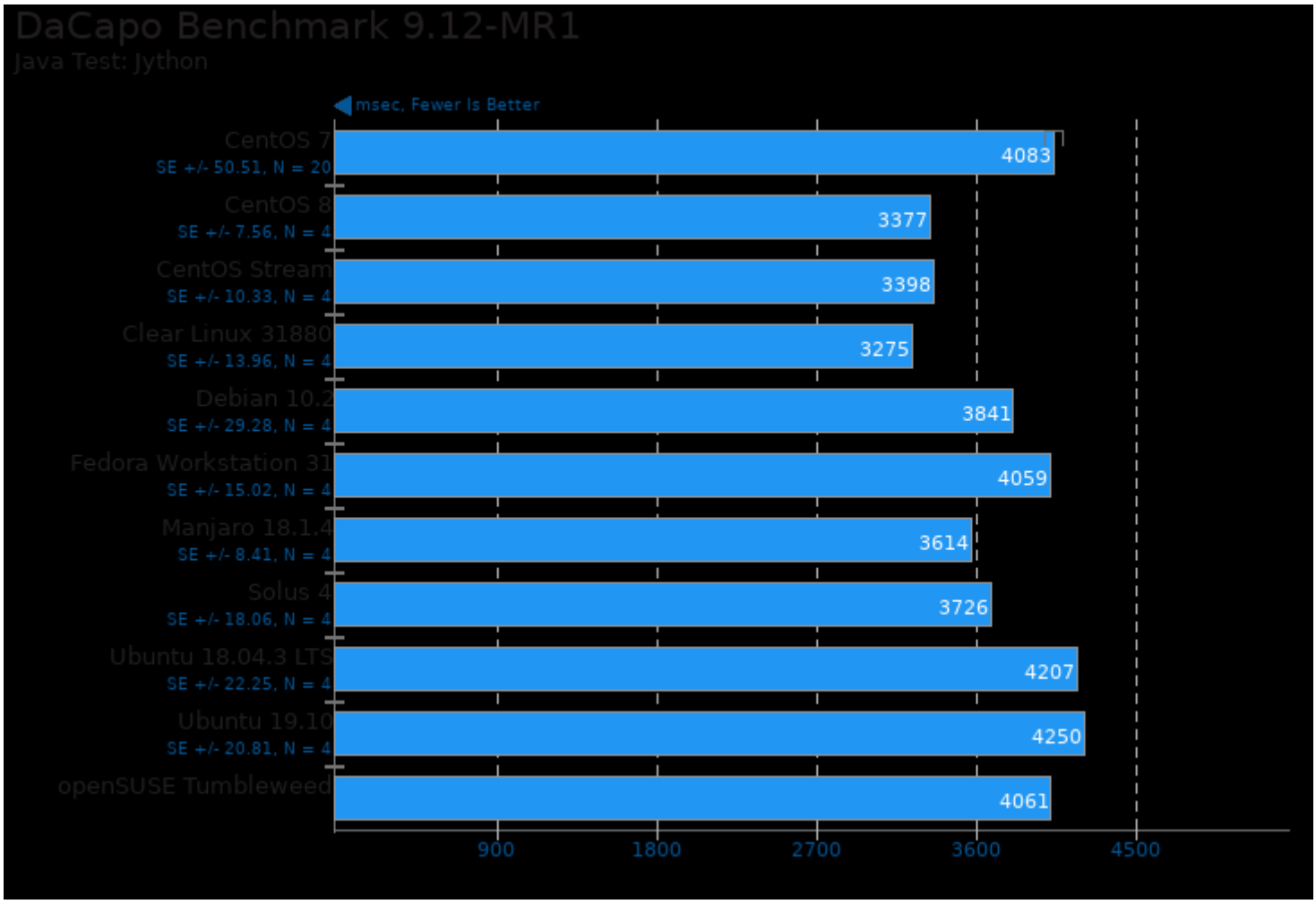


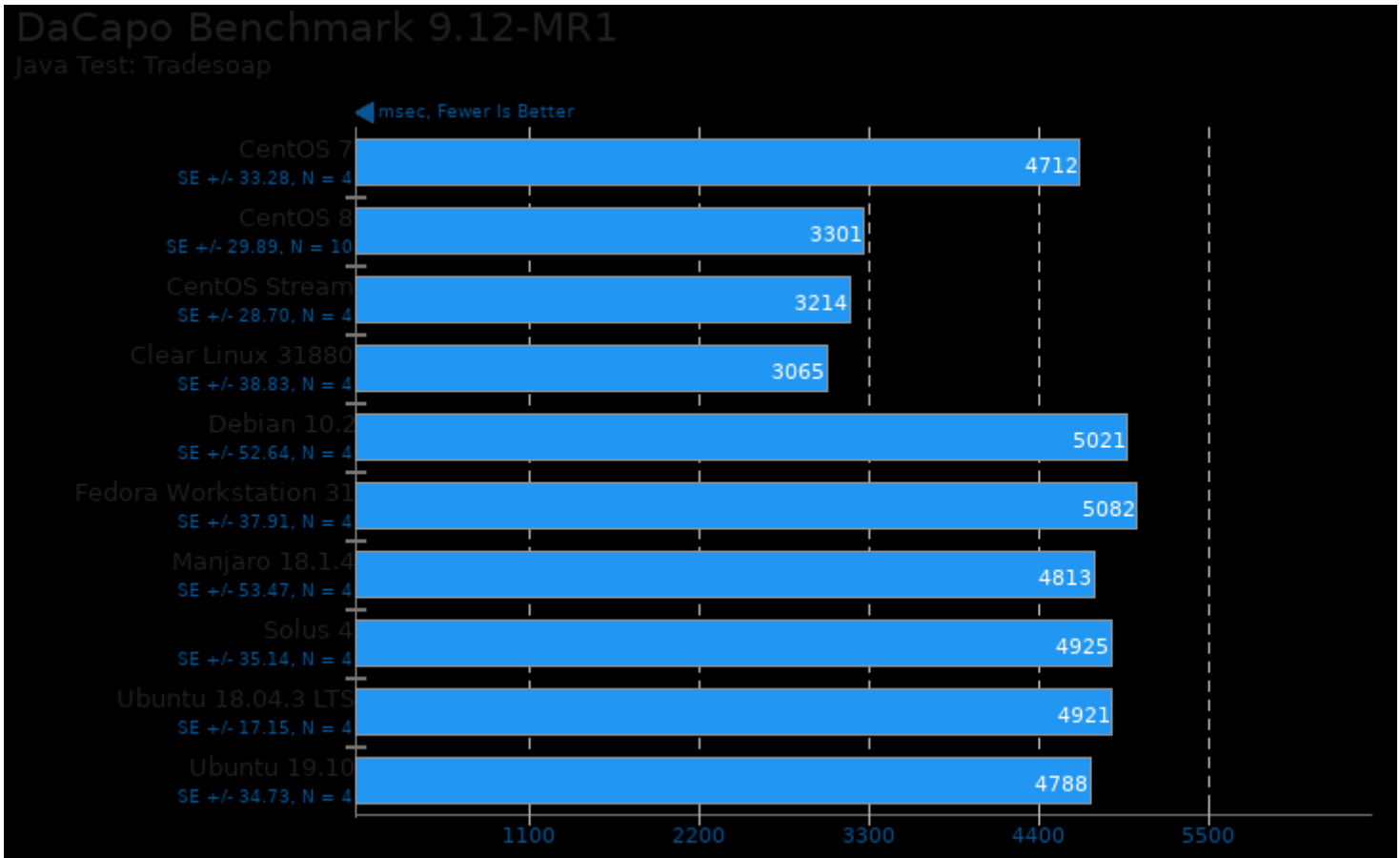
Intel Core i9 10980XE Linux Performance

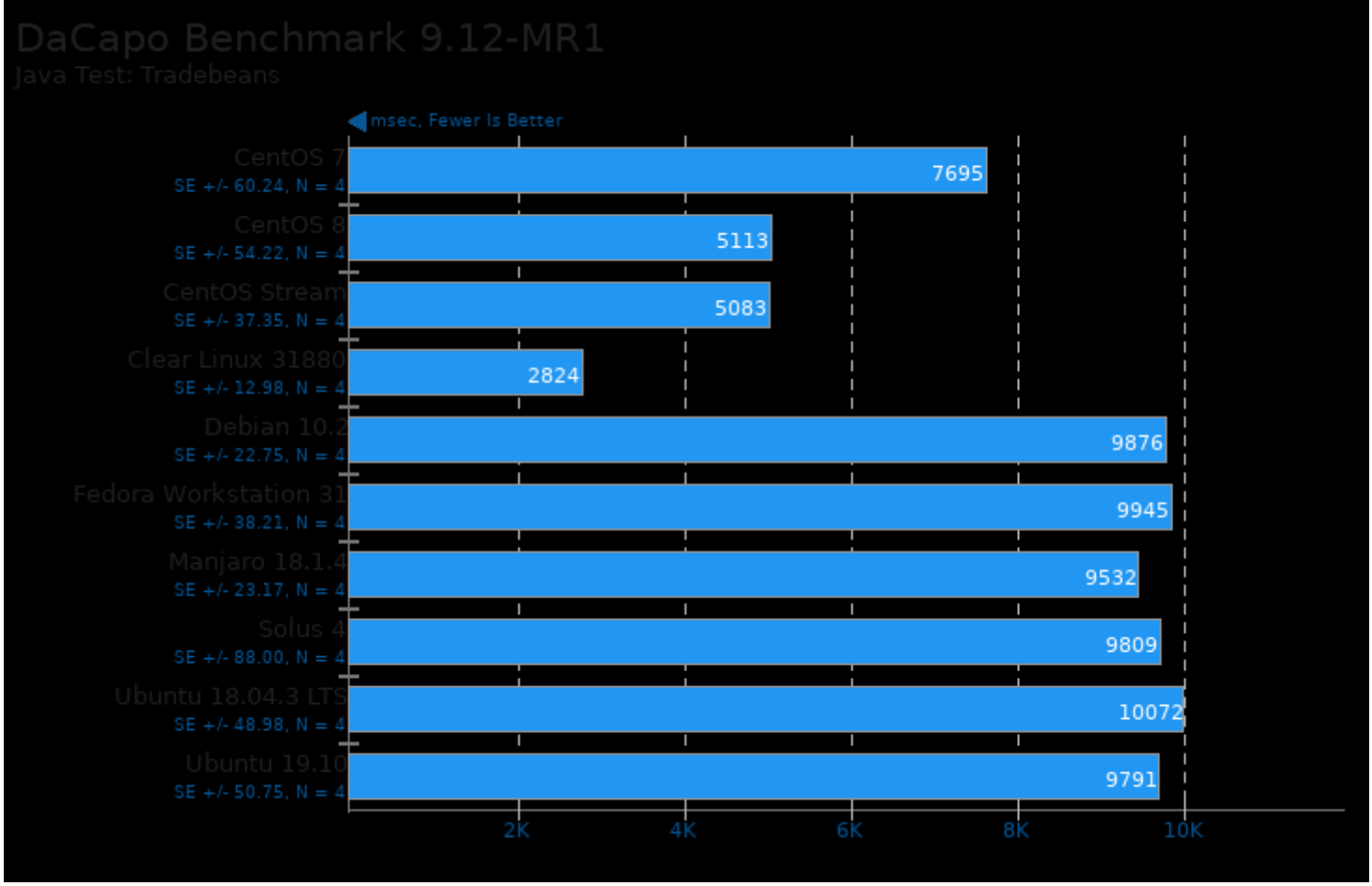



DaCapo Benchmark 9.12-MR1
Java Test: H2
msec, Fewer Is Better
CentOS 7
SE +/- 28.49, N = 4
8340
CentOS 8
SE +/- 39.07, N = 6
3339
CentOS Stream
SE +/- 47.22, N = 4
3385
Clear Linux 31880
SE +/- 44.59, N = 4
3340
Debian 10.2
SE +/- 13.30, N = 4
6080
Fedora Workstation 31
SE +/- 90.26, N = 4
8566
Manjaro 18.1.4
SE +/- 34.78, N = 4
8218
Solus 4
SE +/- 99.70, N = 5
8337
Ubuntu 18.04.3 LTS
SE +/- 62.45, N = 4
6721
Ubuntu 19.10
SE +/- 37.95, N = 4
6629
openSUSE Tumbleweed
SE +/- 32.70, N = 4
6245
2K
4K
6K
8K
10K

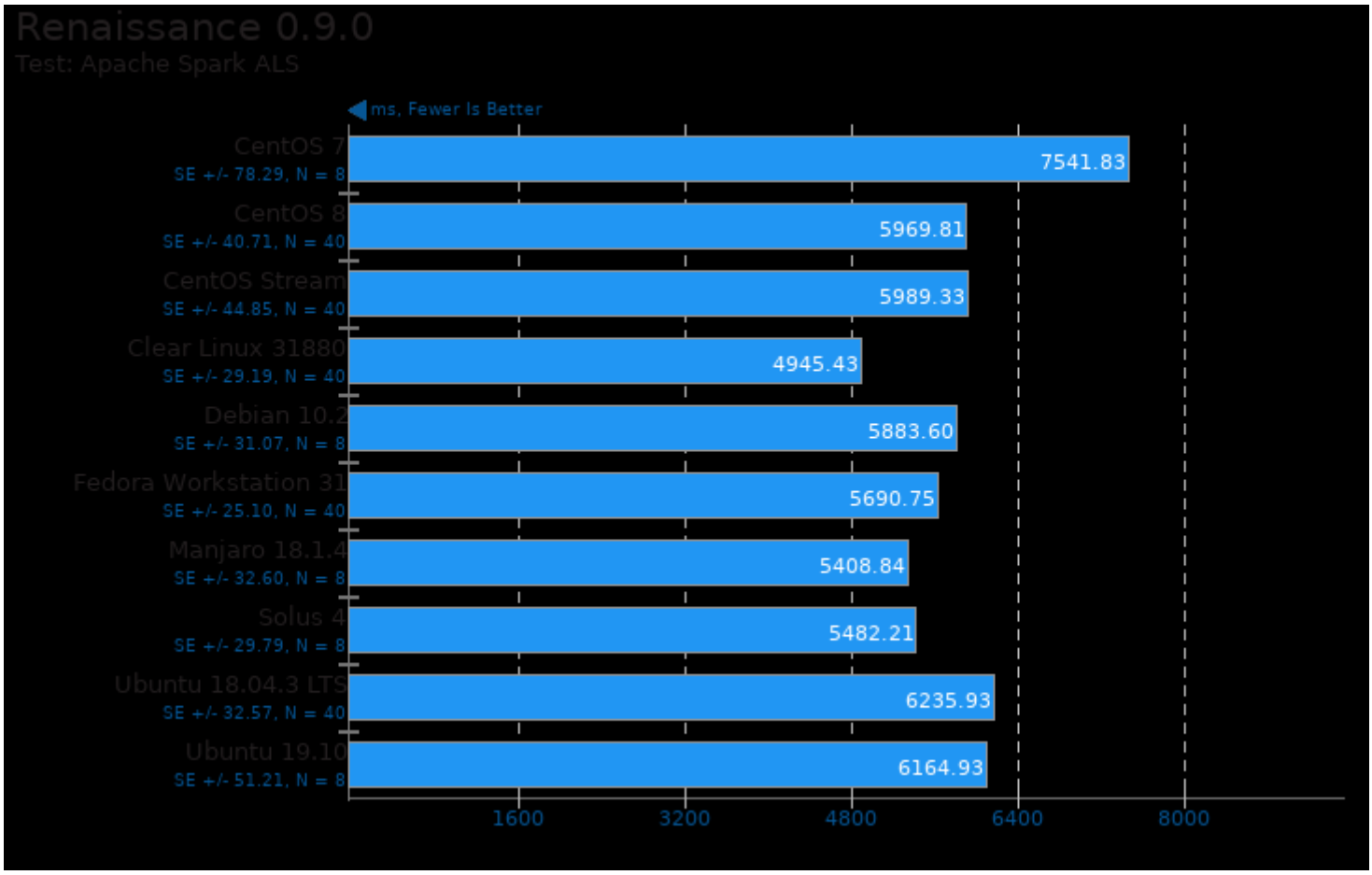
Intel Core i9 10980XE Linux Performance



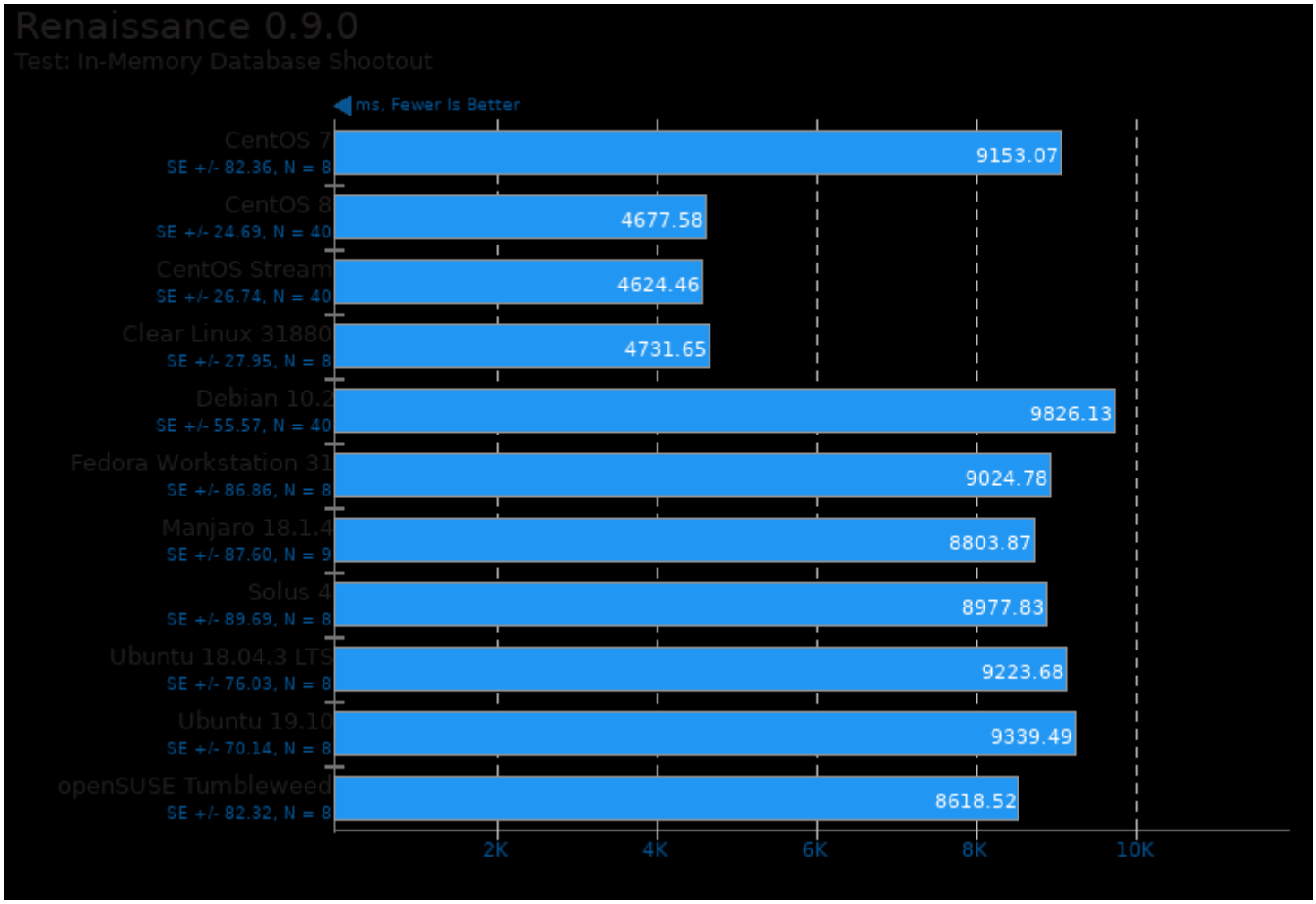

DaCapo Benchmark 9.12-MR1
Java Test: Tradesoap
msec, Fewer Is Better
CentOS 7
SE +/- 33.28, N = 4
4712
CentOS 8
SE +/- 29.89, N = 10
3301
CentOS Stream
SE +/- 28.70, N = 4
3214
Clear Linux 31880
SE +/- 38.83, N = 4
3065
Debian 10.2
SE +/- 52.64, N = 4
5021
Fedora Workstation 31
SE +/- 37.91, N = 4
5082
Manjaro 18.1.4
SE +/- 53.47, N = 4
4813
Solus 4
SE +/- 35.14, N = 4
4925
Ubuntu 18.04.3 LTS
SE +/- 17.15, N = 4
4921
Ubuntu 19.10
SE +/- 34.73, N = 4
4788
1100
2200
3300
4400
5500


DaCapo Benchmark 9.12-MR1
Java Test: Tradebeans
msec, Fewer Is Better
CentOS 7
SE +/- 60.24, N = 4
7695
CentOS 8
SE +/- 54.22, N = 4
5113
CentOS Stream
SE +/- 37.35, N = 4
5083
Clear Linux 31880
SE +/- 12.98, N = 4
2824
Debian 10.2
SE +/- 22.75, N = 4
9876
Fedora Workstation 31
SE +/- 38.21, N = 4
9945
Manjaro 18.1.4
SE +/- 23.17, N = 4
9532
Solus 4
SE +/- 88.00, N = 4
9809
Ubuntu 18.04.3 LTS
SE +/- 48.98, N = 4
10072
Ubuntu 19.10
SE +/- 50.75, N = 4
9791
2K
4K
6K
8K
10K

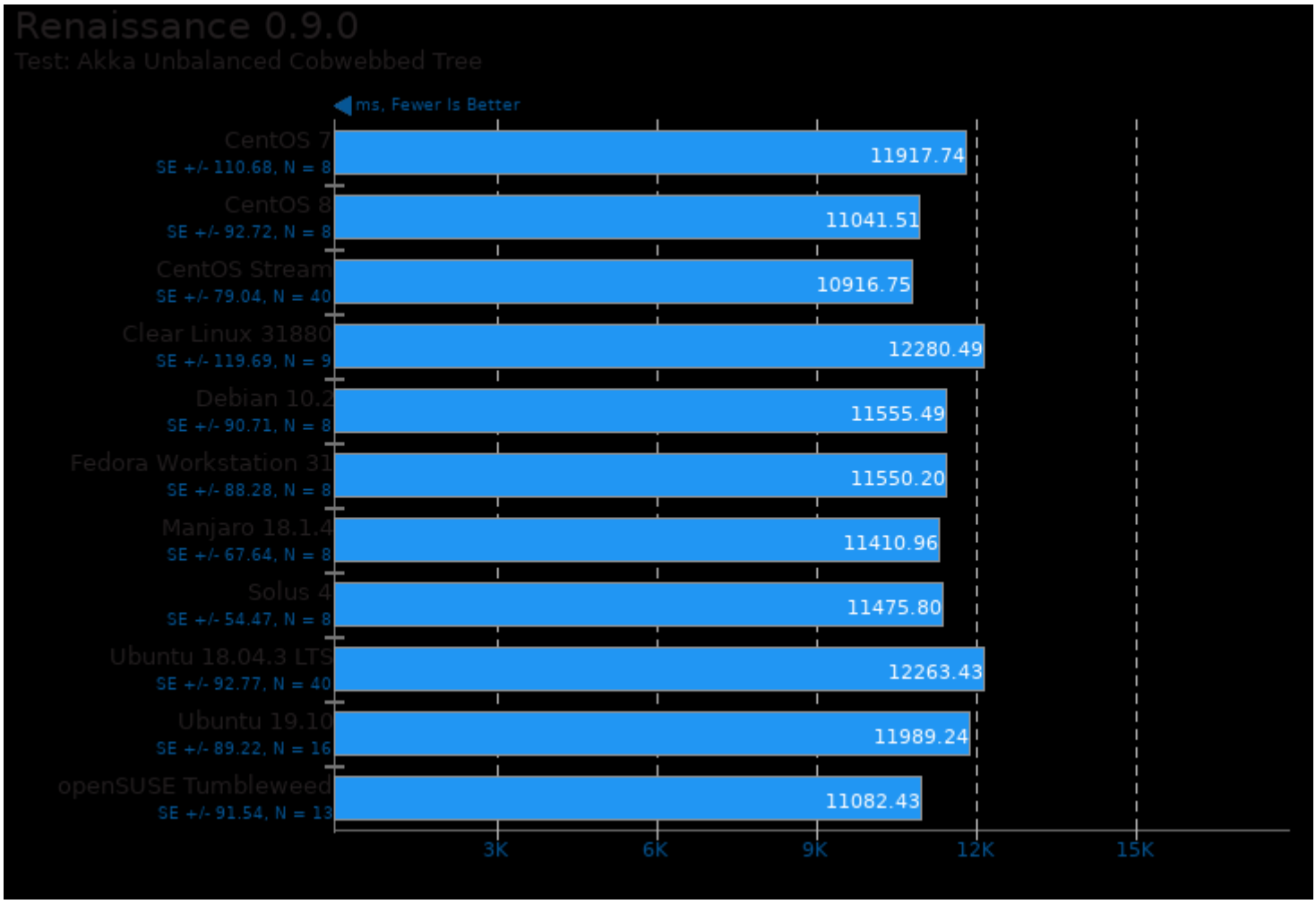
Intel Core i9 10980XE Linux Performance



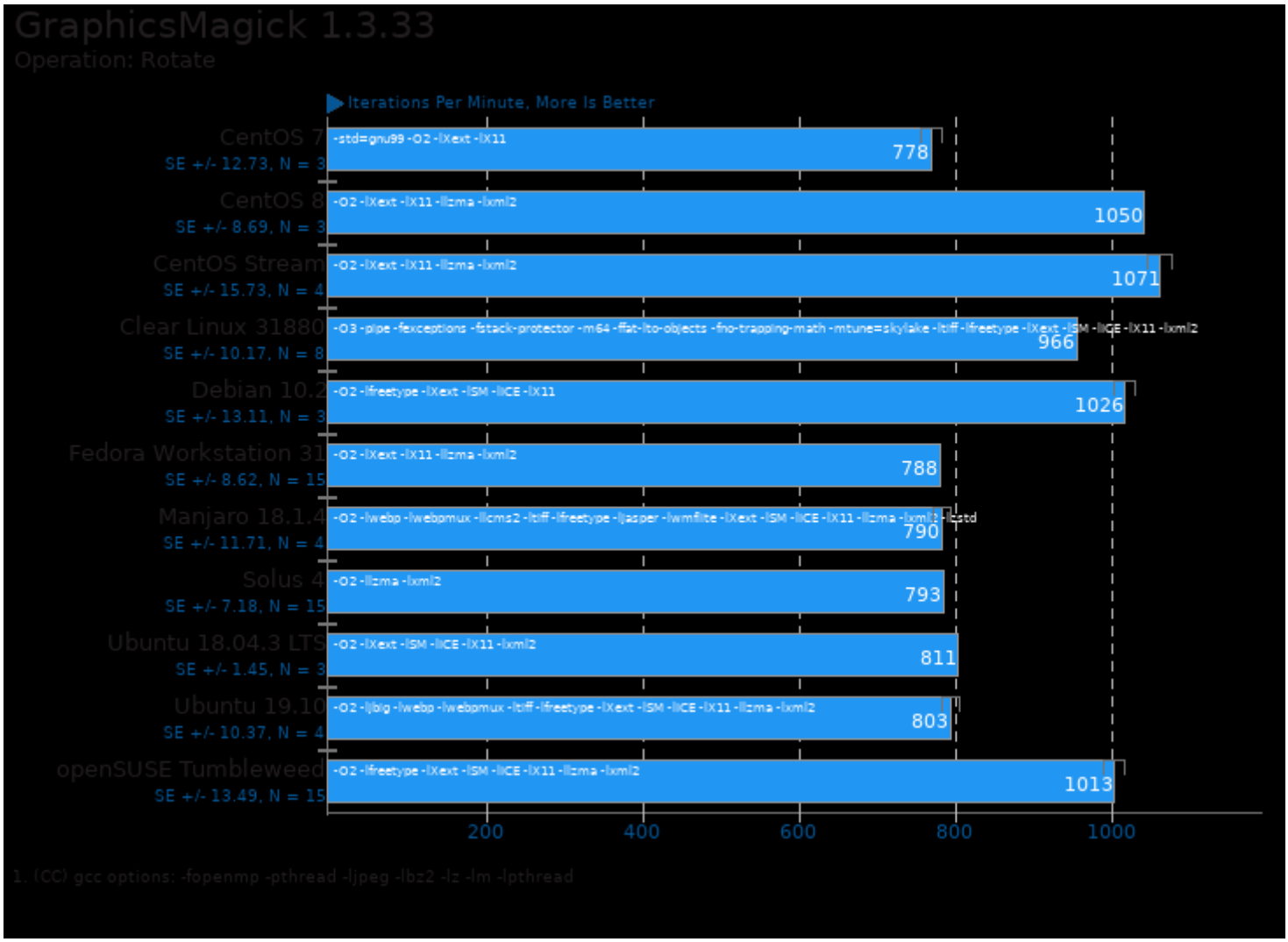
Intel Core i9 10980XE Linux Performance



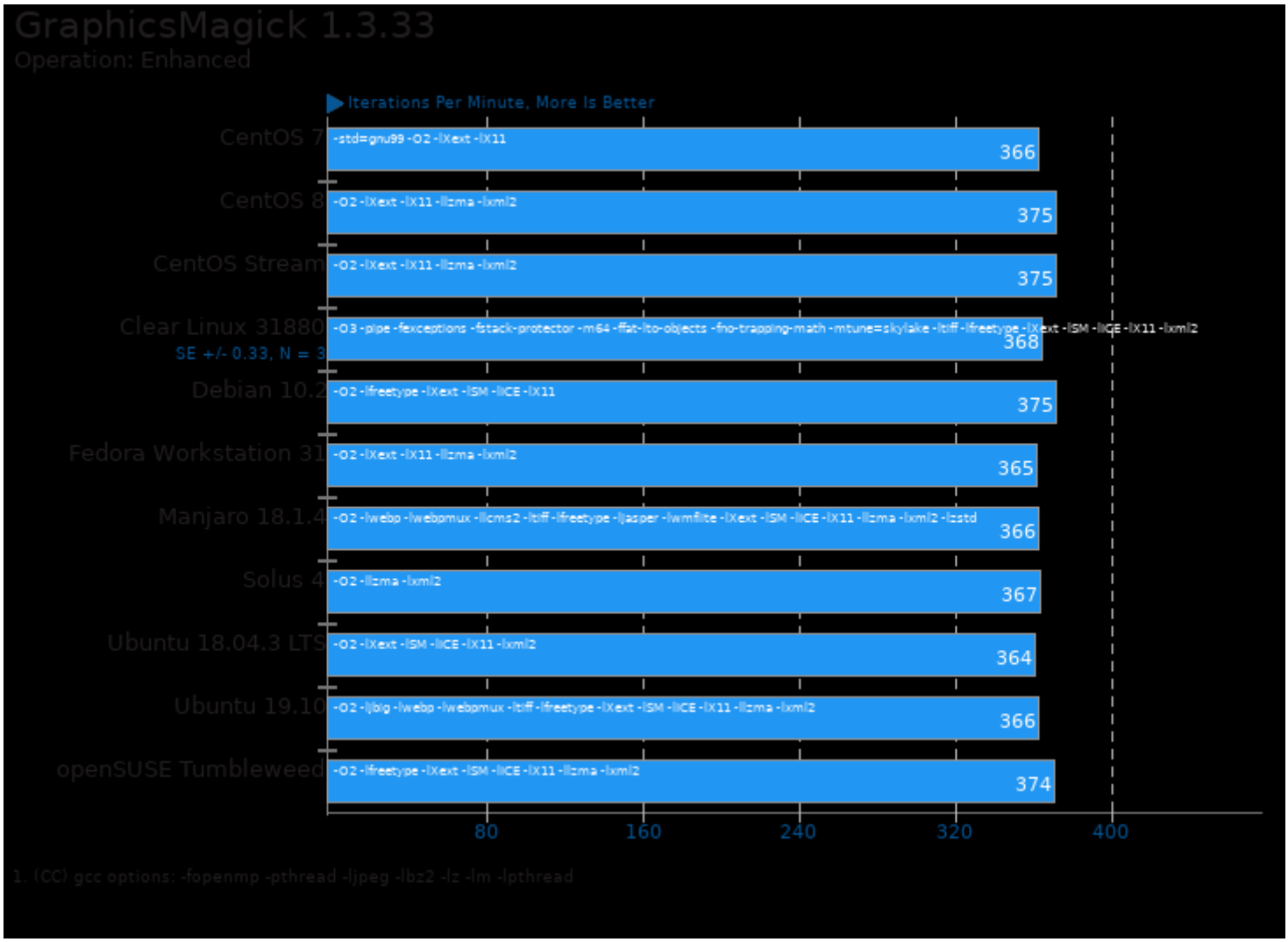
Intel Core i9 10980XE Linux Performance



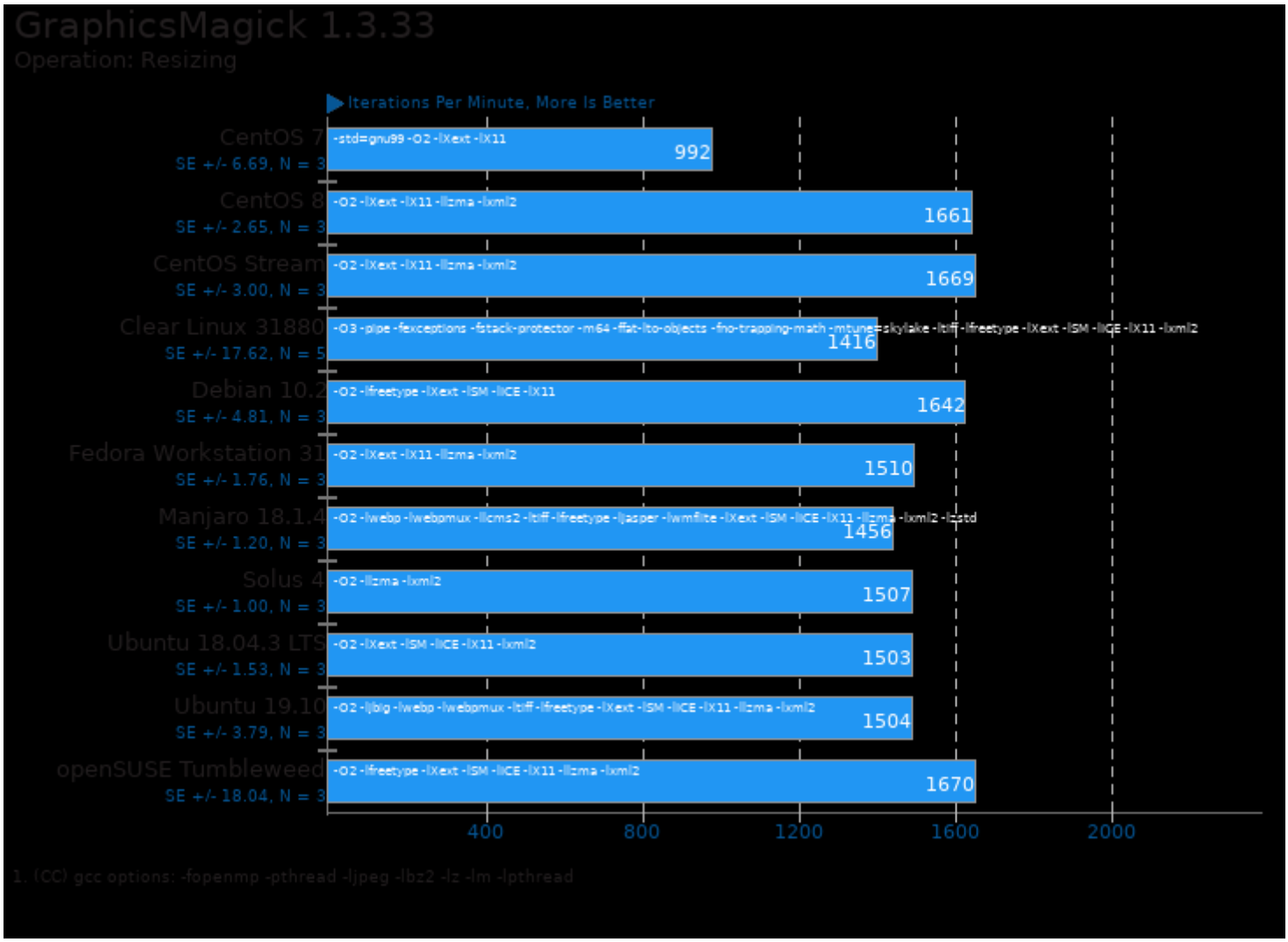
Intel Core i9 10980XE Linux Performance



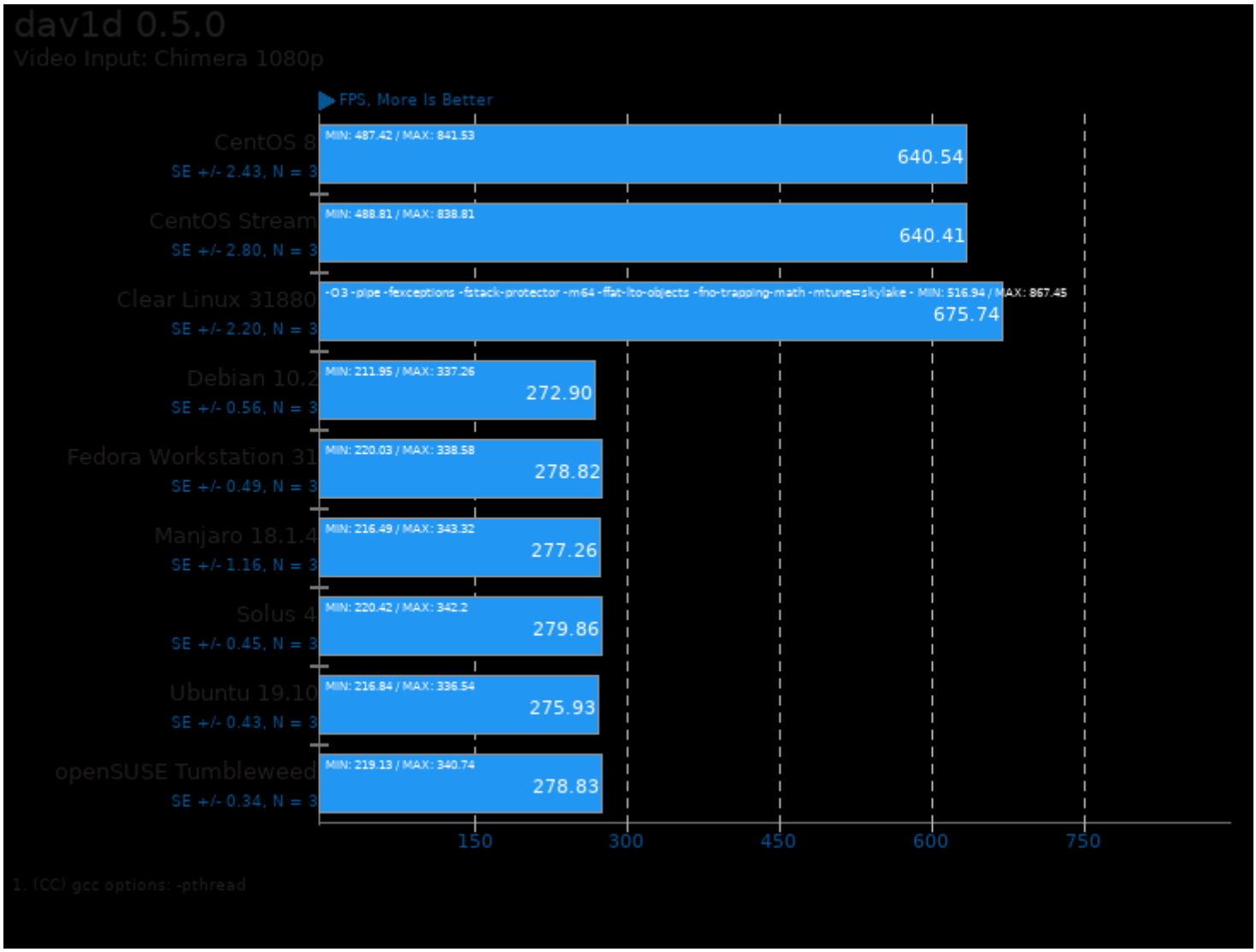
Intel Core i9 10980XE Linux Performance



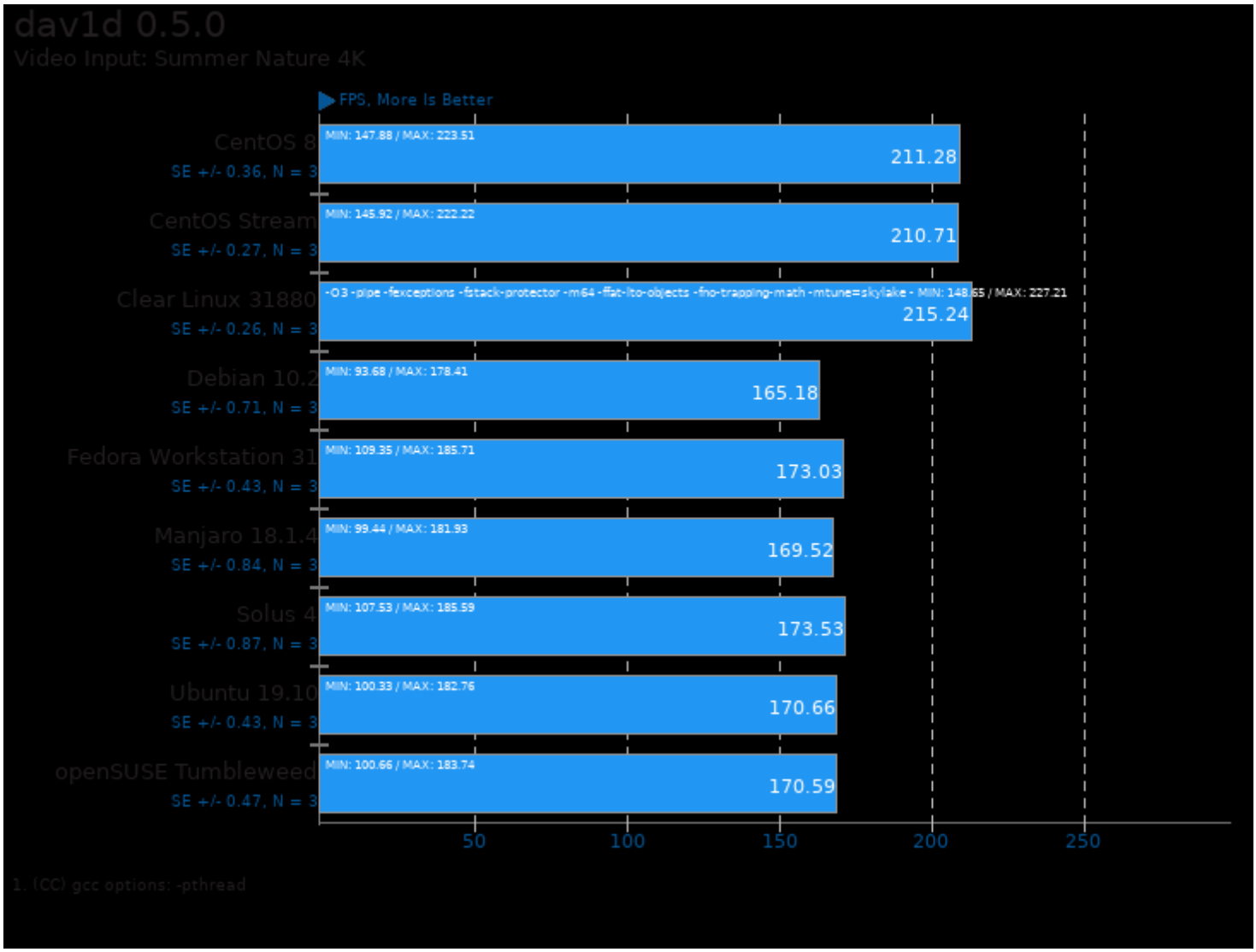
Intel Core i9 10980XE Linux Performance

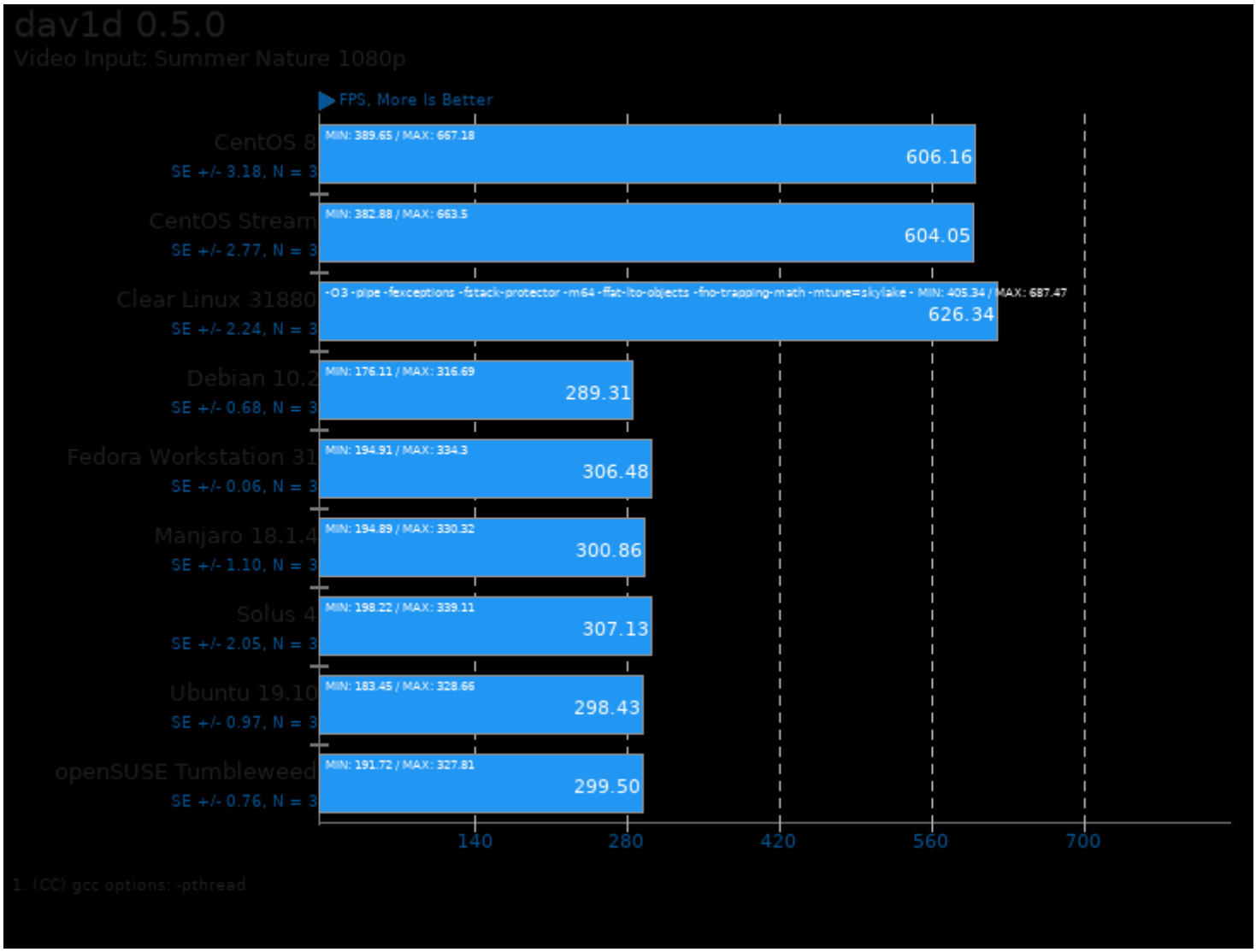


Intel Core i9 10980XE Linux Performance

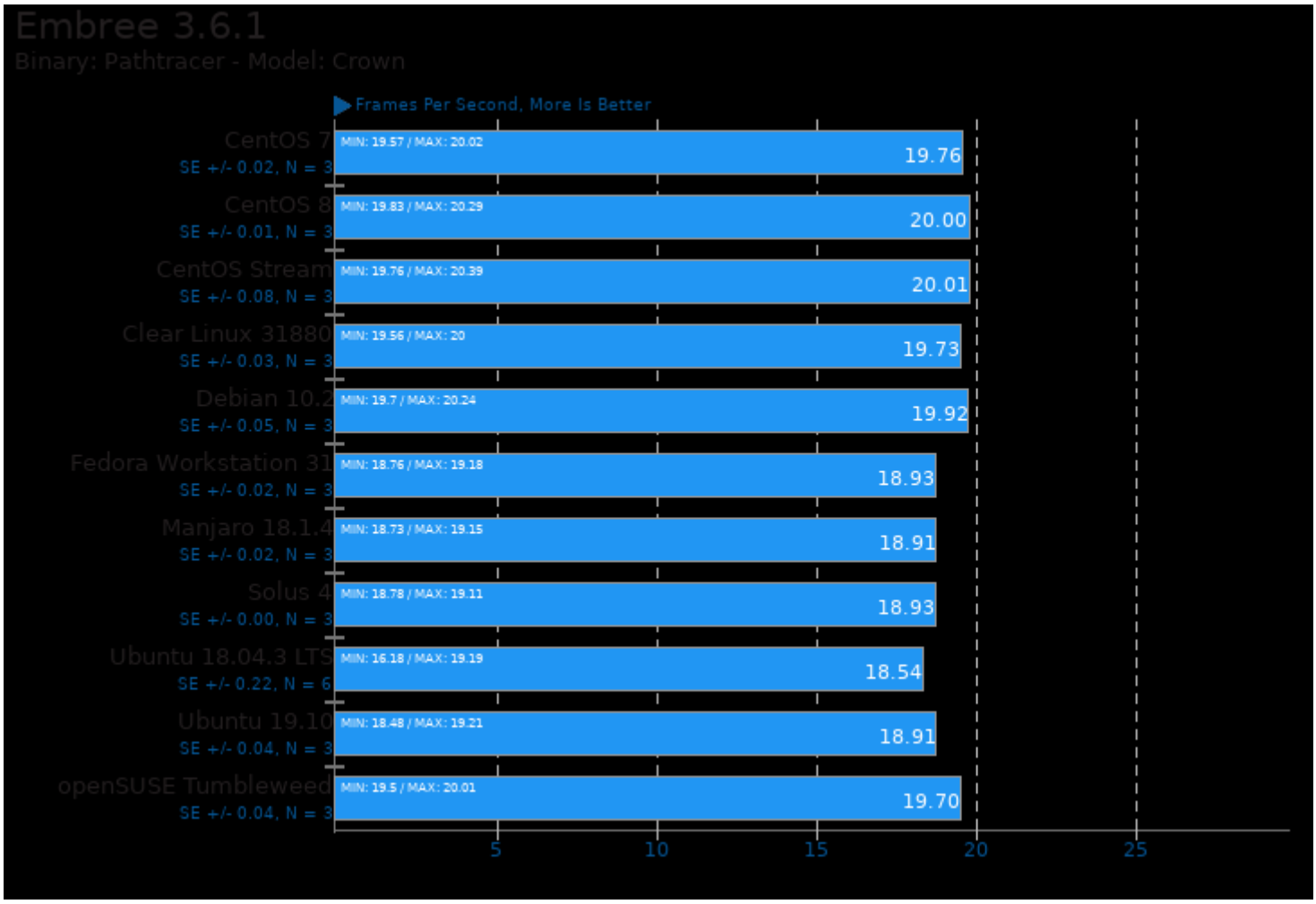


Intel Core i9 10980XE Linux Performance

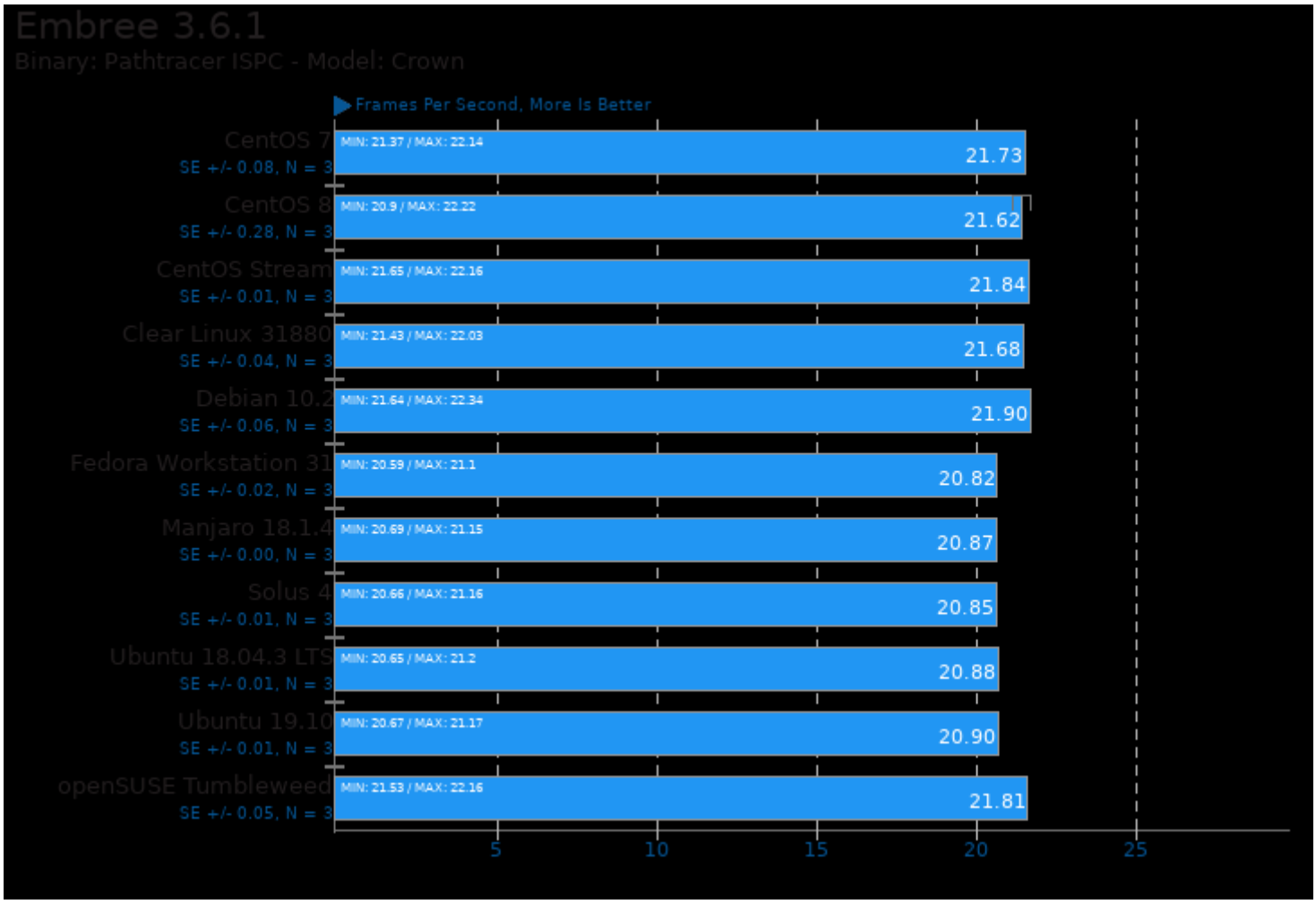



dav1d 0.5.0
Video Input: Summer Nature 1080p
FPS, More Is Better
CentOS 8
SE +/- 3.18, N = 3
MIN: 389.65 / MAX: 667.18
606.16
CentOS Stream
SE +/- 2.77, N = 3
MIN: 382.88 / MAX: 663.5
604.05
Clear Linux 31880
SE +/- 2.24, N = 3
-O3 -pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-trapping-math -mtune=skylake - MIN: 405.34 / MAX: 687.47
626.34
Debian 10.2
SE +/- 0.68, N = 3
MIN: 176.11 / MAX: 316.69
289.31
Fedora Workstation 31
SE +/- 0.06, N = 3
MIN: 194.91 / MAX: 334.3
306.48
Manjaro 18.1.4
SE +/- 1.10, N = 3
MIN: 194.89 / MAX: 330.32
300.86
Solus 4
SE +/- 2.05, N = 3
MIN: 198.22 / MAX: 339.11
307.13
Ubuntu 19.10
SE +/- 0.97, N = 3
MIN: 183.45 / MAX: 328.66
298.43
openSUSE Tumbleweed
SE +/- 0.76, N = 3
MIN: 191.72 / MAX: 327.81
299.50
140
280
420
560
700
1. (CC) gcc options: -pthread

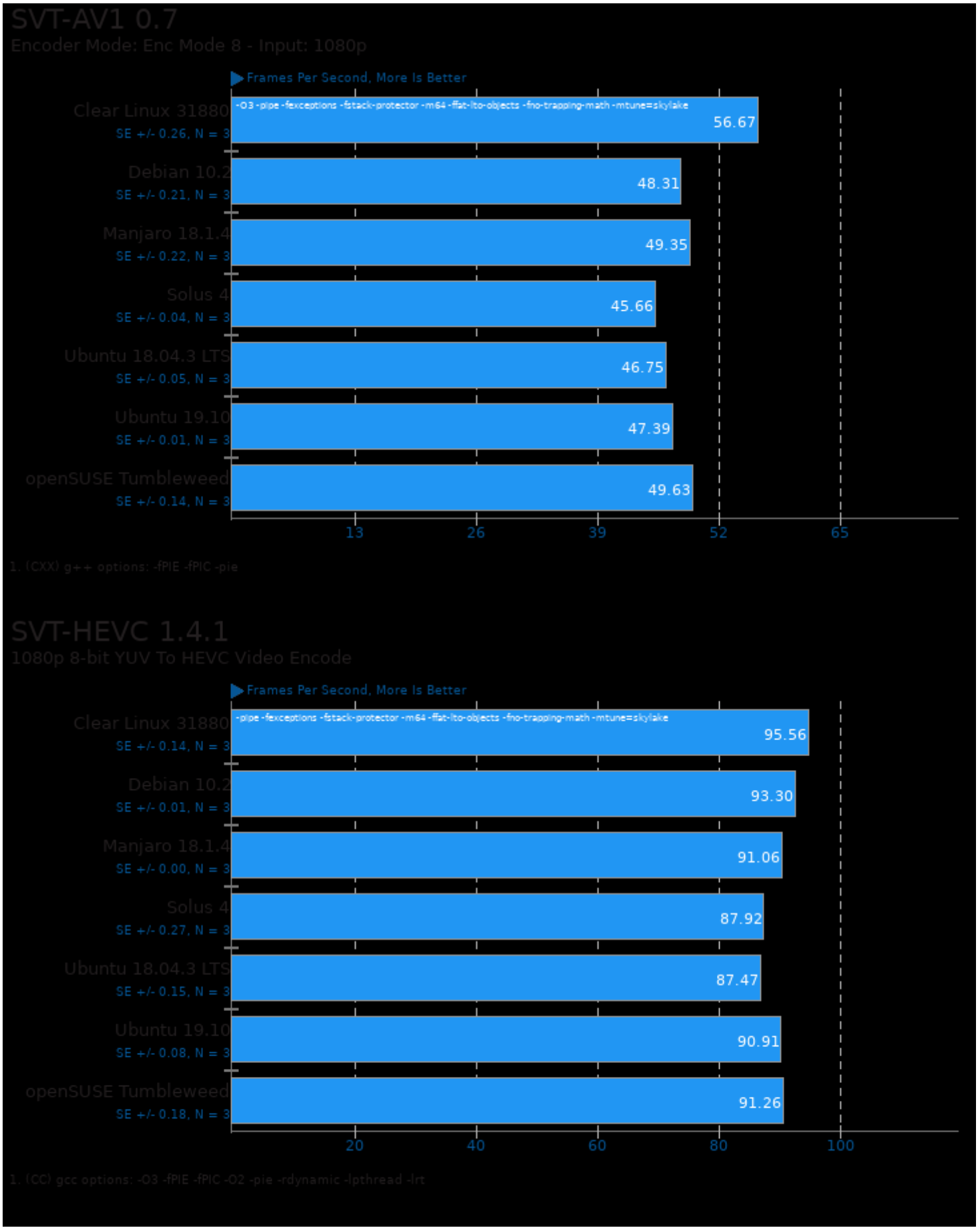
Intel Core i9 10980XE Linux Performance

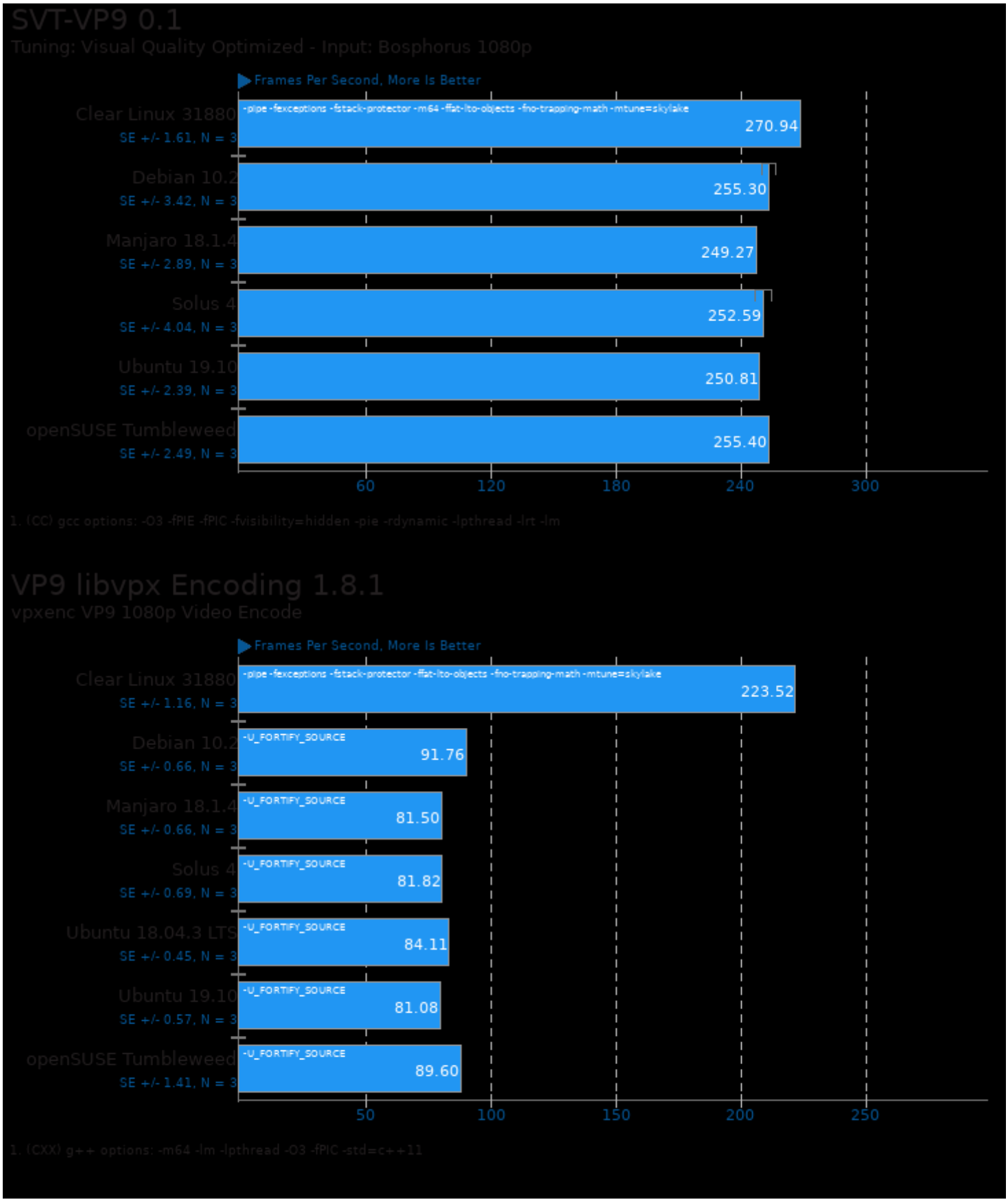


Intel Core i9 10980XE Linux Performance

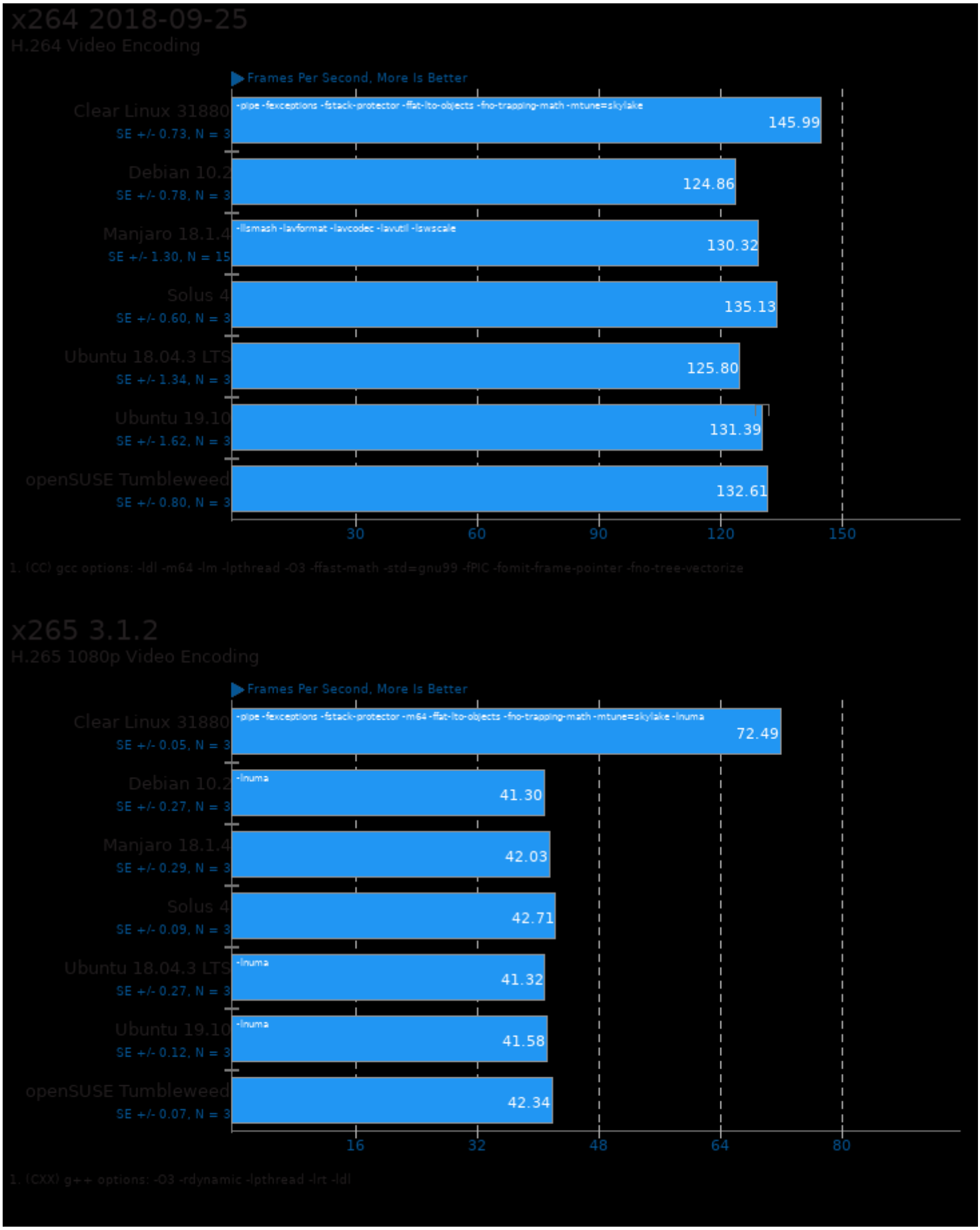


Intel Core i9 10980XE Linux Performance

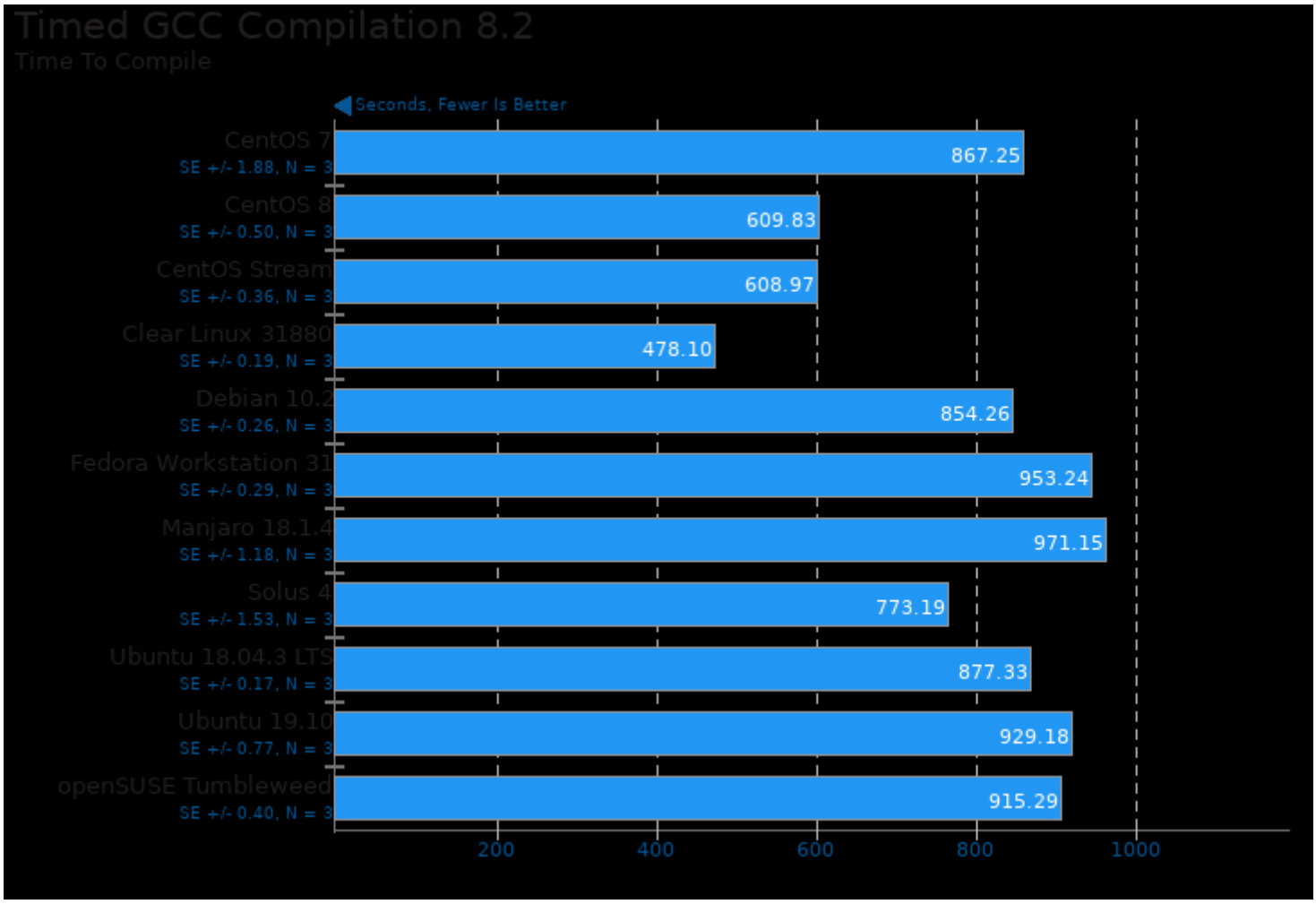



SVT-VP9 0.1
Tuning: Visual Quality Optimized - Input: Bosphorus 1080p
Frames Per Second, More Is Better
Clear Linux 31880
SE +/- 1.61, N = 3
-pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake
270.94
Debian 10.2
SE +/- 3.42, N = 3
255.30
Manjaro 18.1.4
SE +/- 2.89, N = 3
249.27
Solus 4
SE +/- 4.04, N = 3
252.59
Ubuntu 19.10
SE +/- 2.39, N = 3
250.81
openSUSE Tumbleweed
SE +/- 2.49, N = 3
255.40
60
120
180
240
300
1. (CC) gcc options: -O3 -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm
VP9 libvpx Encoding 1.8.1
vpxenc VP9 1080p Video Encode
Frames Per Second, More Is Better
Clear Linux 31880
SE +/- 1.16, N = 3
-pipe -fexceptions -fstack-protector -ffat-lto-objects -fno-trapping-math -mtune=skylake
223.52
Debian 10.2
SE +/- 0.66, N = 3
-U_FORTIFY_SOURCE
91.76
Manjaro 18.1.4
SE +/- 0.66, N = 3
-U_FORTIFY_SOURCE
81.50
Solus 4
SE +/- 0.69, N = 3
-U_FORTIFY_SOURCE
81.82
Ubuntu 18.04.3 LTS
SE +/- 0.45, N = 3
-U_FORTIFY_SOURCE
84.11
Ubuntu 19.10
SE +/- 0.57, N = 3
-U_FORTIFY_SOURCE
81.08
openSUSE Tumbleweed
SE +/- 1.41, N = 3
-U_FORTIFY_SOURCE
89.60
50
100
150
200
250
1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -std=c++11

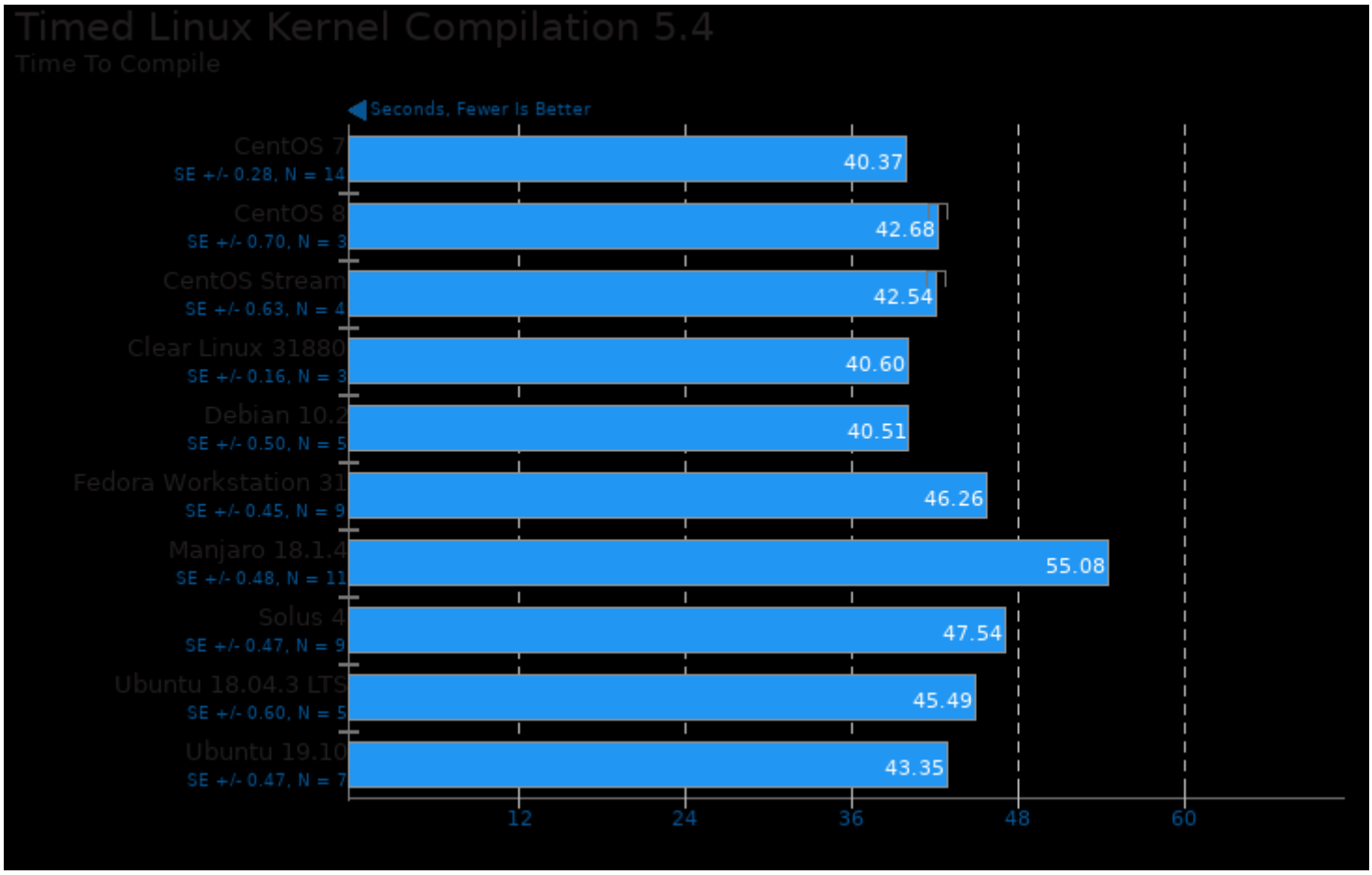
Intel Core i9 10980XE Linux Performance



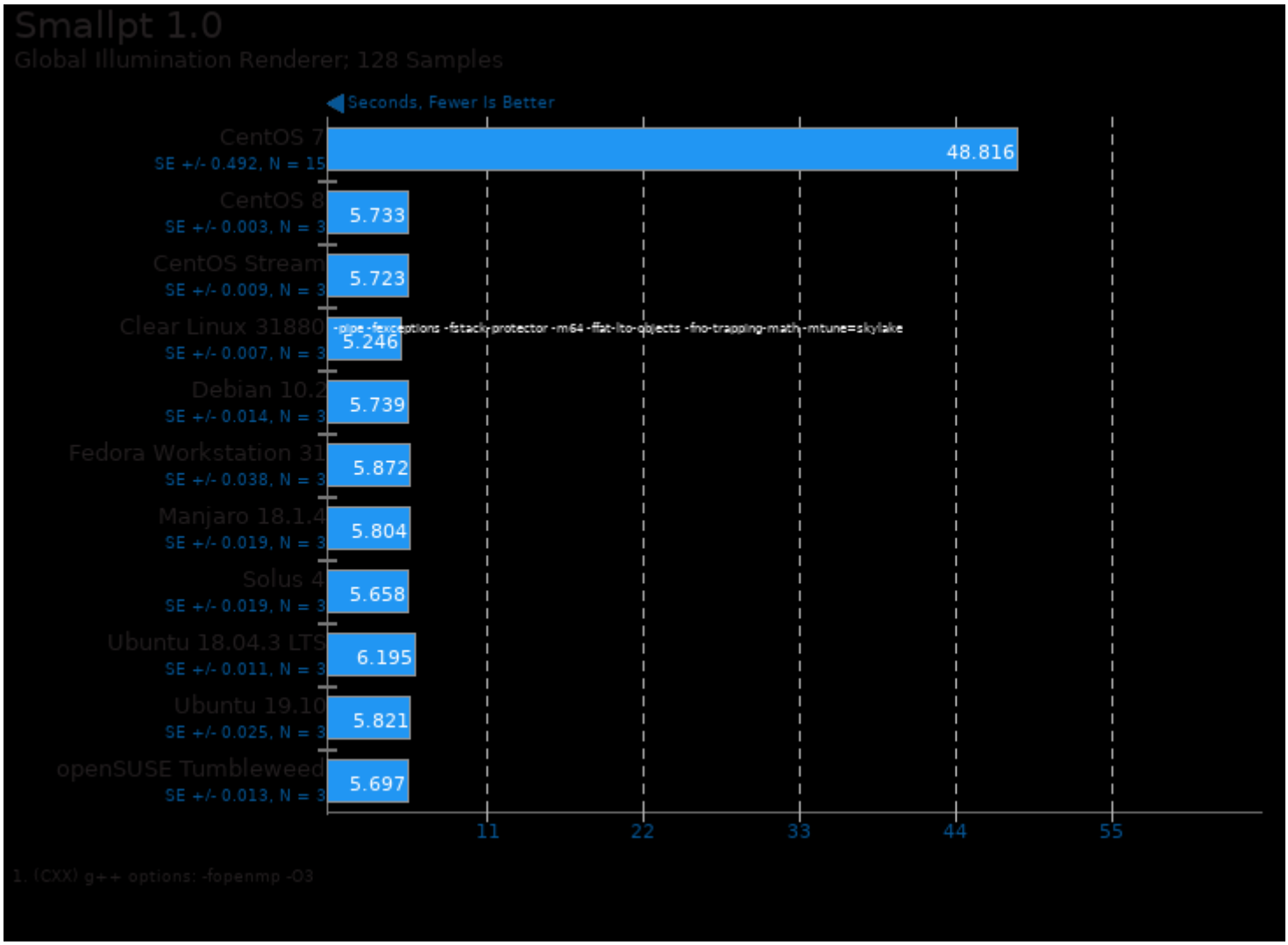
Intel Core i9 10980XE Linux Performance



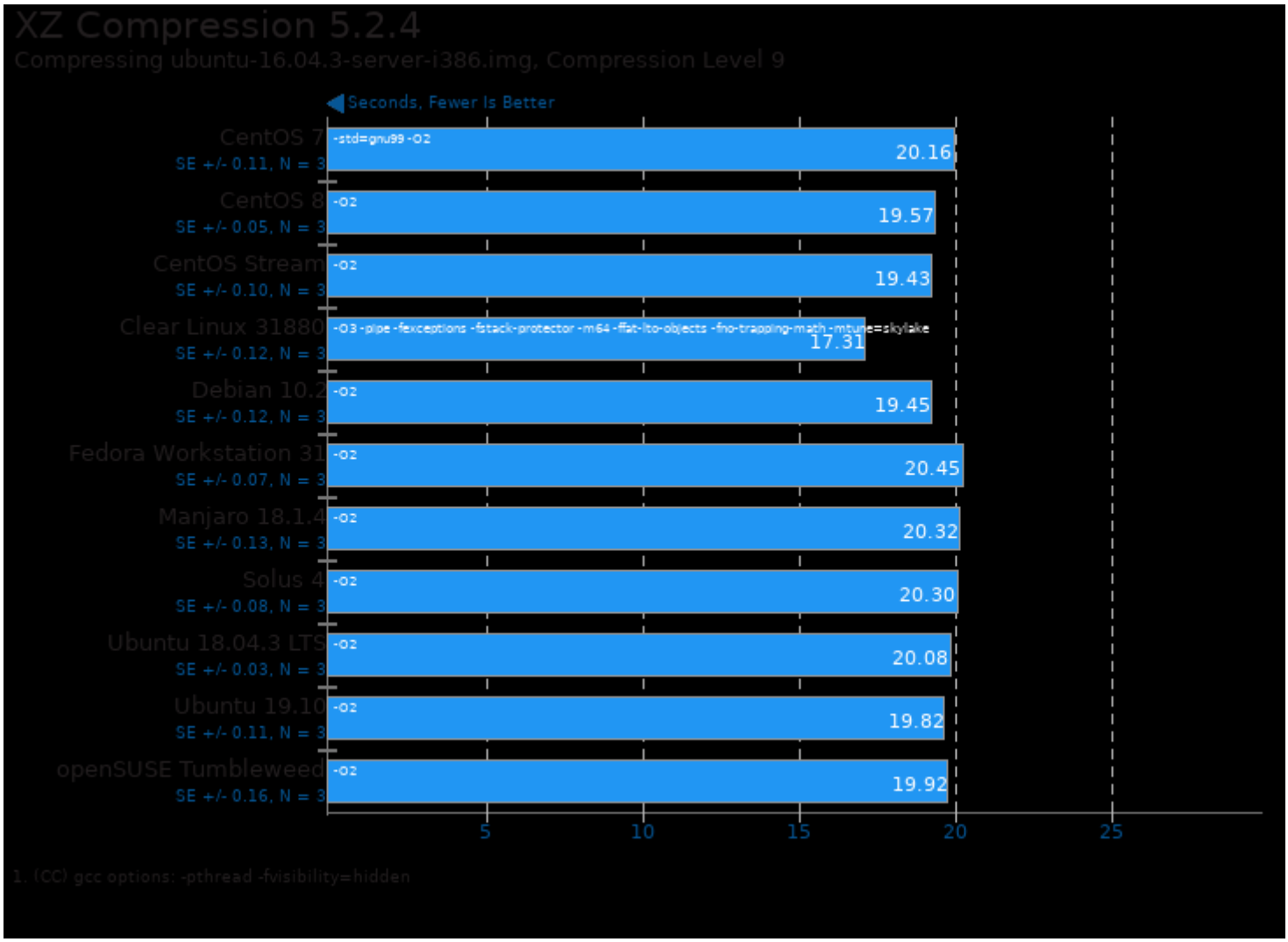
Intel Core i9 10980XE Linux Performance

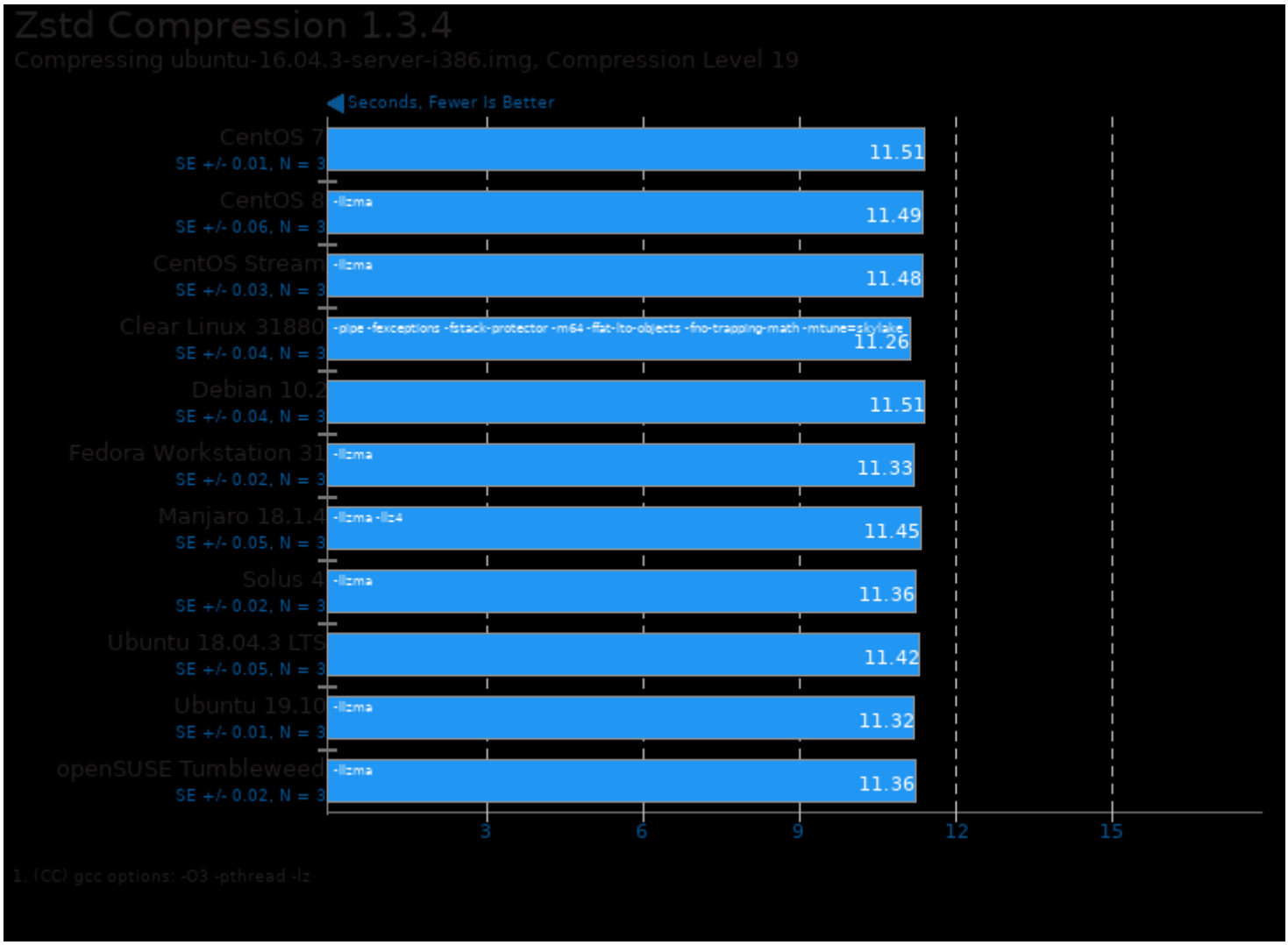


Intel Core i9 10980XE Linux Performance

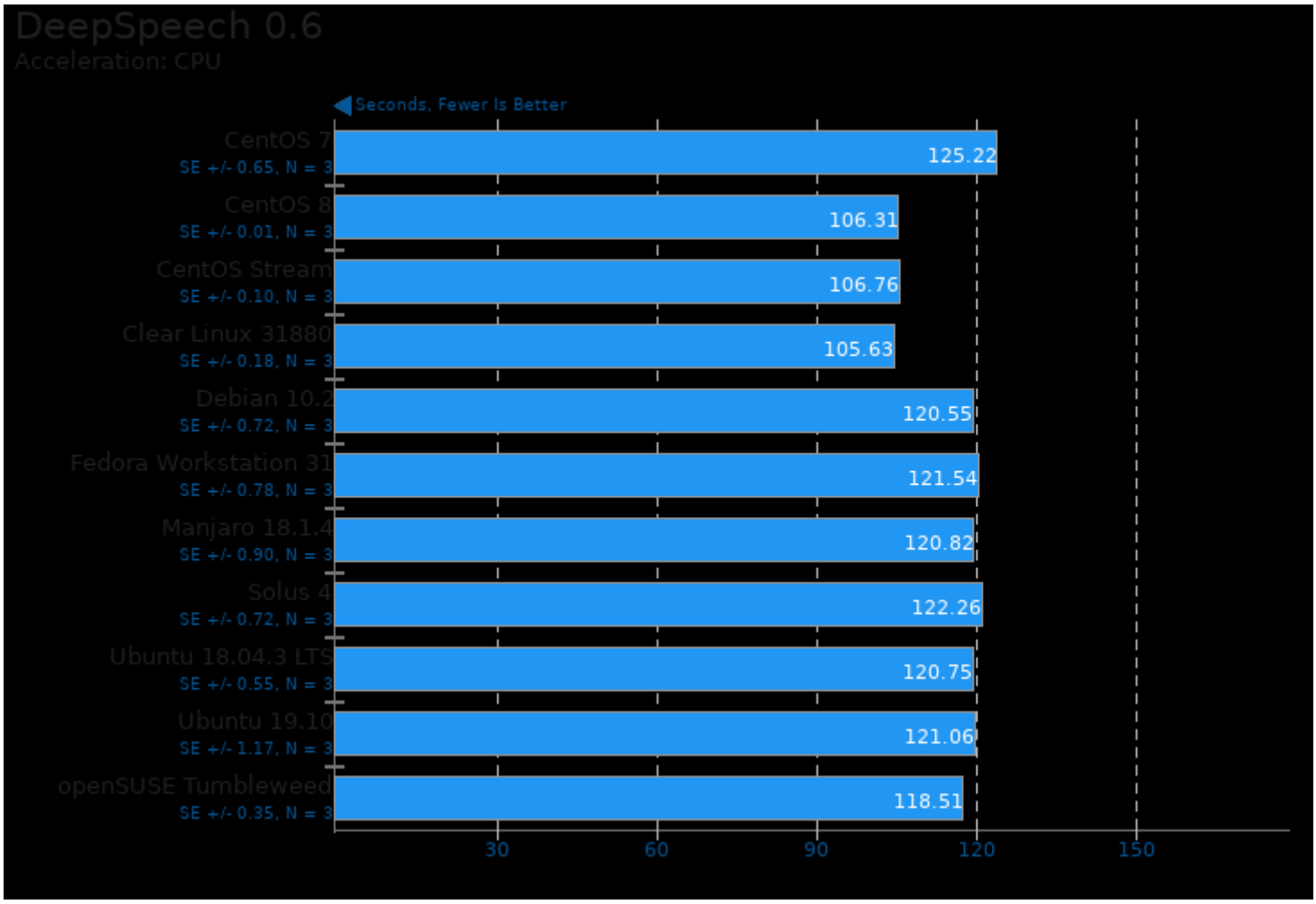


Intel Core i9 10980XE Linux Performance

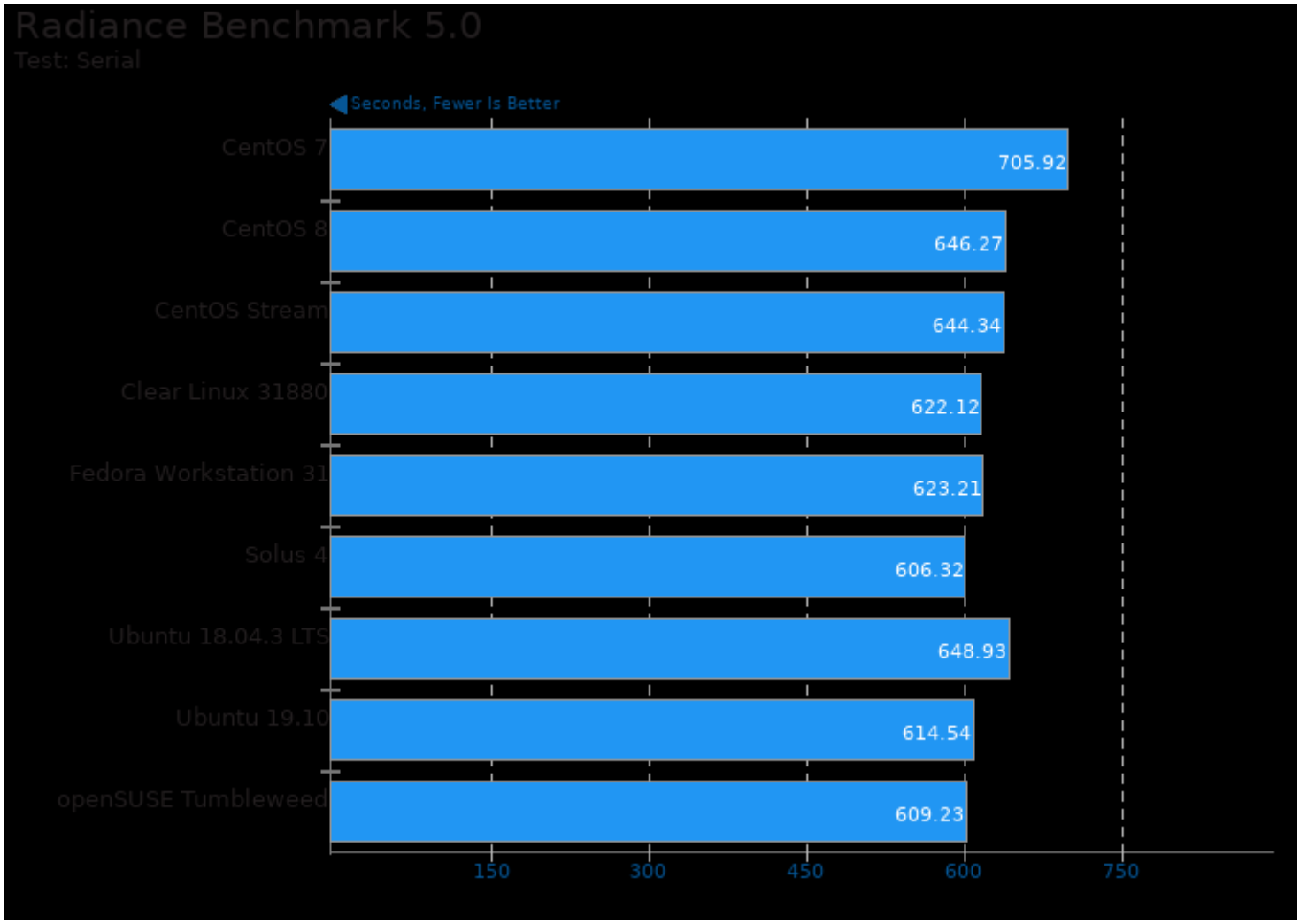



Zstd Compression 1.3.4
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 19
Seconds, Fewer Is Better
CentOS 7
SE +/- 0.01, N = 3
11.51
CentOS 8
SE +/- 0.06, N = 3
-llzma
11.49
CentOS Stream
SE +/- 0.03, N = 3
-llzma
11.48
Clear Linux 31880
SE +/- 0.04, N = 3
-pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-trapping-math -mtune=skylake
11.26
Debian 10.2
SE +/- 0.04, N = 3
11.51
Fedora Workstation 31
SE +/- 0.02, N = 3
-llzma
11.33
Manjaro 18.1.4
SE +/- 0.05, N = 3
-llzma -llz4
11.45
Solus 4
SE +/- 0.02, N = 3
-llzma
11.36
Ubuntu 18.04.3 LTS
SE +/- 0.05, N = 3
11.42
Ubuntu 19.10
SE +/- 0.01, N = 3
-llzma
11.32
openSUSE Tumbleweed
SE +/- 0.02, N = 3
-llzma
11.36
3
6
9
12
15
1. (CC) gcc options: -O3 -pthread -lz

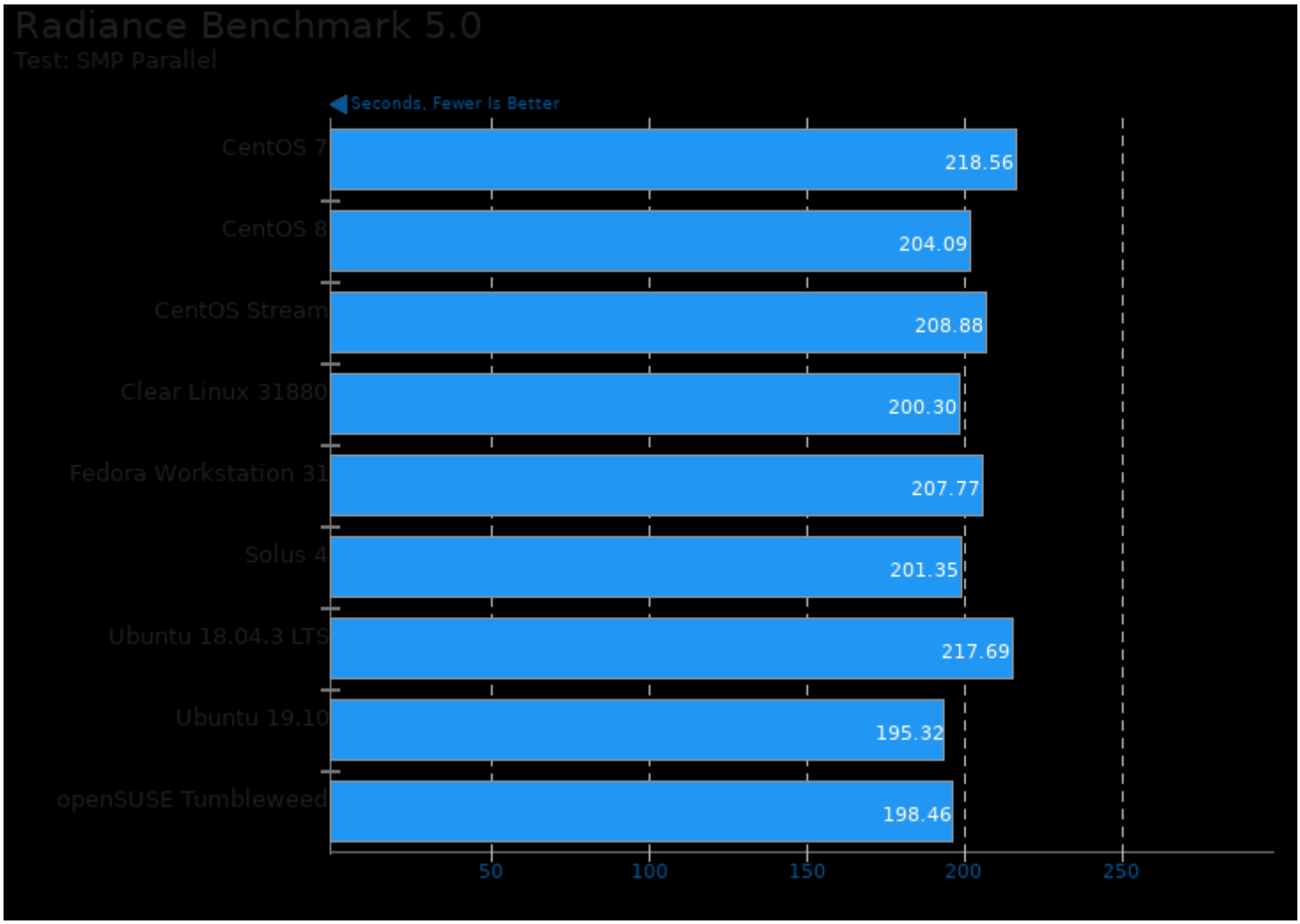
Intel Core i9 10980XE Linux Performance



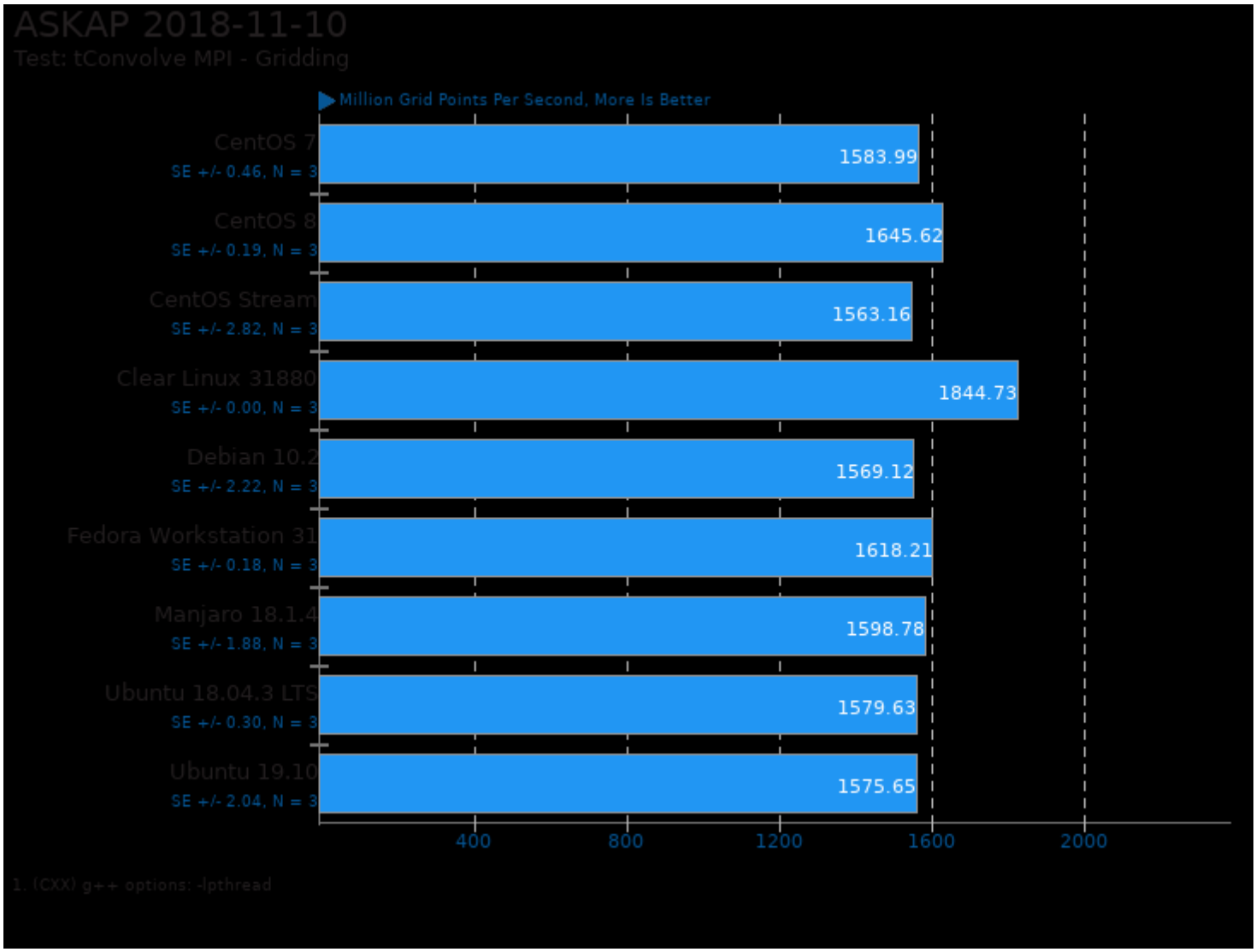
Intel Core i9 10980XE Linux Performance



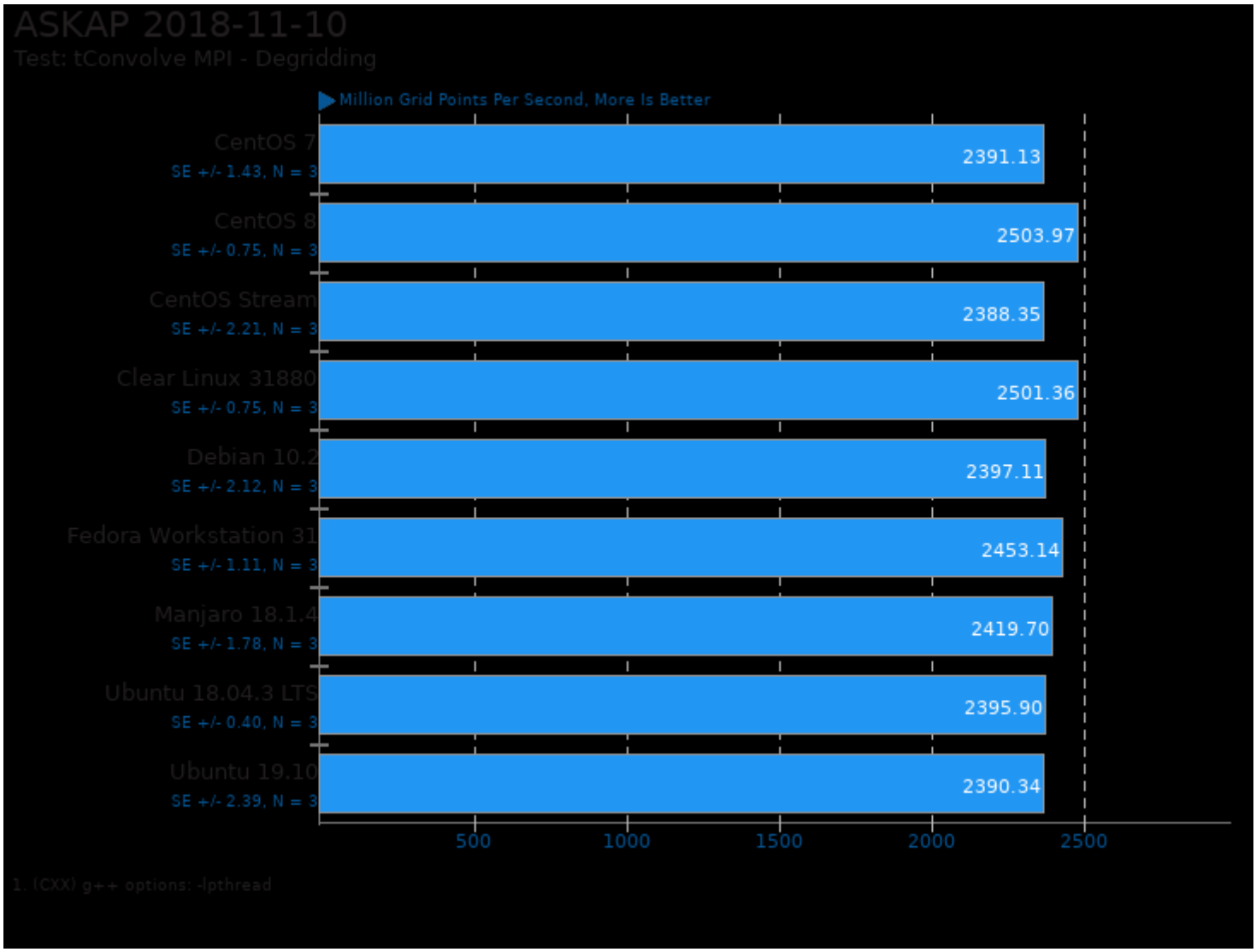
Intel Core i9 10980XE Linux Performance



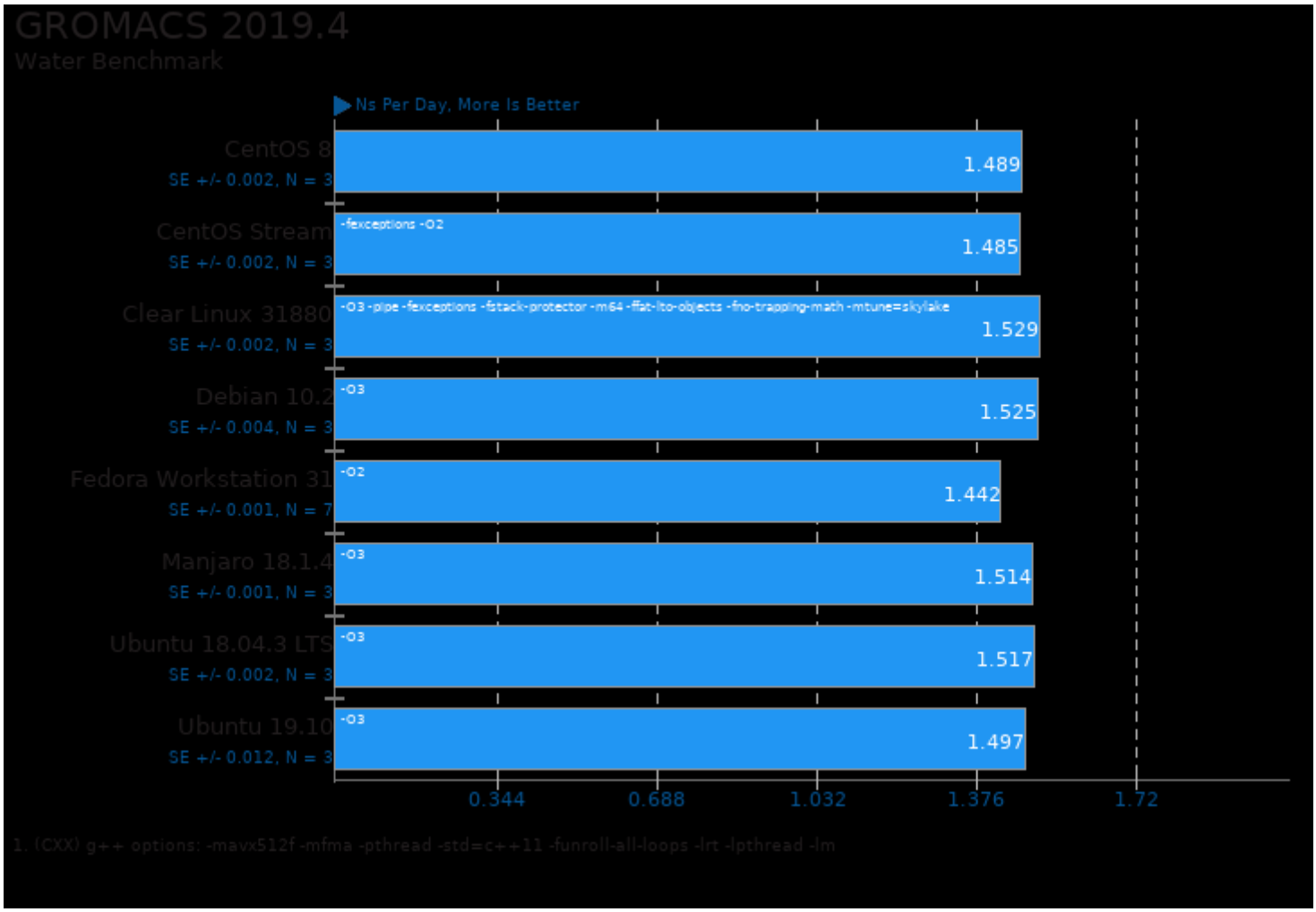
Intel Core i9 10980XE Linux Performance



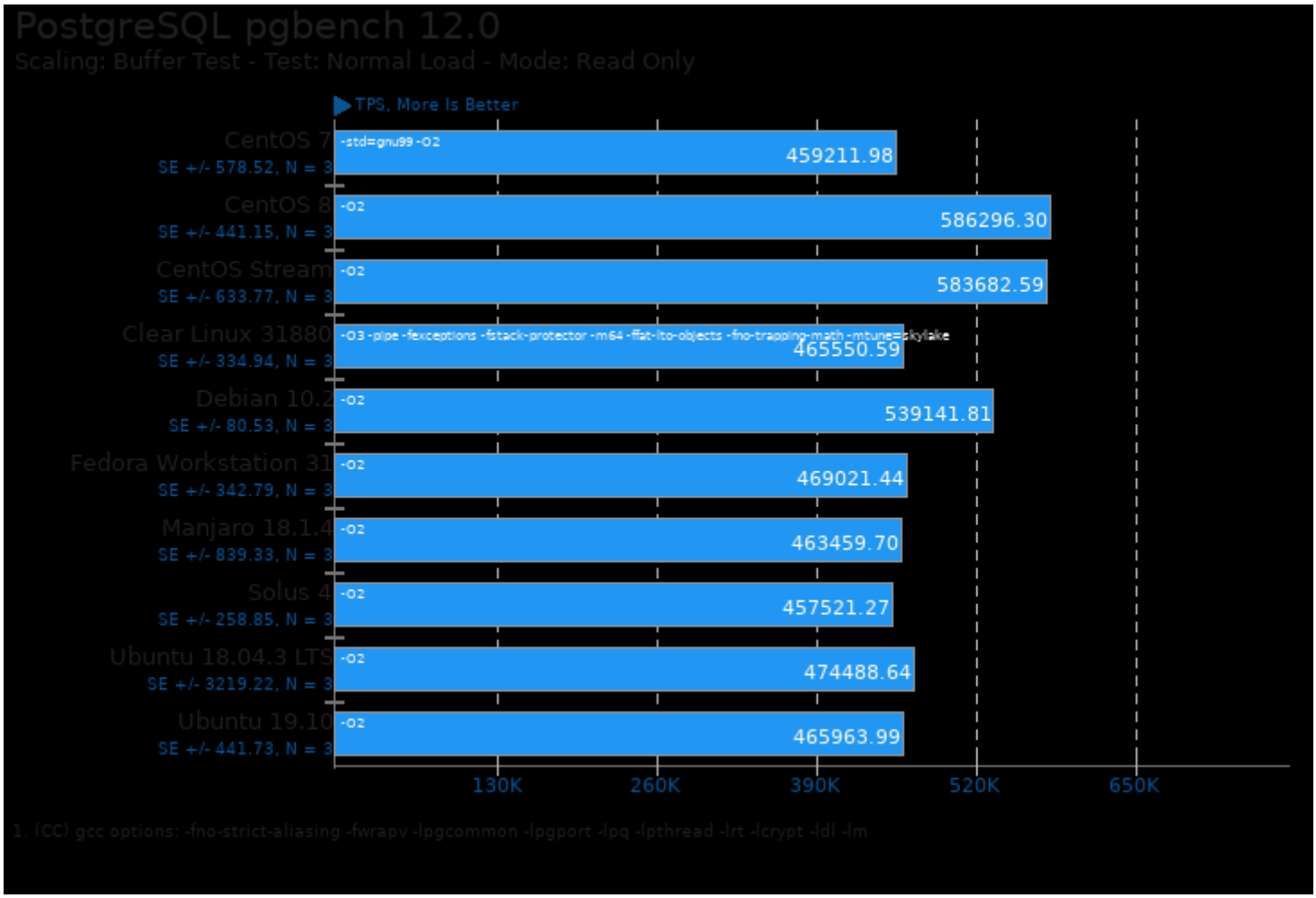
Intel Core i9 10980XE Linux Performance



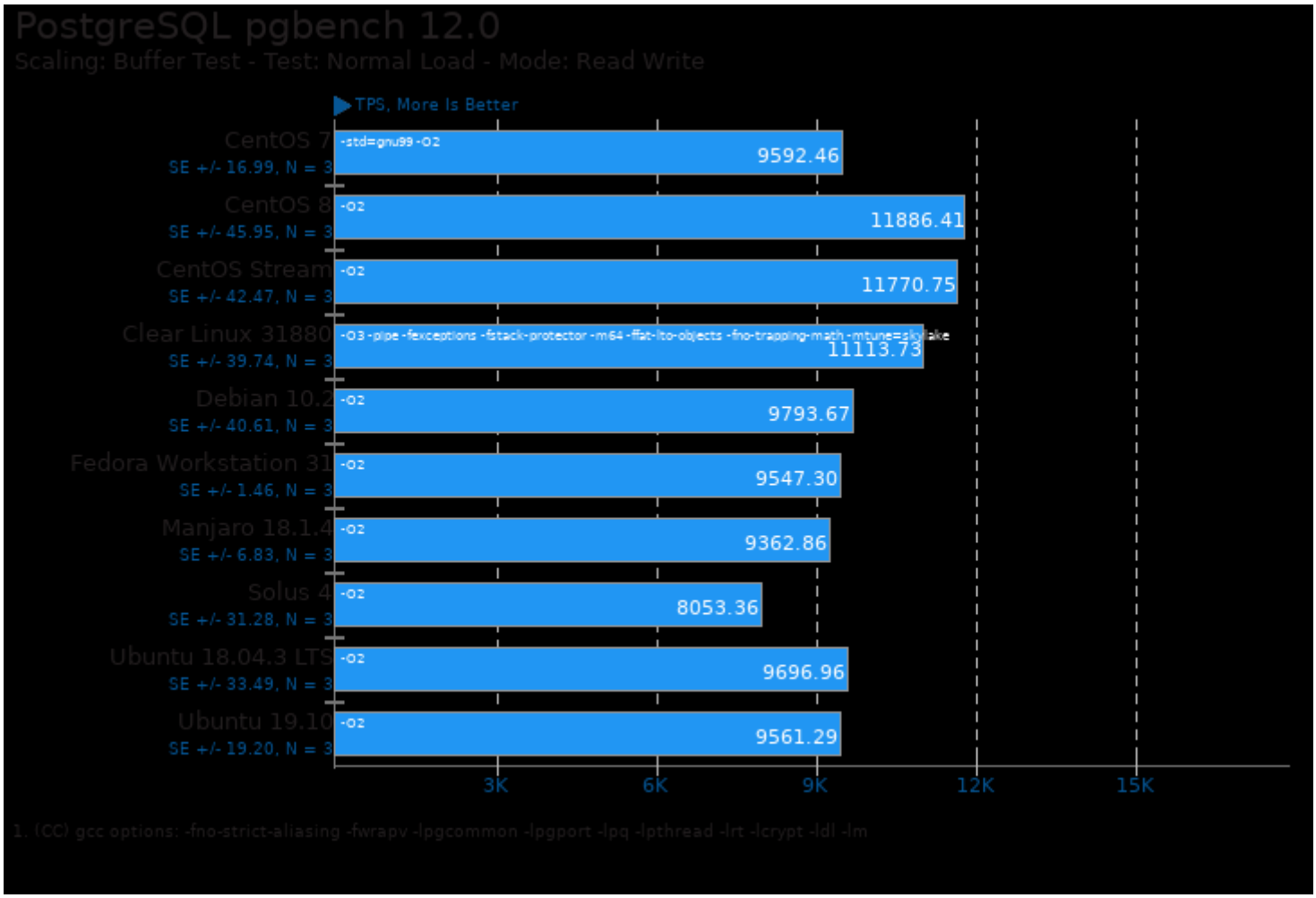
Intel Core i9 10980XE Linux Performance



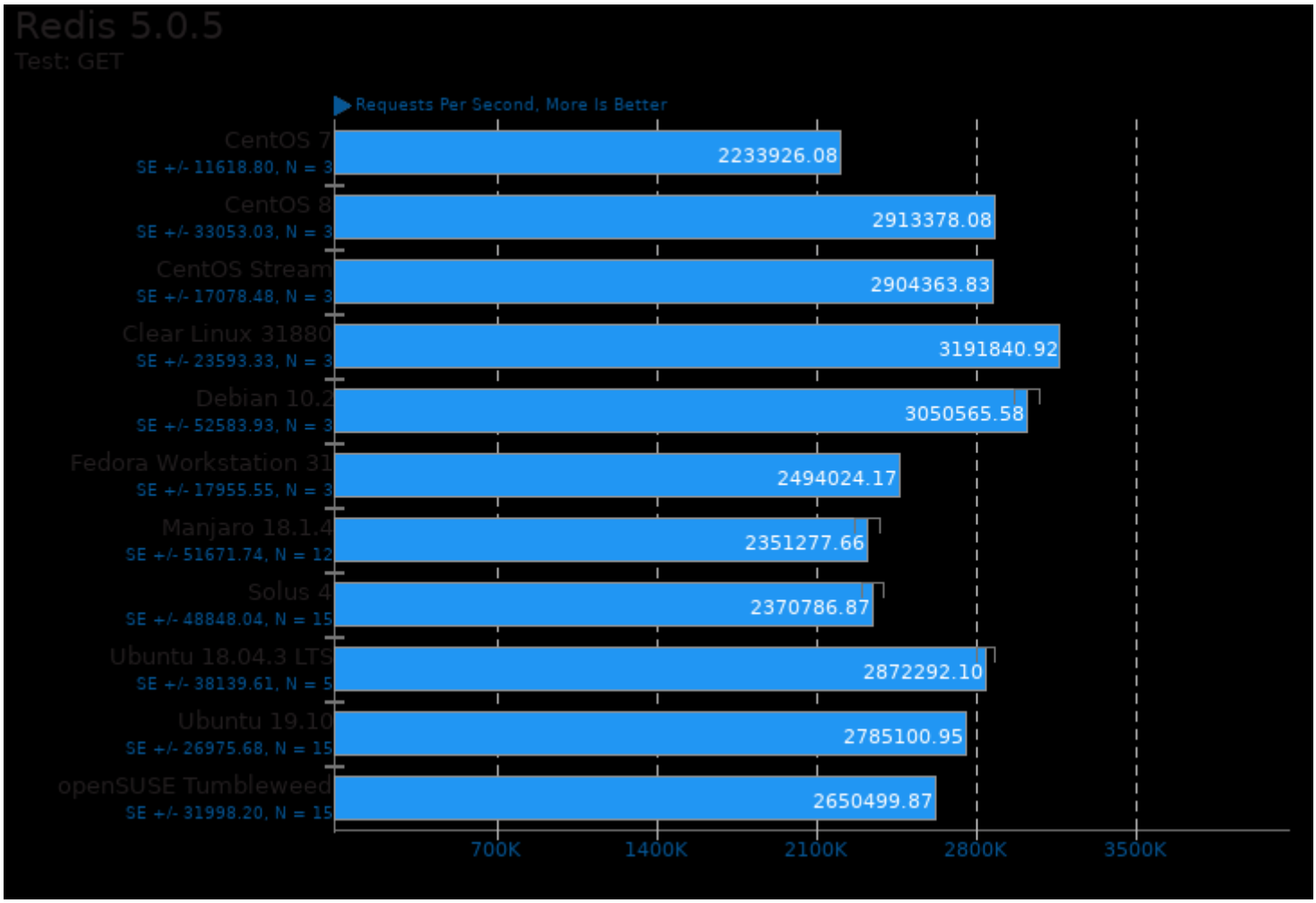
Intel Core i9 10980XE Linux Performance



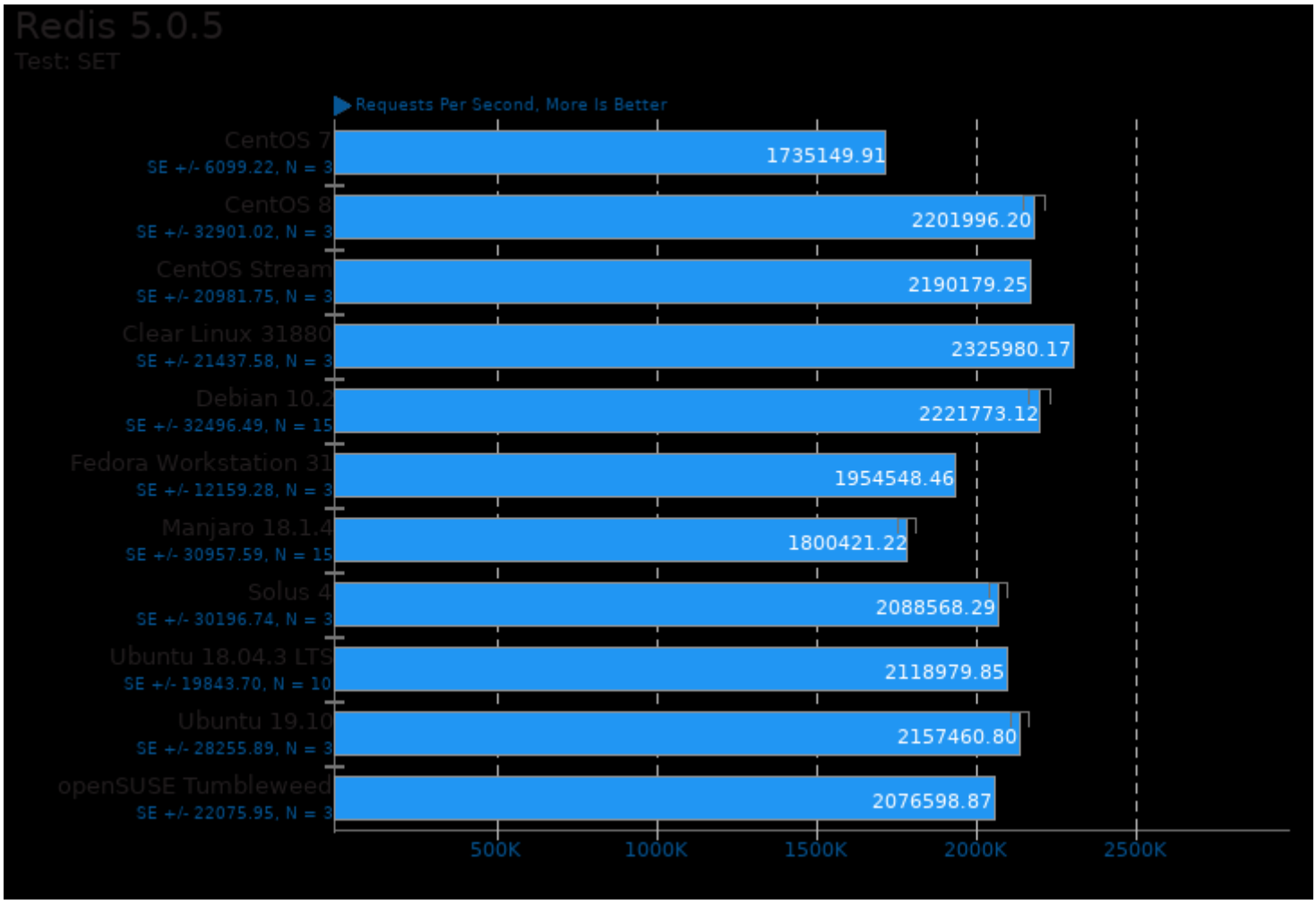
Intel Core i9 10980XE Linux Performance

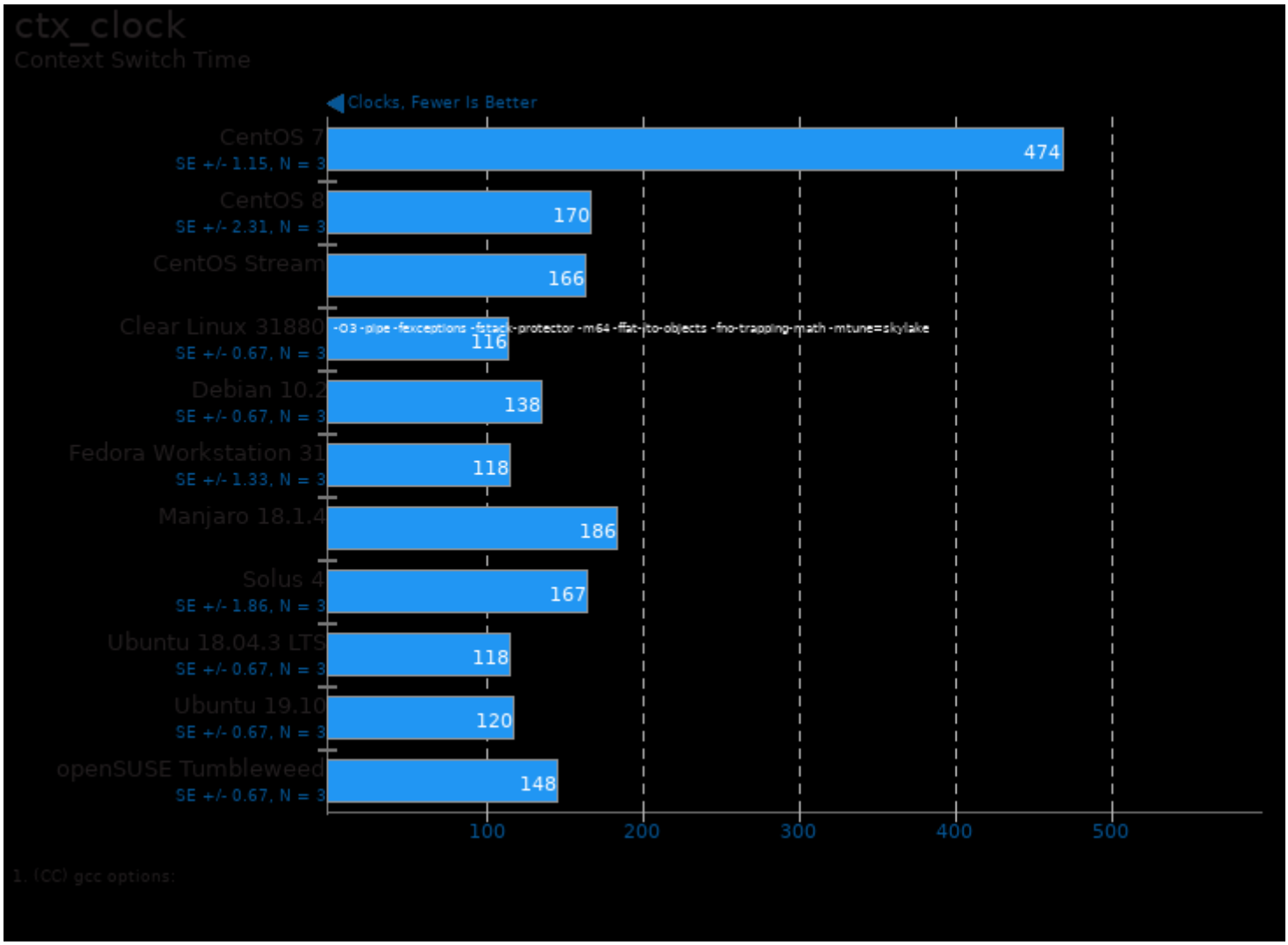


Intel Core i9 10980XE Linux Performance

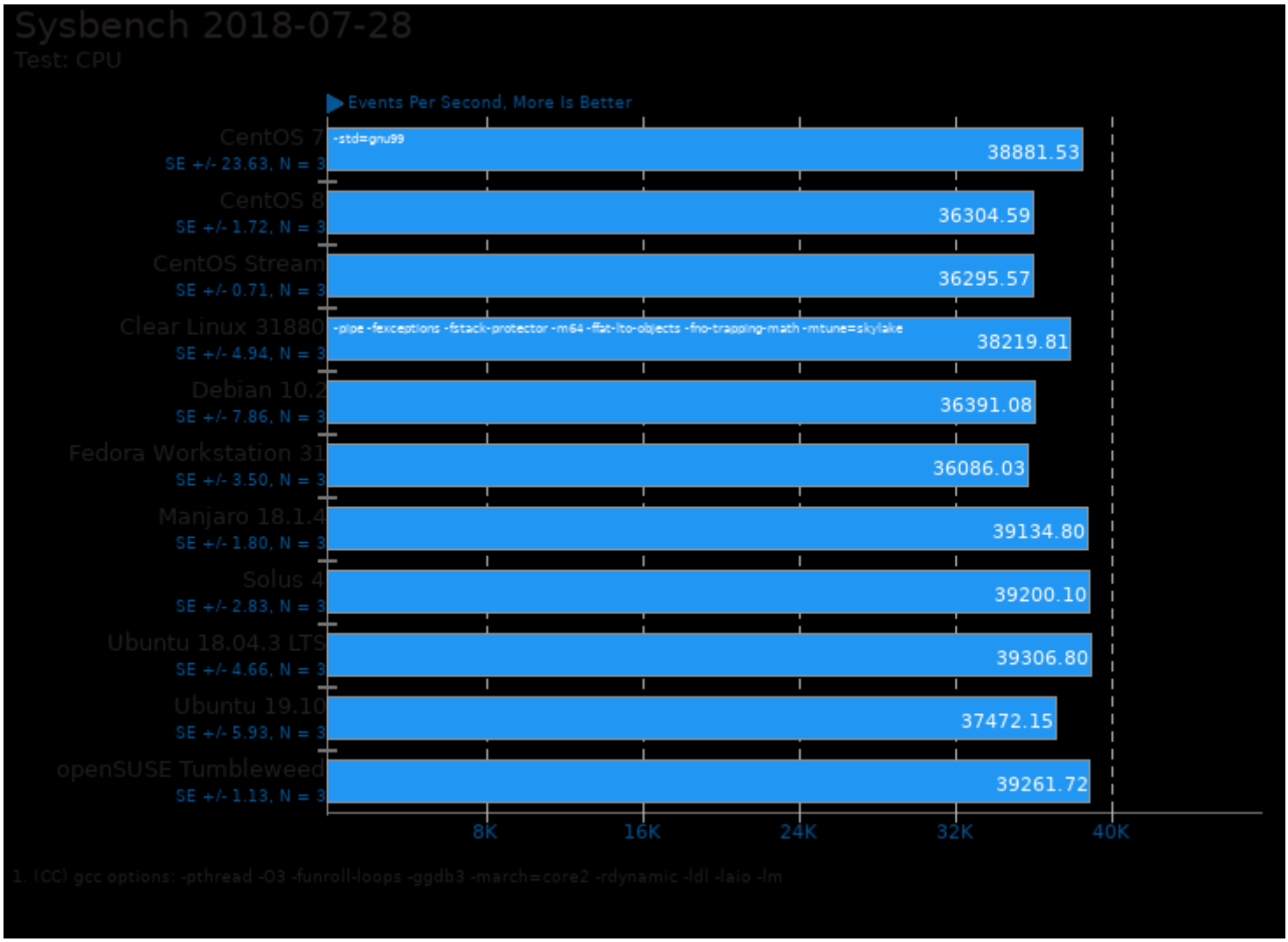


Intel Core i9 10980XE Linux Performance

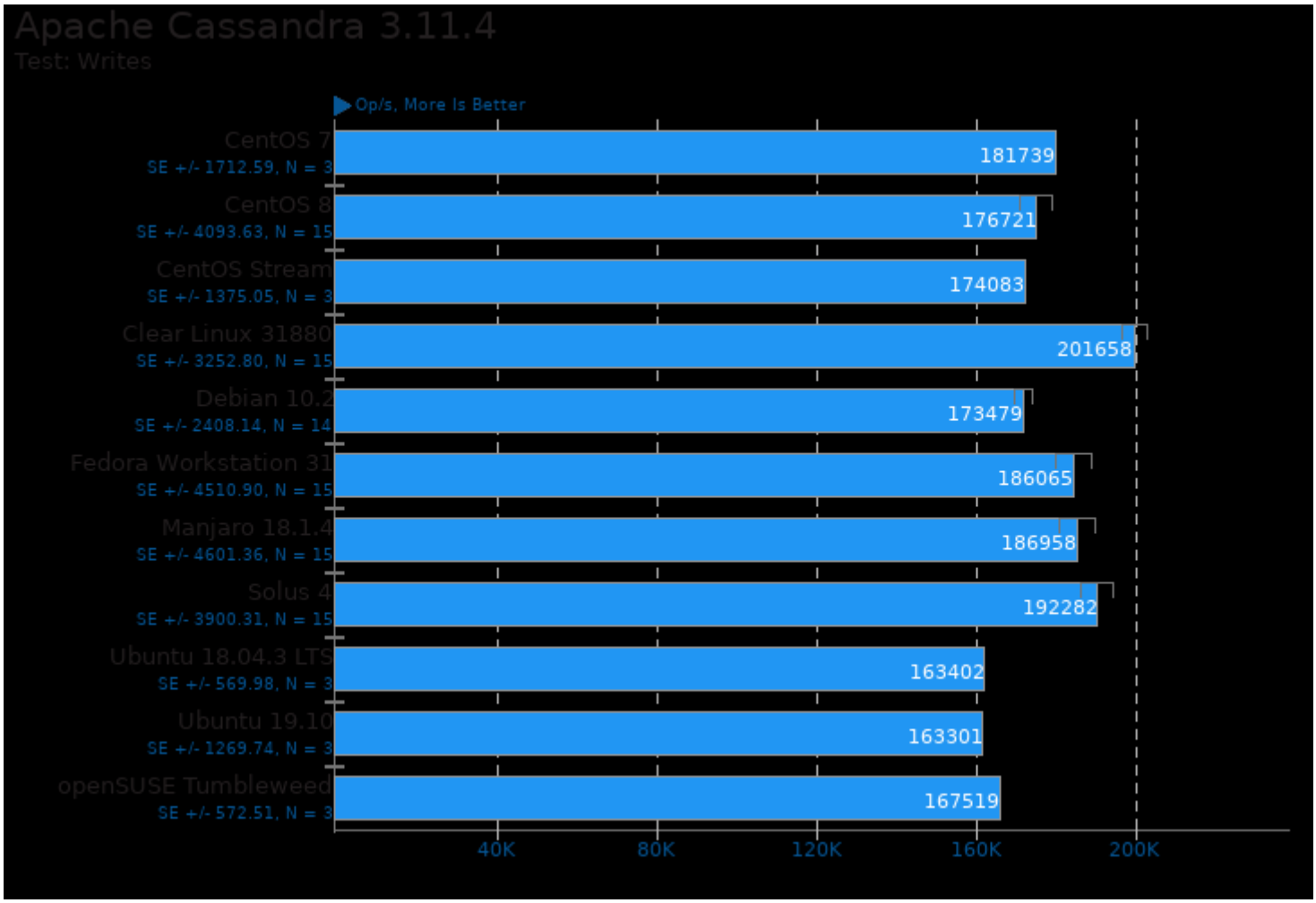



ctx_clock
Context Switch Time
Clocks, Fewer Is Better
CentOS 7
SE +/- 1.15, N = 3
474
CentOS 8
SE +/- 2.31, N = 3
170
CentOS Stream
166
Clear Linux 31880
SE +/- 0.67, N = 3
-O3 -pipe -fexceptions -fstack-protector -m64 -flat-lto-objects -fno-trapping-math -mtune=skylake
116
Debian 10.2
SE +/- 0.67, N = 3
138
Fedora Workstation 31
SE +/- 1.33, N = 3
118
Manjaro 18.1.4
186
Solus 4
SE +/- 1.86, N = 3
167
Ubuntu 18.04.3 LTS
SE +/- 0.67, N = 3
118
Ubuntu 19.10
SE +/- 0.67, N = 3
120
openSUSE Tumbleweed
SE +/- 0.67, N = 3
148
100
200
300
400
500
1. (CC) gcc options:

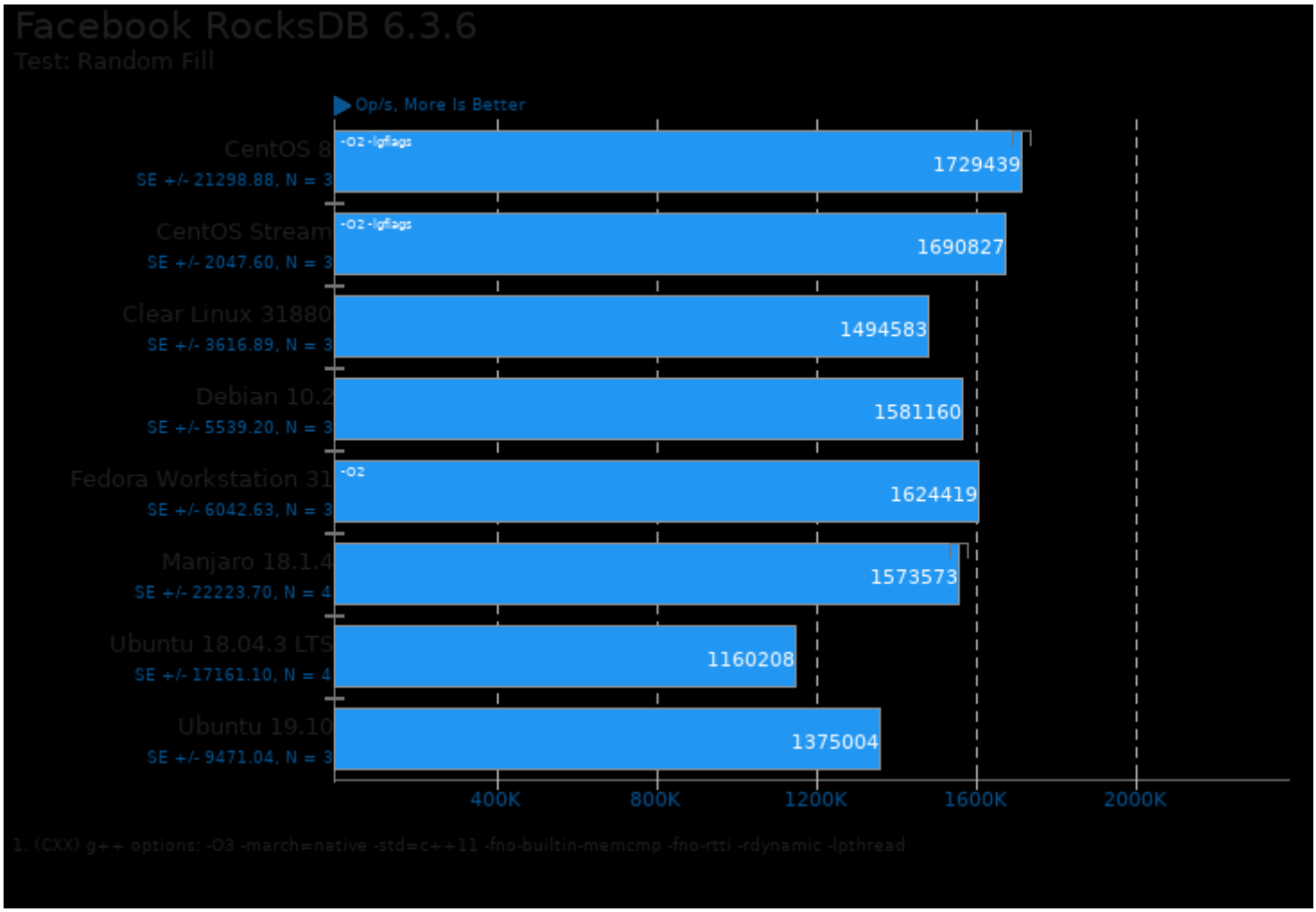
Intel Core i9 10980XE Linux Performance



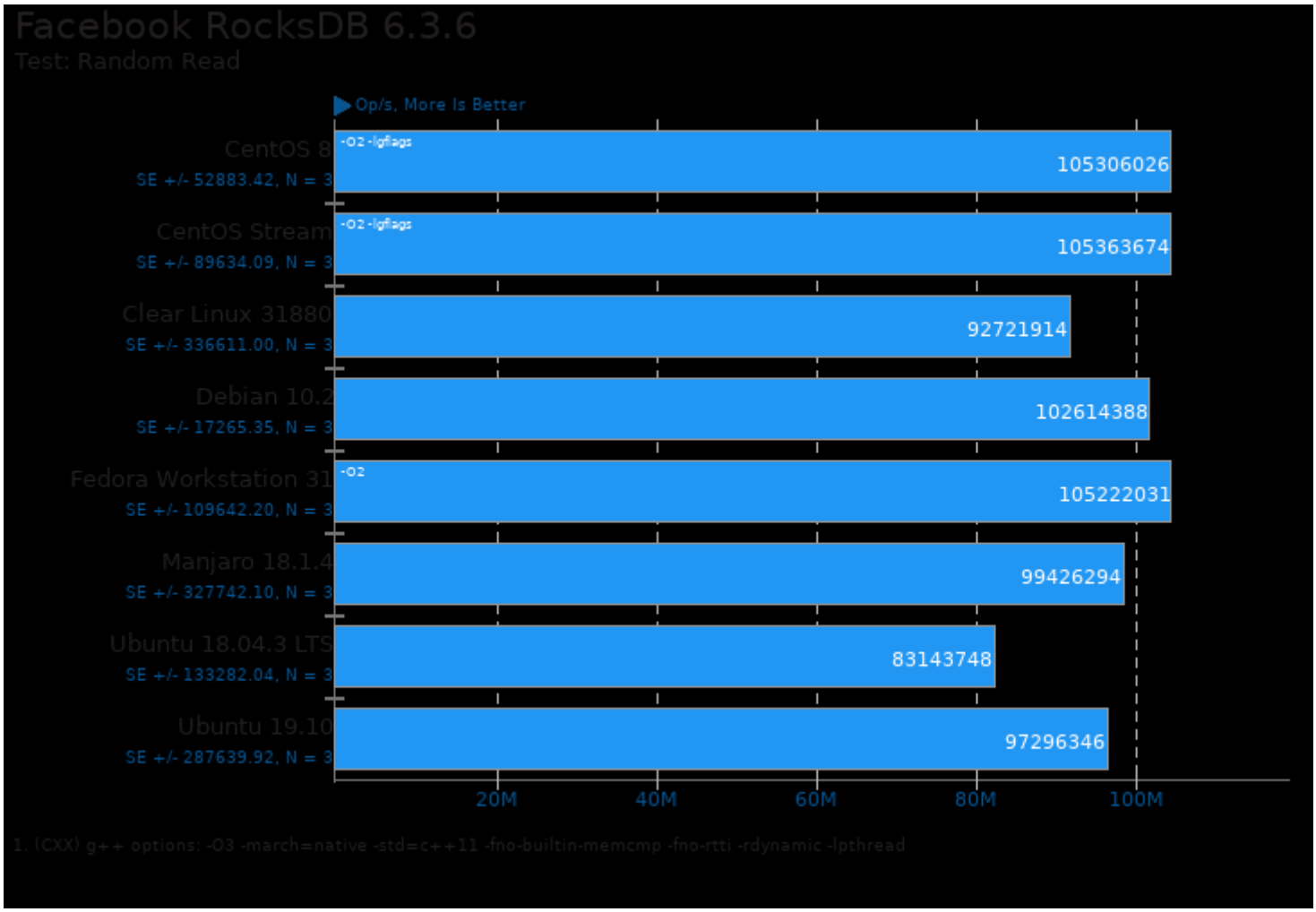
Intel Core i9 10980XE Linux Performance



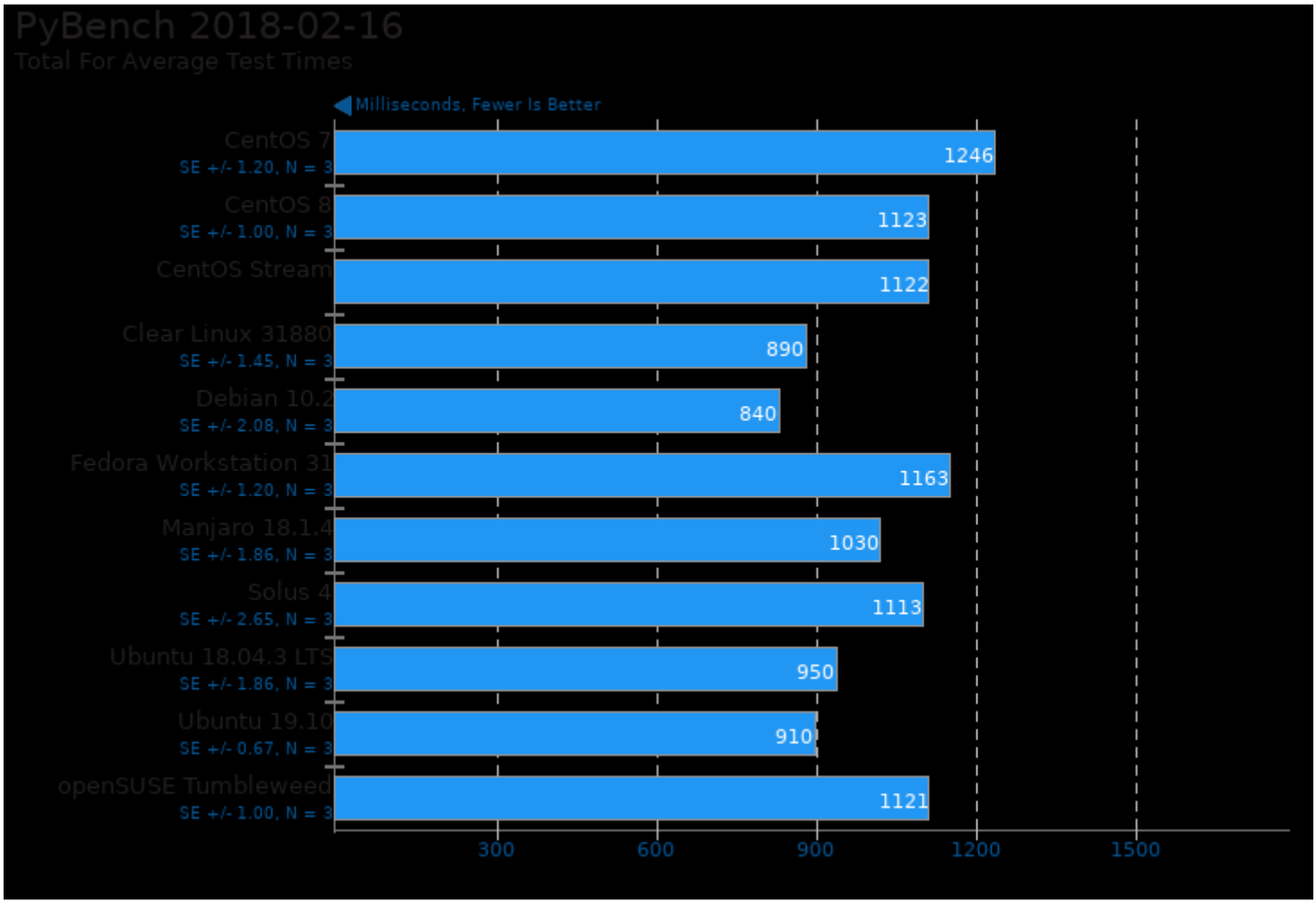
Intel Core i9 10980XE Linux Performance



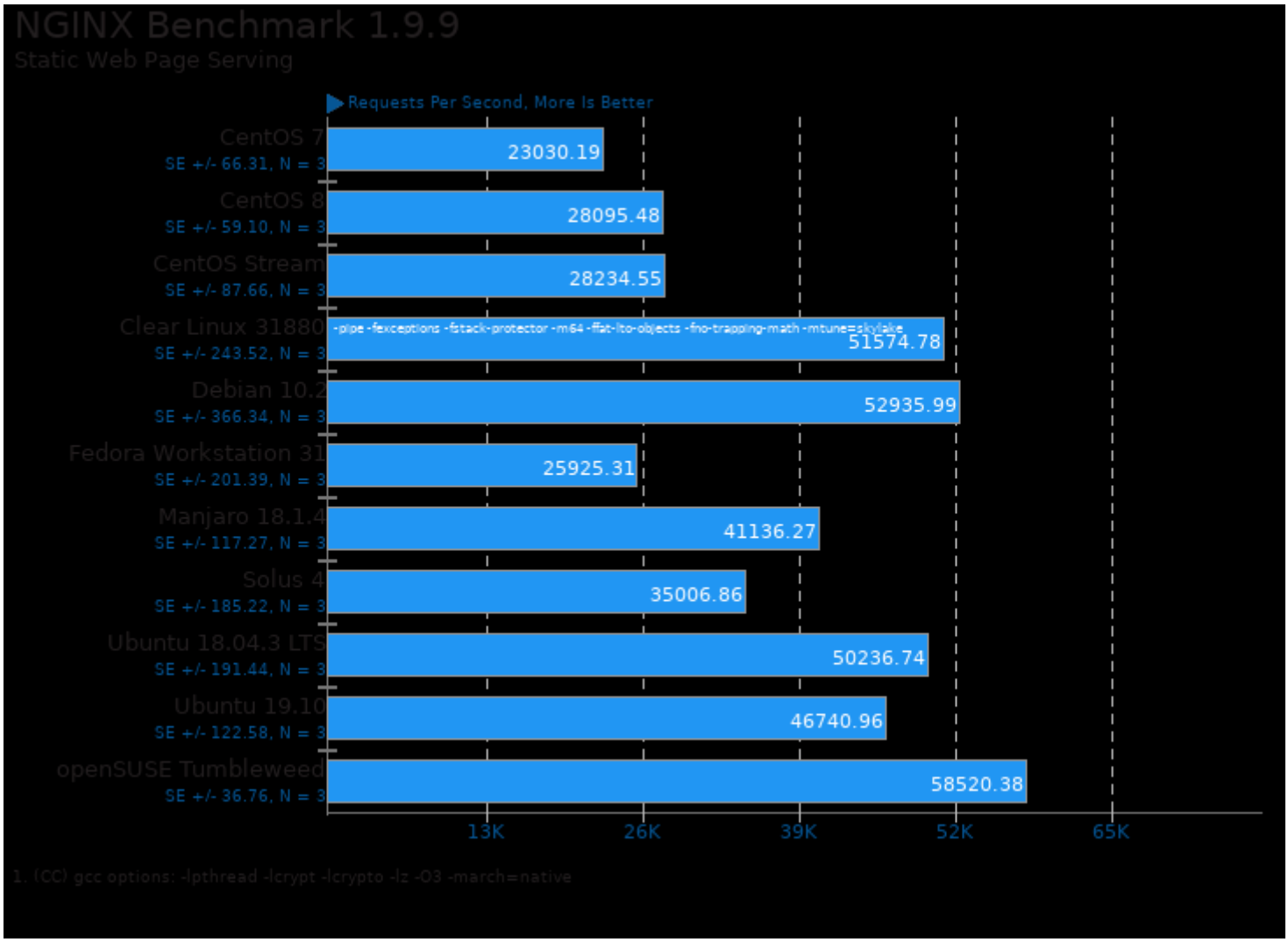
Intel Core i9 10980XE Linux Performance

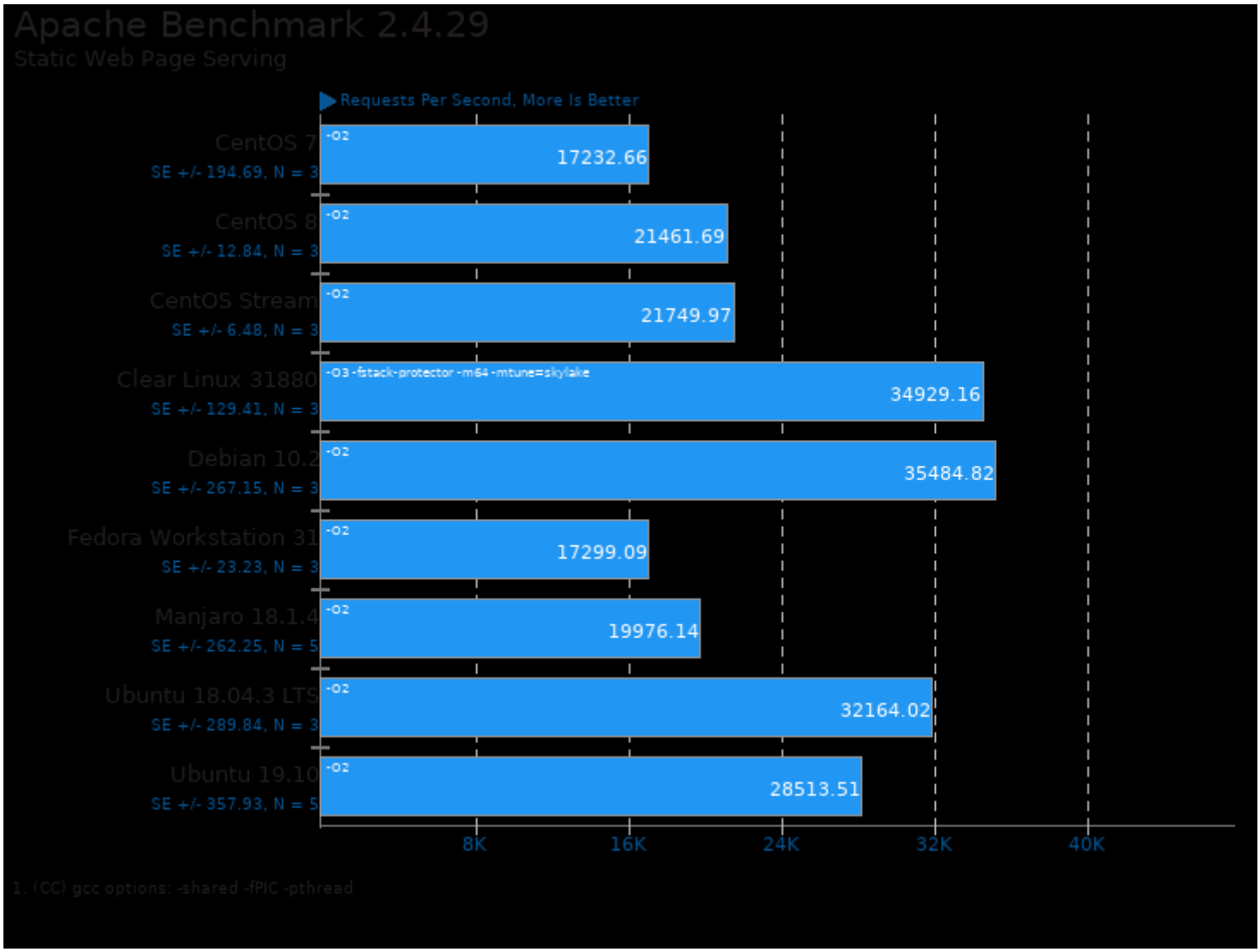


Intel Core i9 10980XE Linux Performance

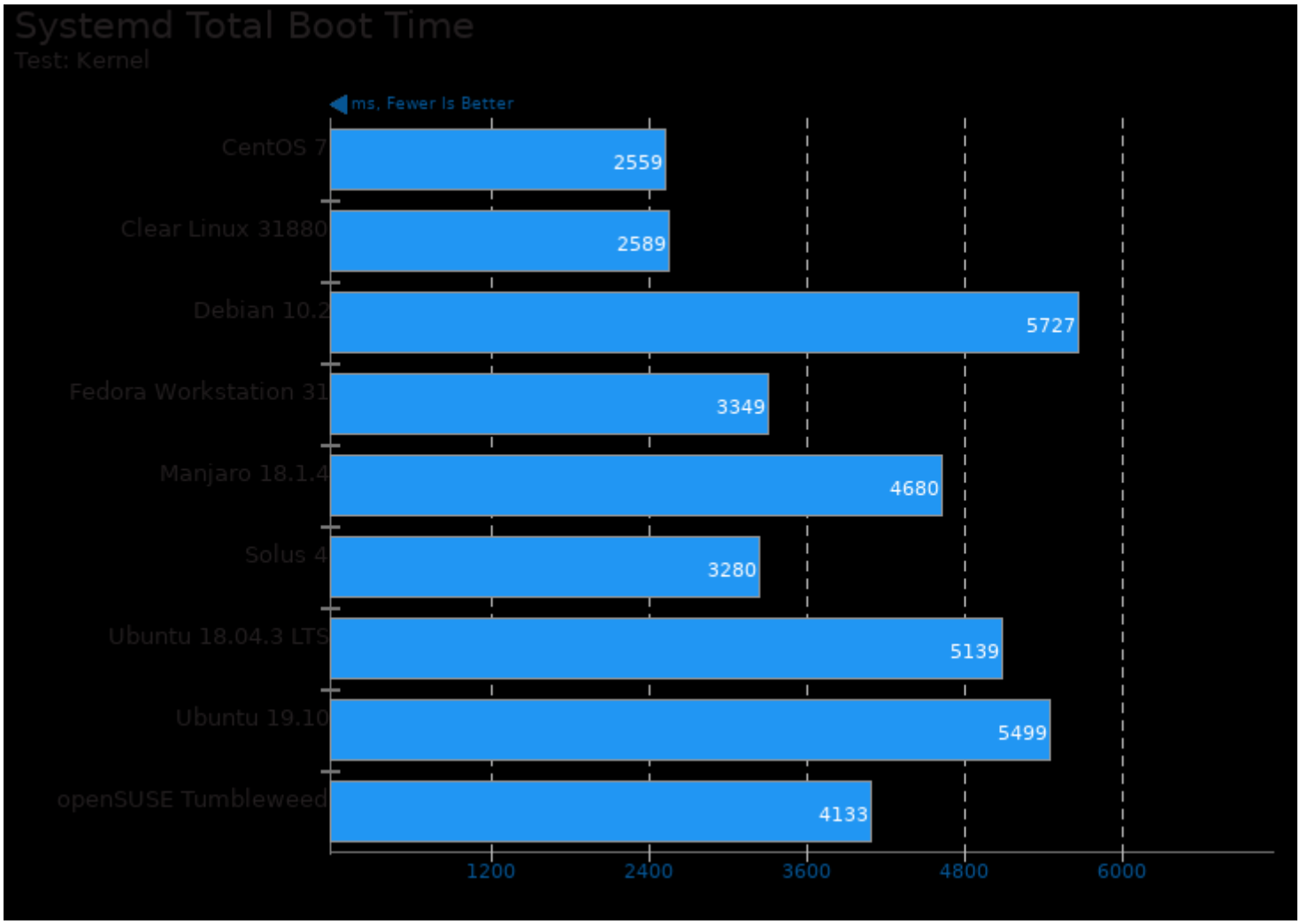


Intel Core i9 10980XE Linux Performance

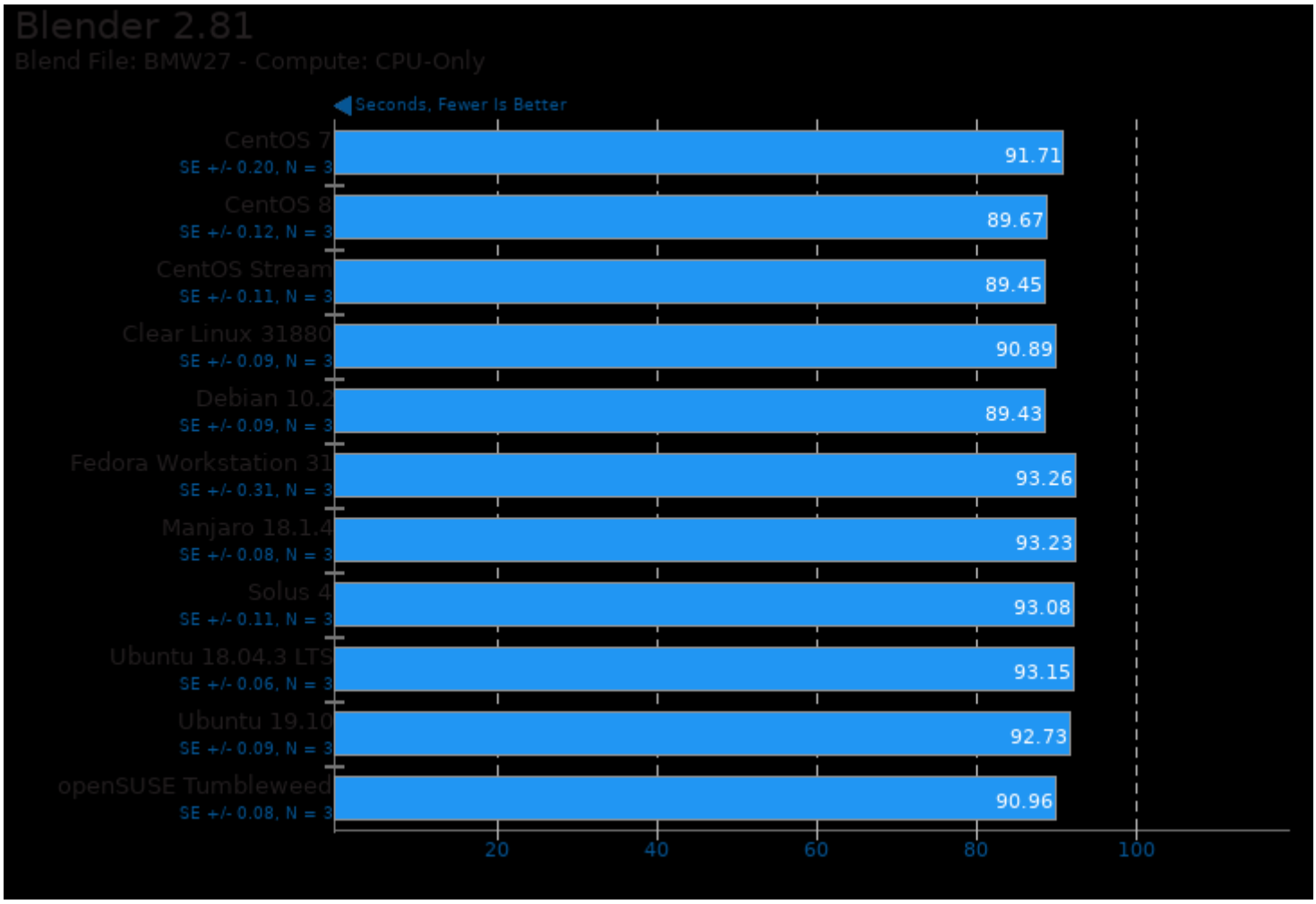



Apache Benchmark 2.4.29
Static Web Page Serving
Requests Per Second, More Is Better
CentOS 7
SE +/- 194.69, N = 3
-O2
17232.66
CentOS 8
SE +/- 12.84, N = 3
-O2
21461.69
CentOS Stream
SE +/- 6.48, N = 3
-O2
21749.97
Clear Linux 31880
SE +/- 129.41, N = 3
-O3 -fstack-protector -m64 -mtune=skylake
34929.16
Debian 10.2
SE +/- 267.15, N = 3
-O2
35484.82
Fedora Workstation 31
SE +/- 23.23, N = 3
-O2
17299.09
Manjaro 18.1.4
SE +/- 262.25, N = 5
-O2
19976.14
Ubuntu 18.04.3 LTS
SE +/- 289.84, N = 3
-O2
32164.02
Ubuntu 19.10
SE +/- 357.93, N = 5
-O2
28513.51
8K
16K
24K
32K
40K
1. (CC) gcc options: -shared -fPIC -pthread

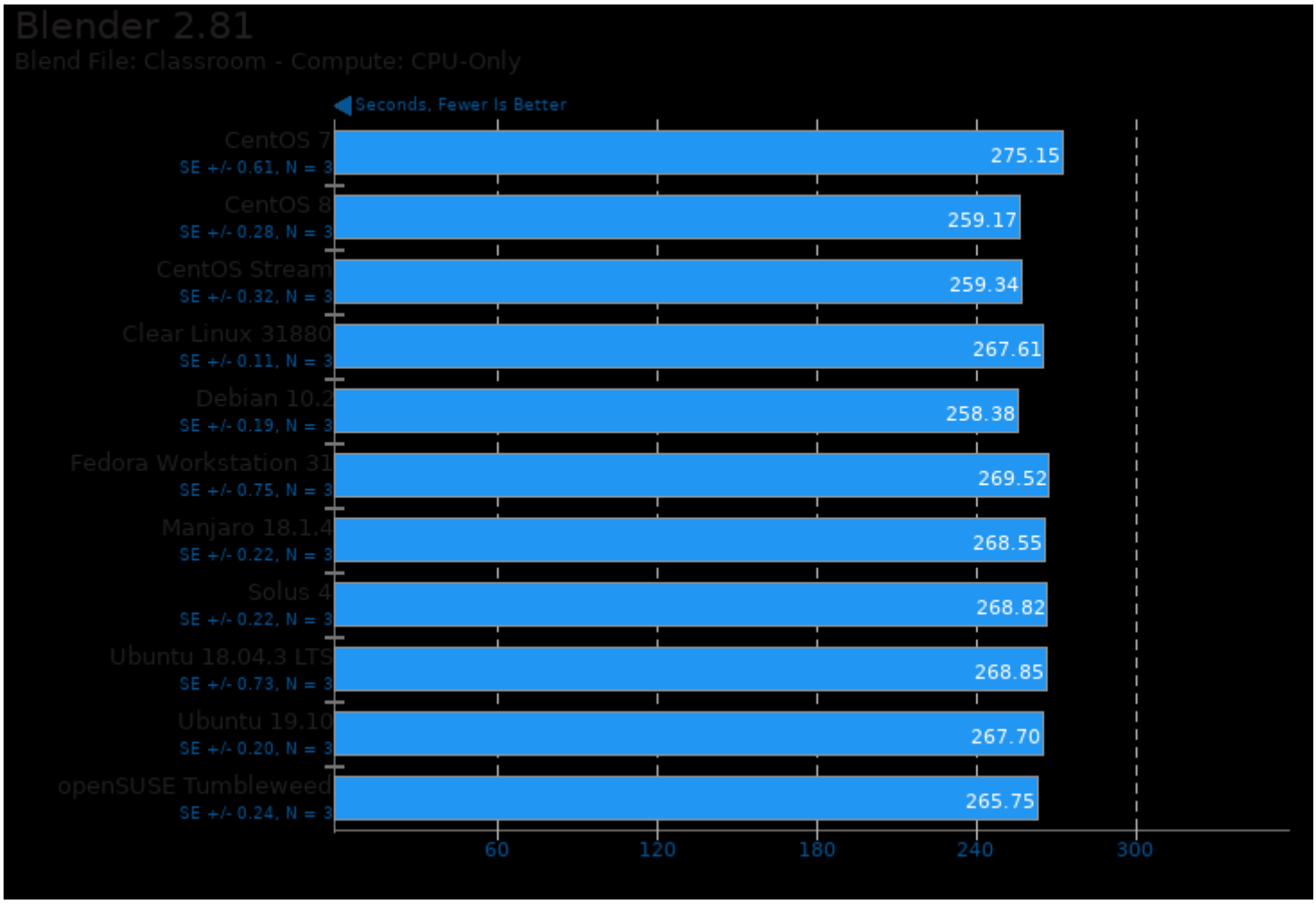
Intel Core i9 10980XE Linux Performance



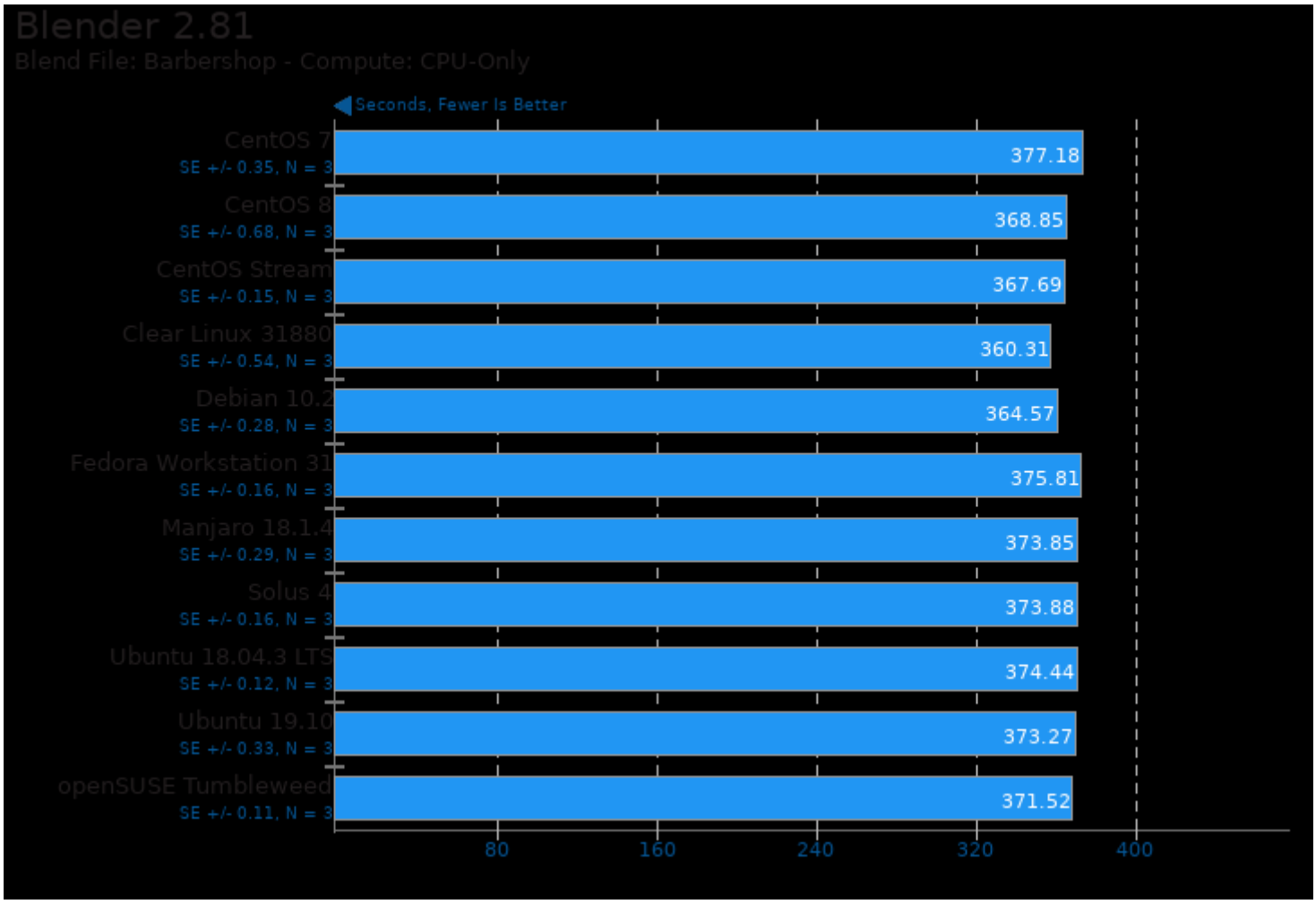
Intel Core i9 10980XE Linux Performance



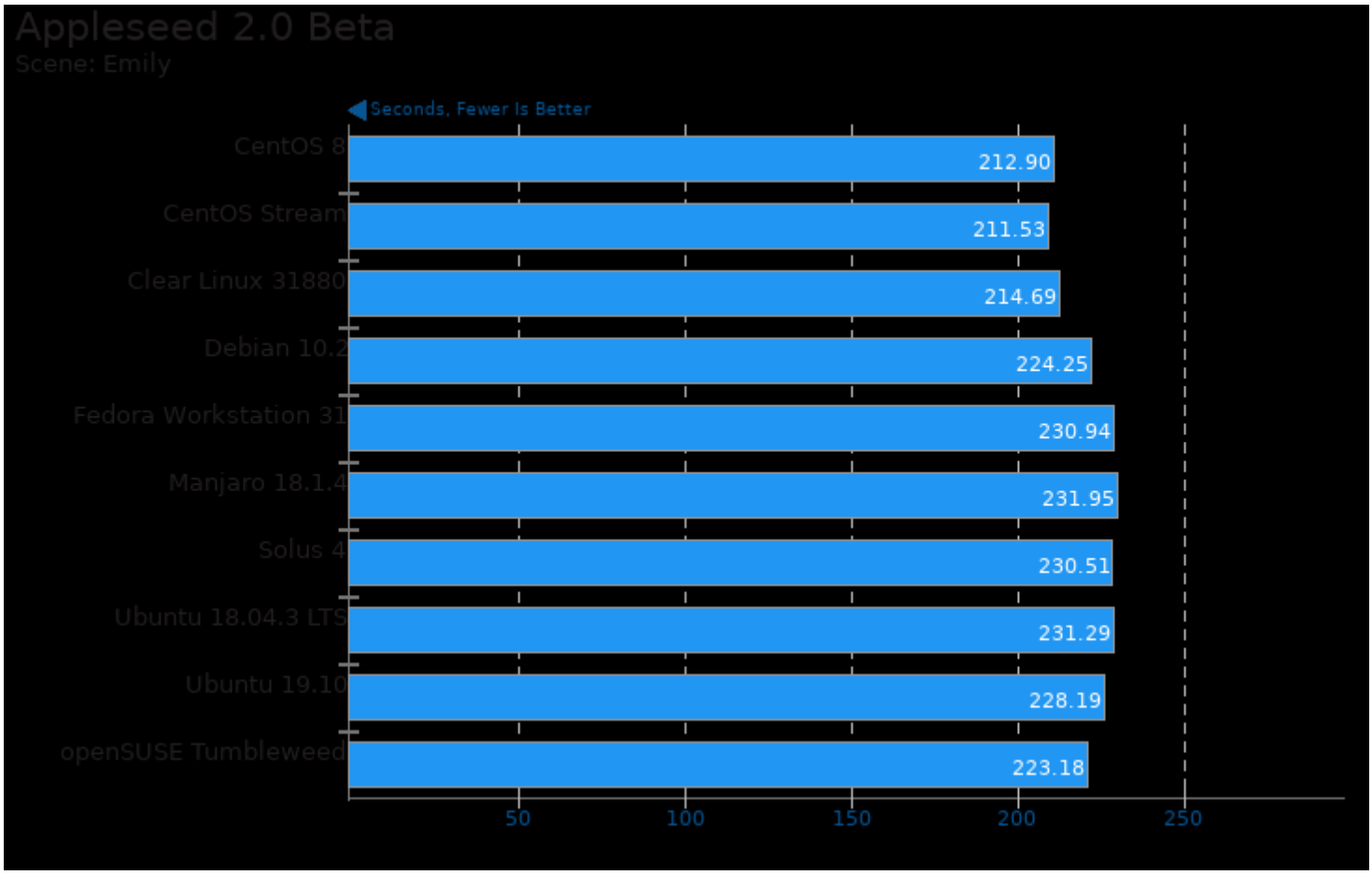
Intel Core i9 10980XE Linux Performance



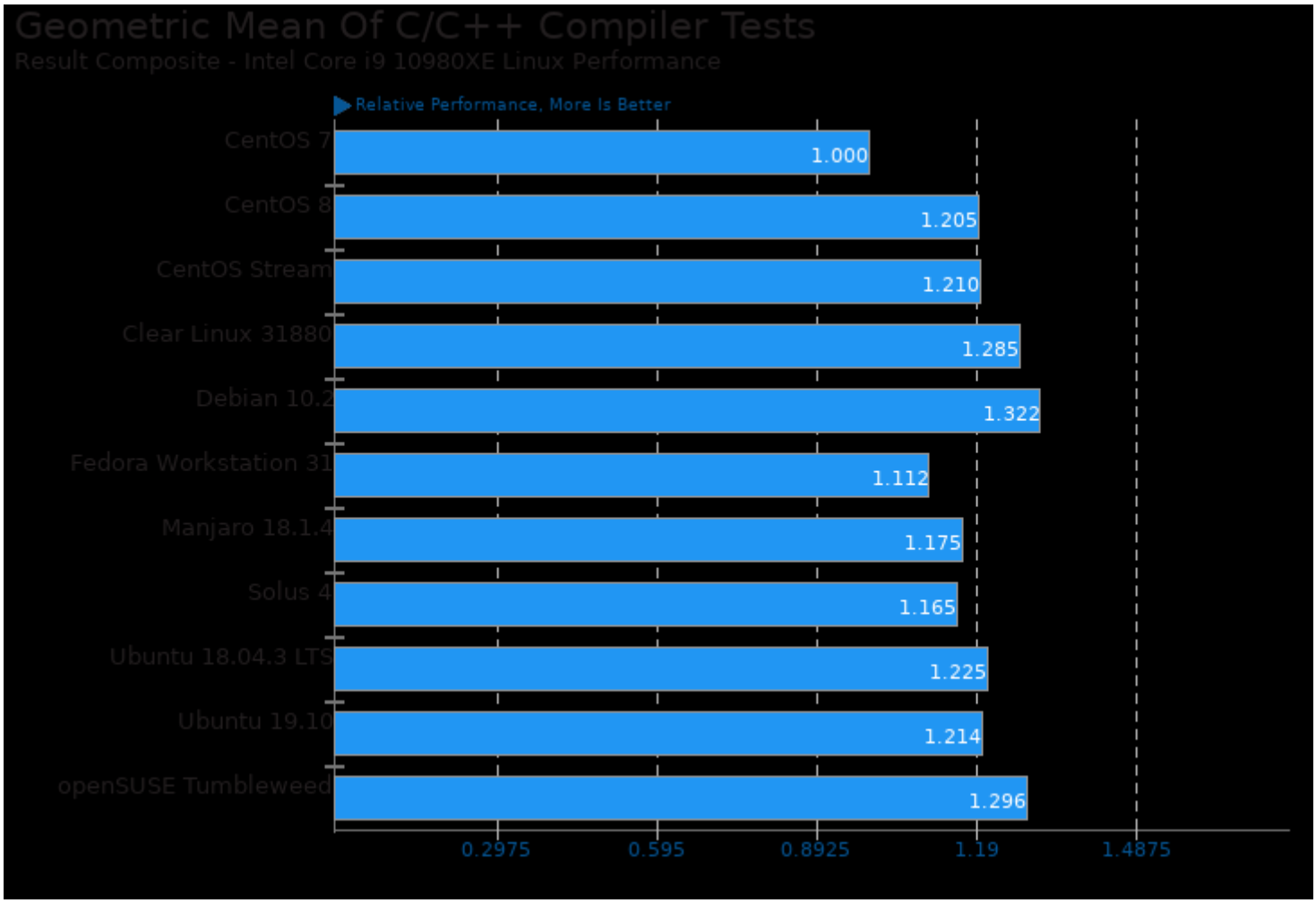
Intel Core i9 10980XE Linux Performance



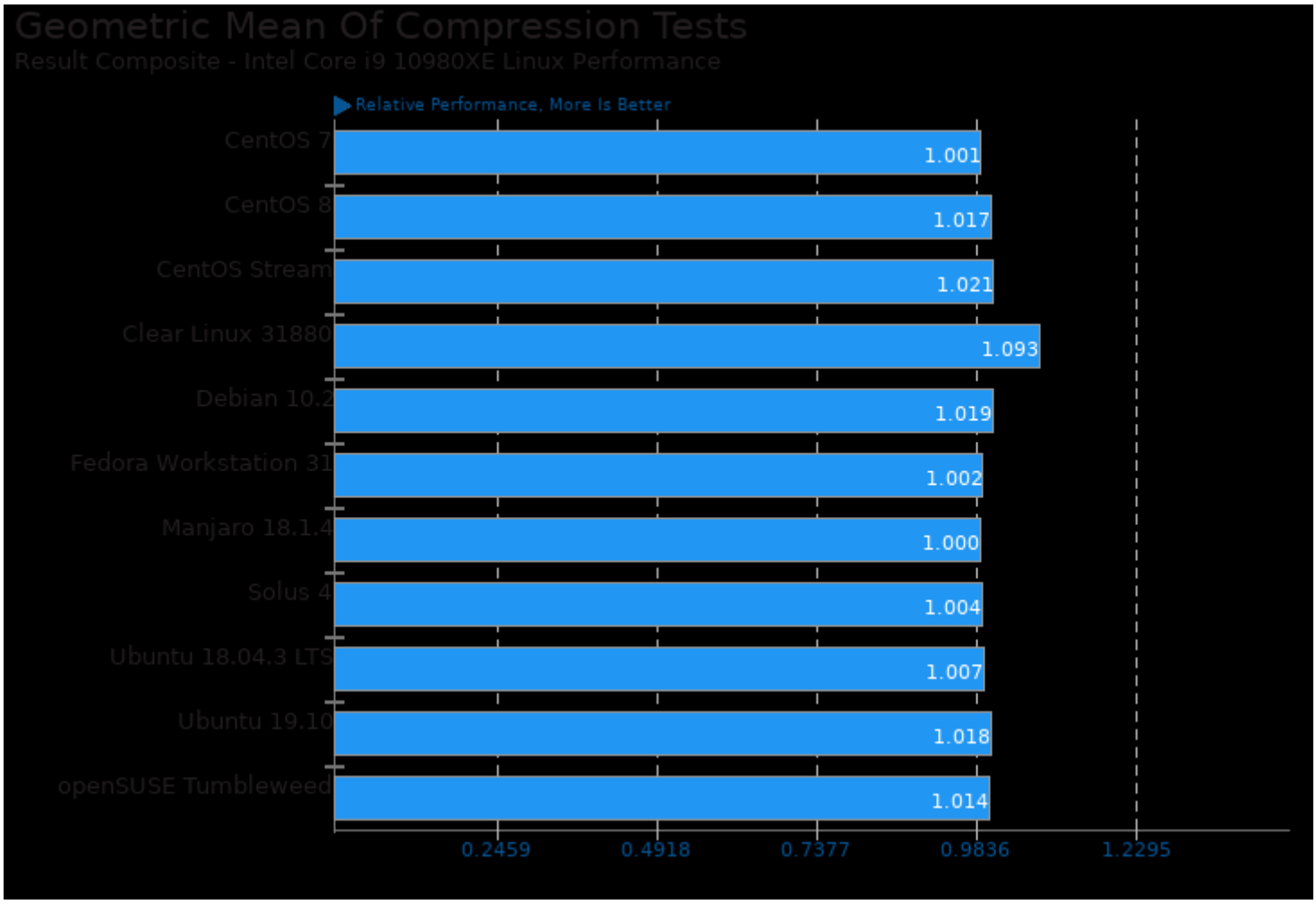
Intel Core i9 10980XE Linux Performance



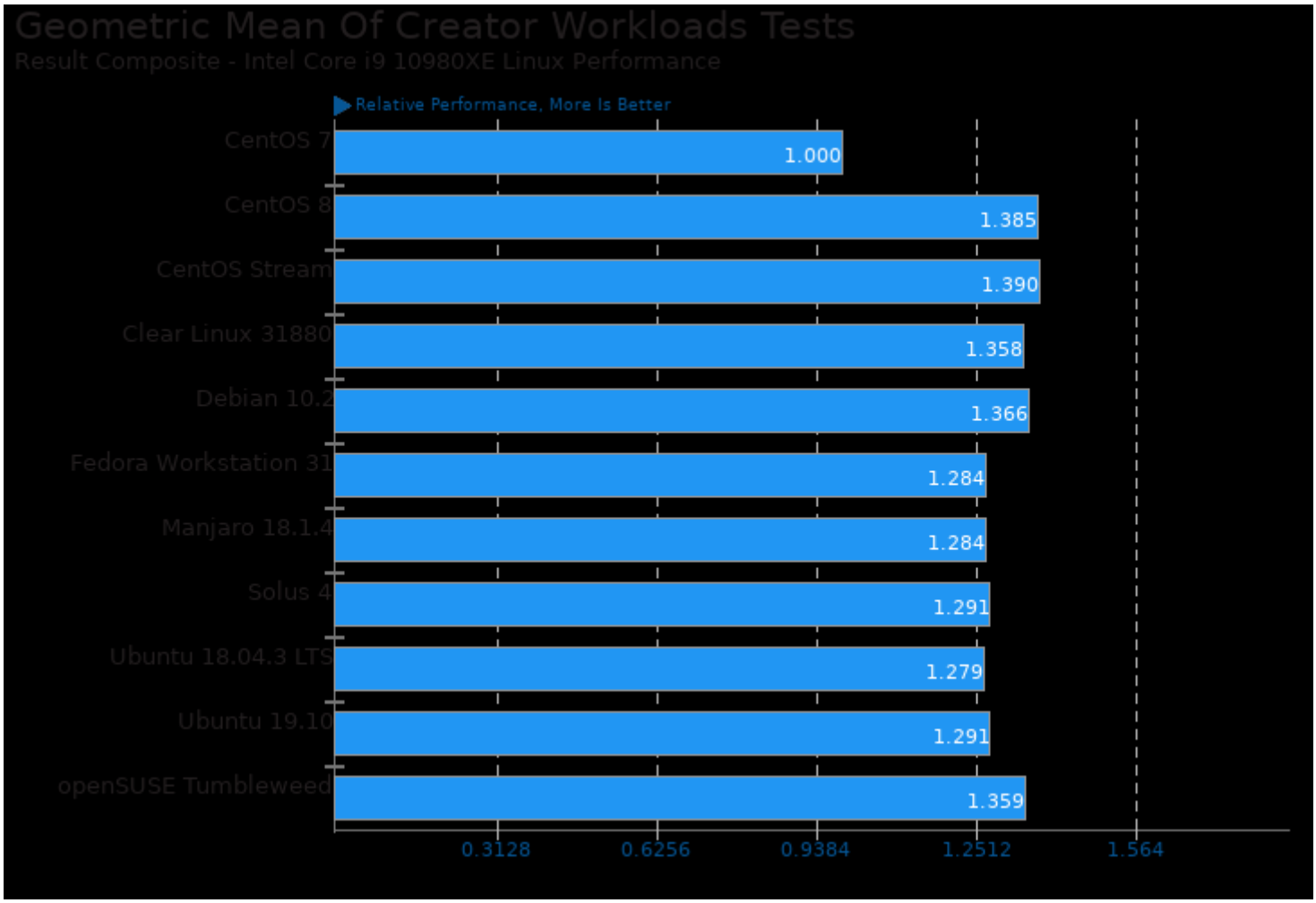
These geometric means are based upon test groupings / test suites for this result file.



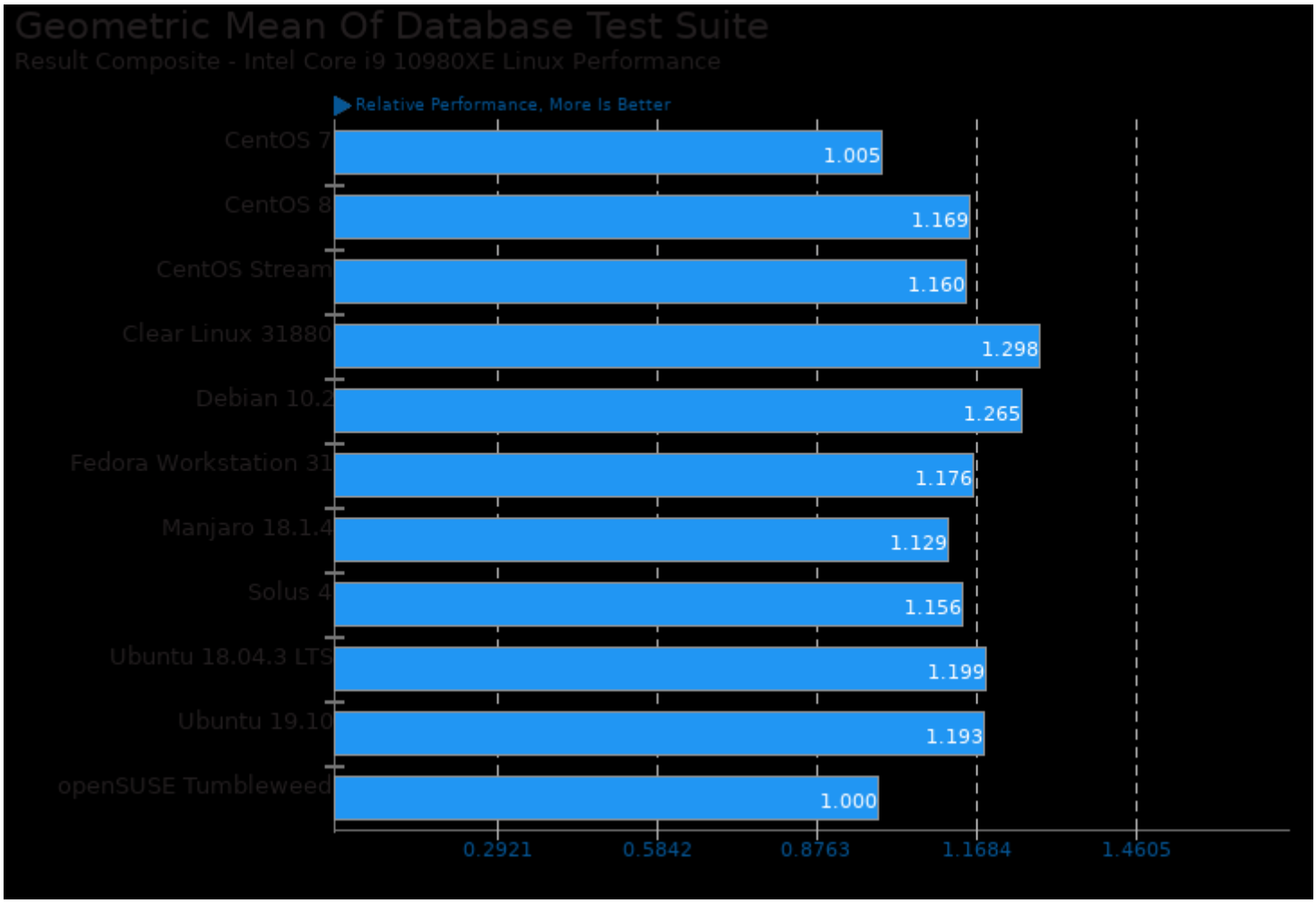
Geometric mean based upon tests: pts/vpxenc, pts/graphics-magick, pts/pgbench, pts/apache, pts/sqlite-speedtest, pts/dav1d, pts/x264, pts/x265, pts/compress-xz, pts/compress-zstd, pts/nginx, pts/svt-av1, pts/svt-vp9 and pts/gromacs



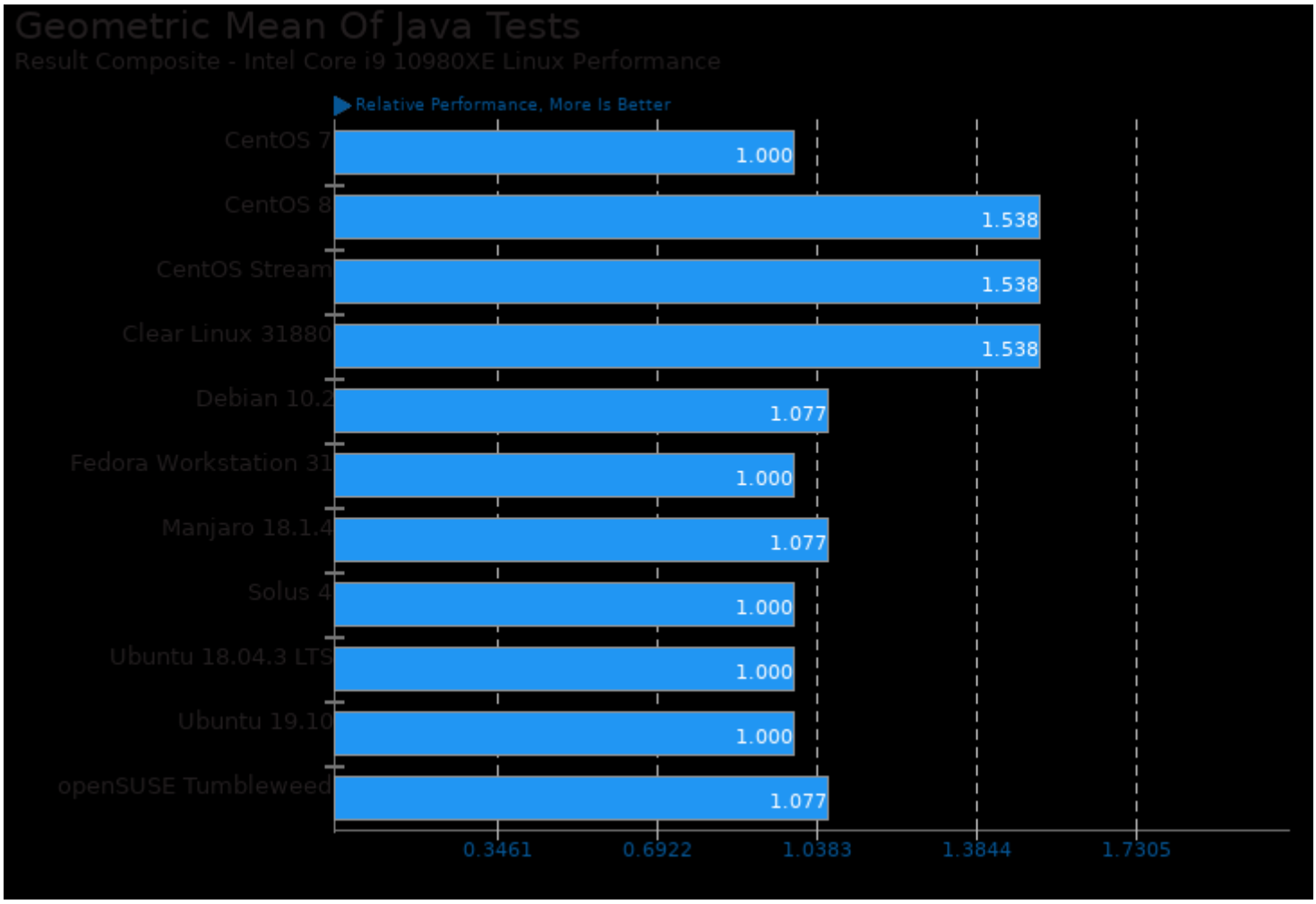
Geometric mean based upon tests: pts/compress-zstd and pts/compress-xz



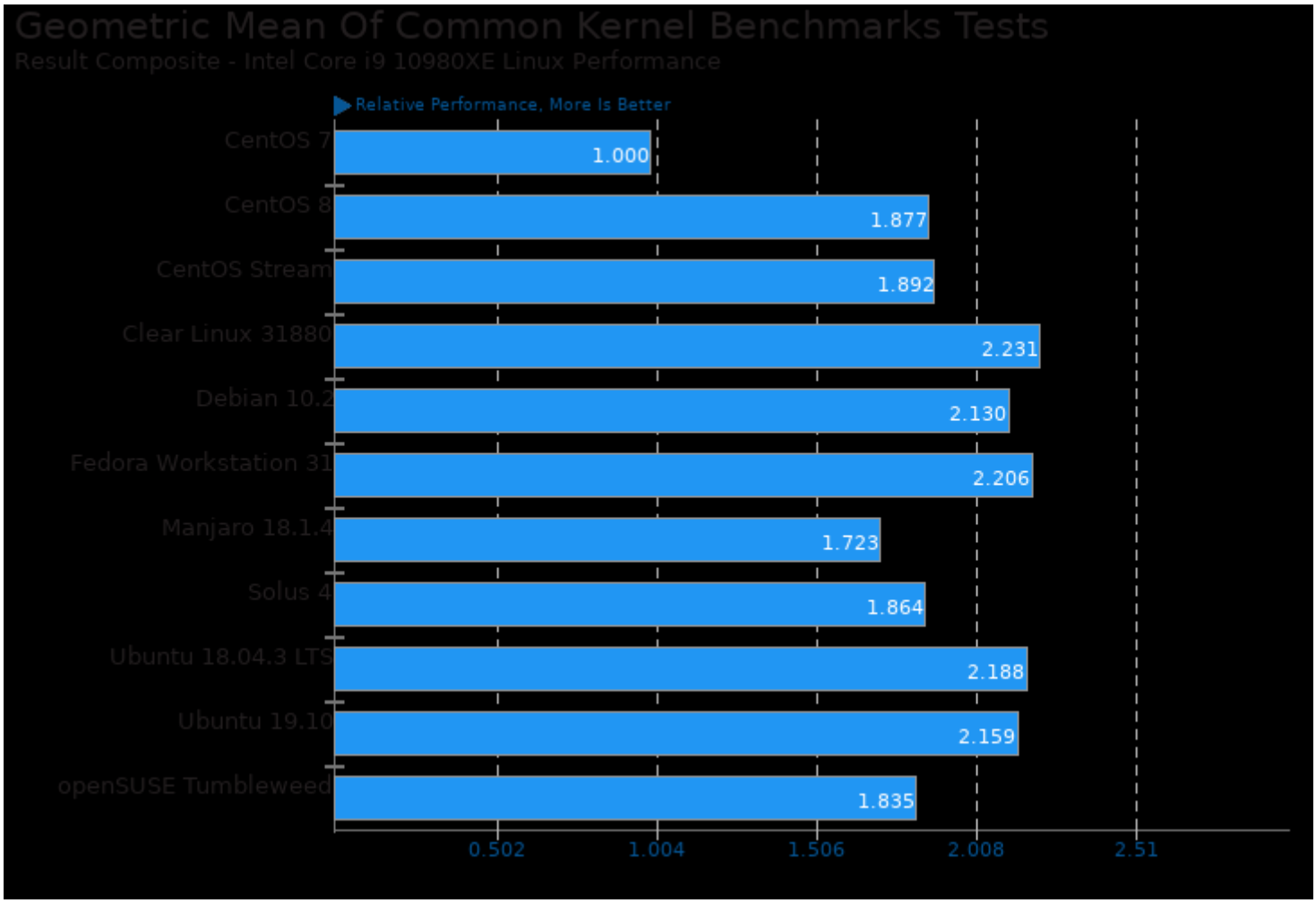
Geometric mean based upon tests: pts/blender, pts/appleseed, pts/radiance, pts/smallpt, pts/svt-vp9, pts/svt-hevc, pts/x264, pts/x265, pts/vpxenc, pts/dav1d, pts/svt-av1, pts/graphics-magick, pts/embree and pts/deepspeech



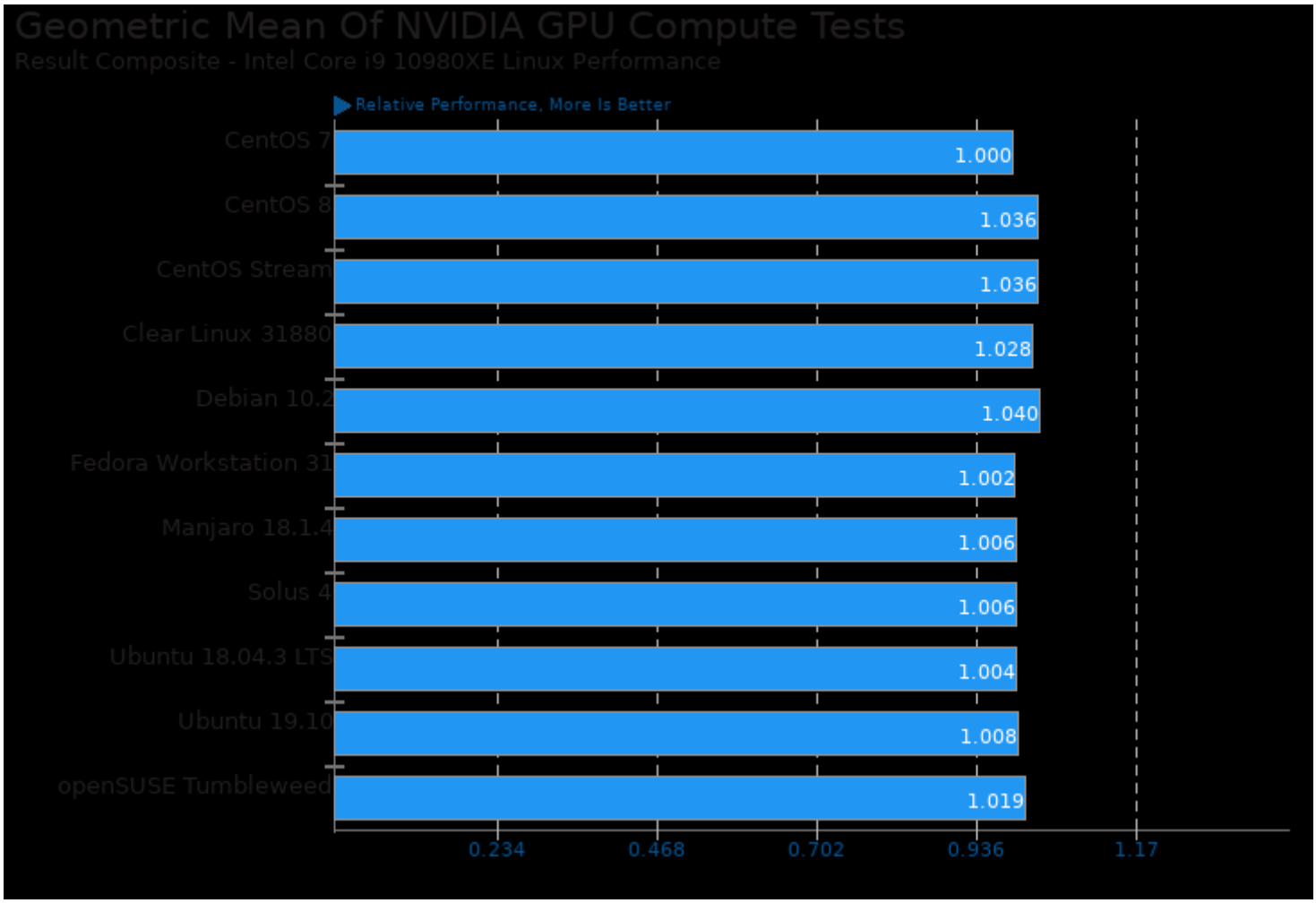
Geometric mean based upon tests: pts/sqlite, pts/sqlite-speedtest, pts/redis, pts/rocksdb, pts/cassandra and pts/pgbench



Geometric mean based upon tests: pts/dacapobench and pts/renaissance

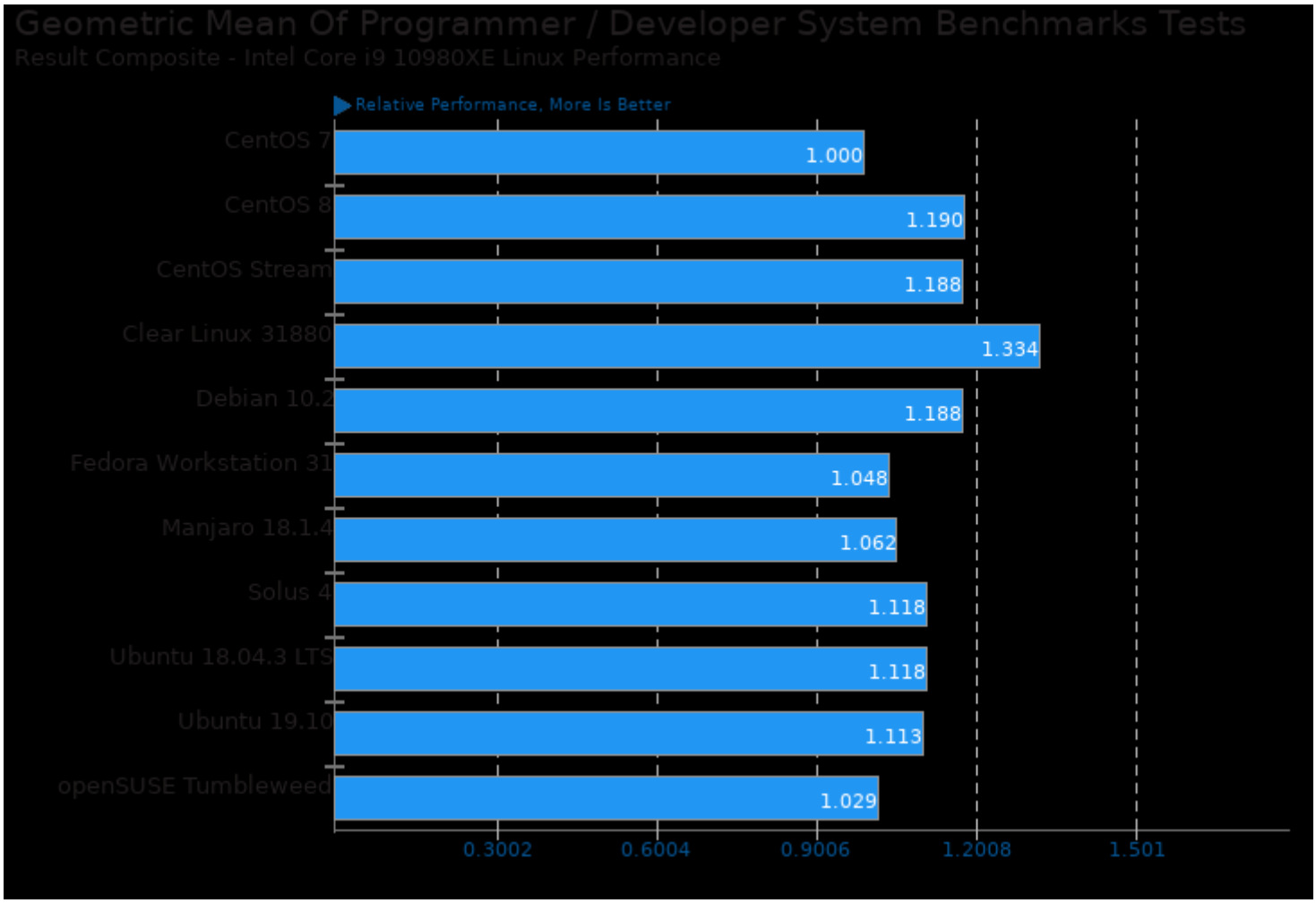


Geometric mean based upon tests: pts/apache, pts/sqlite-speedtest, pts/pgbench, pts/ctx-clock and pts/rocksdb

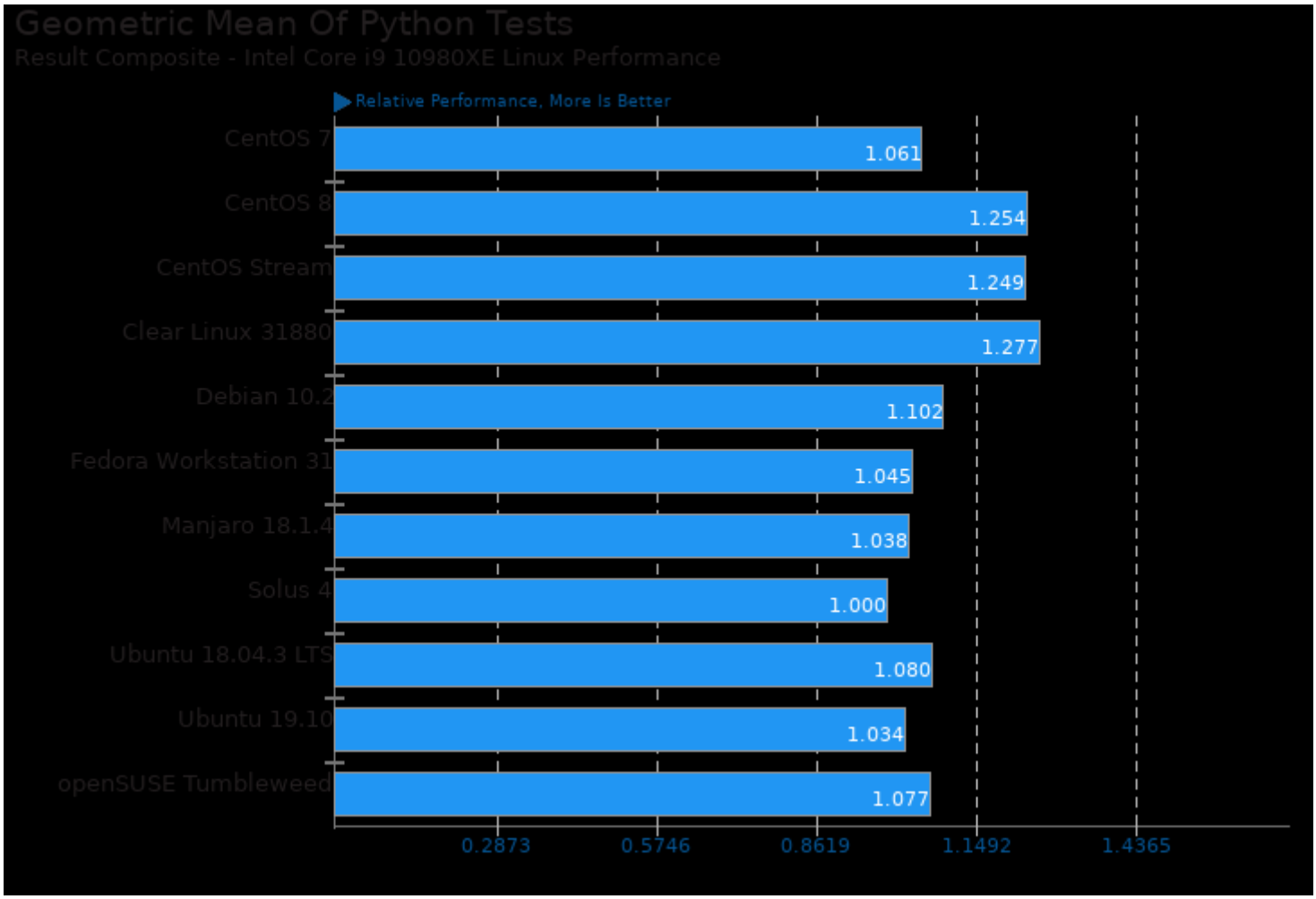


Geometric mean based upon tests: pts/gromacs and pts/blender

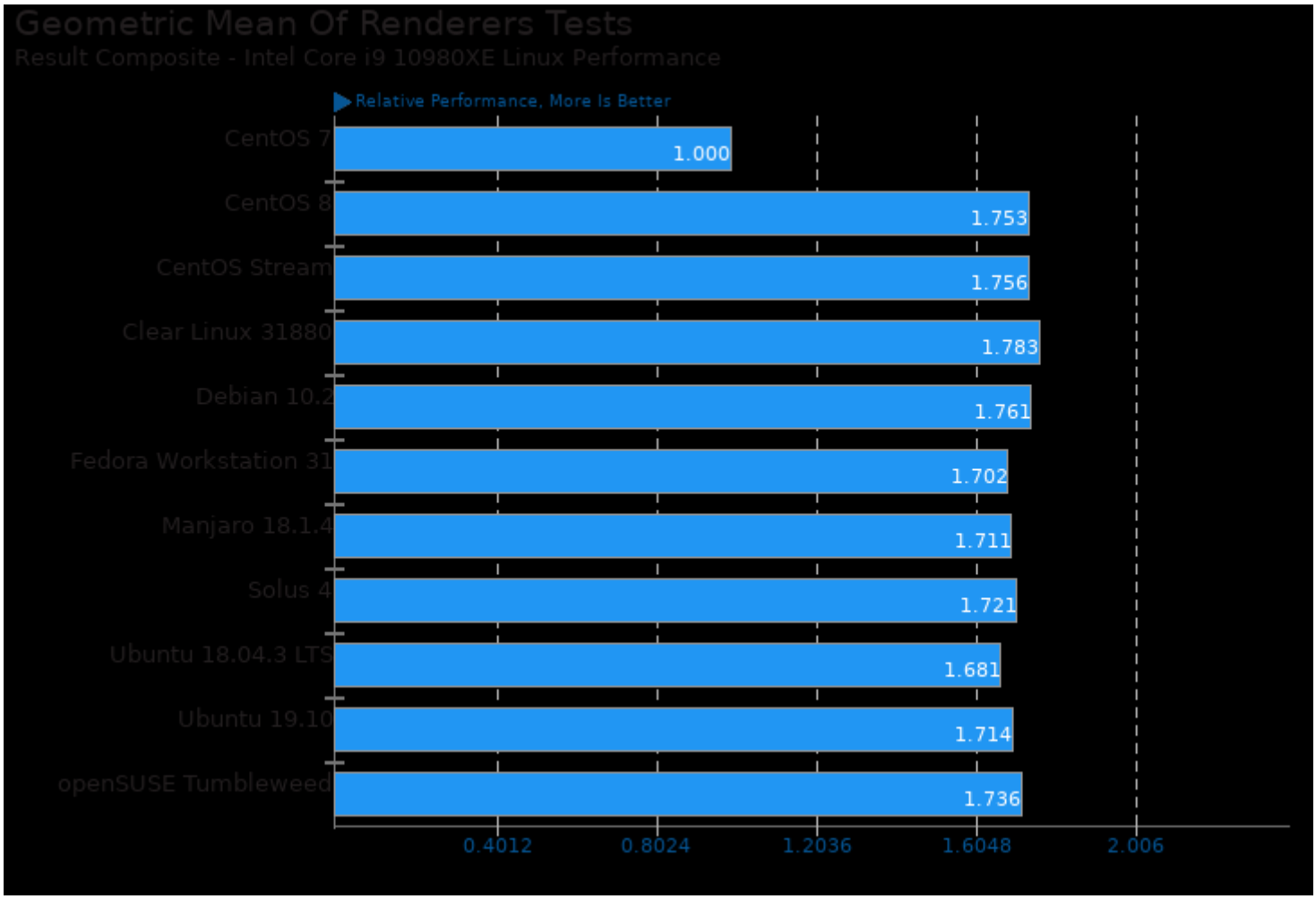
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Geometric mean based upon tests: pts/sqlite-speedtest, pts/compress-zstd, pts/pybench, pts/build-linux-kernel and pts/build-gcc

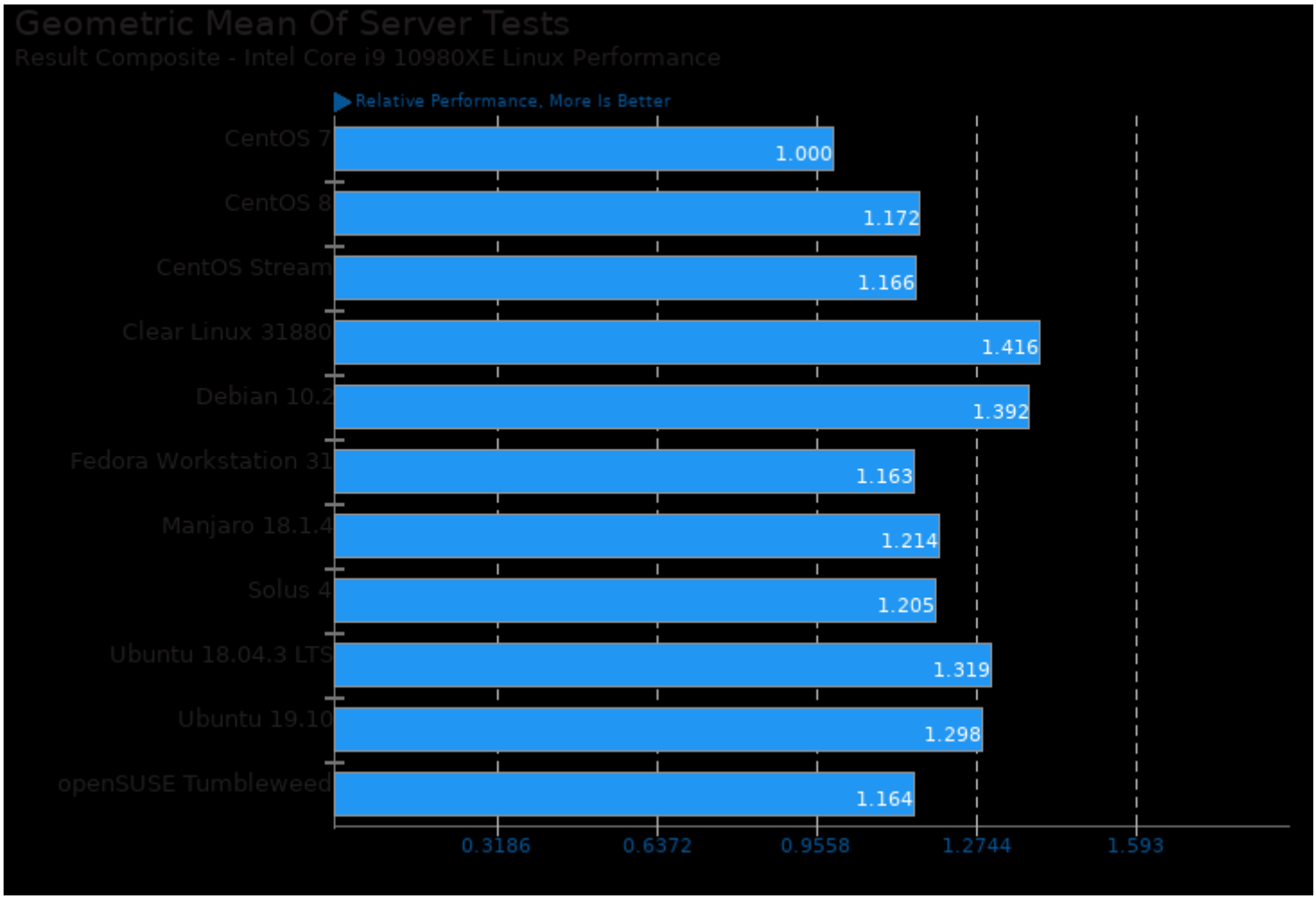


Geometric mean based upon tests: pts/paraview, pts/pybench and pts/systemd-boot-total



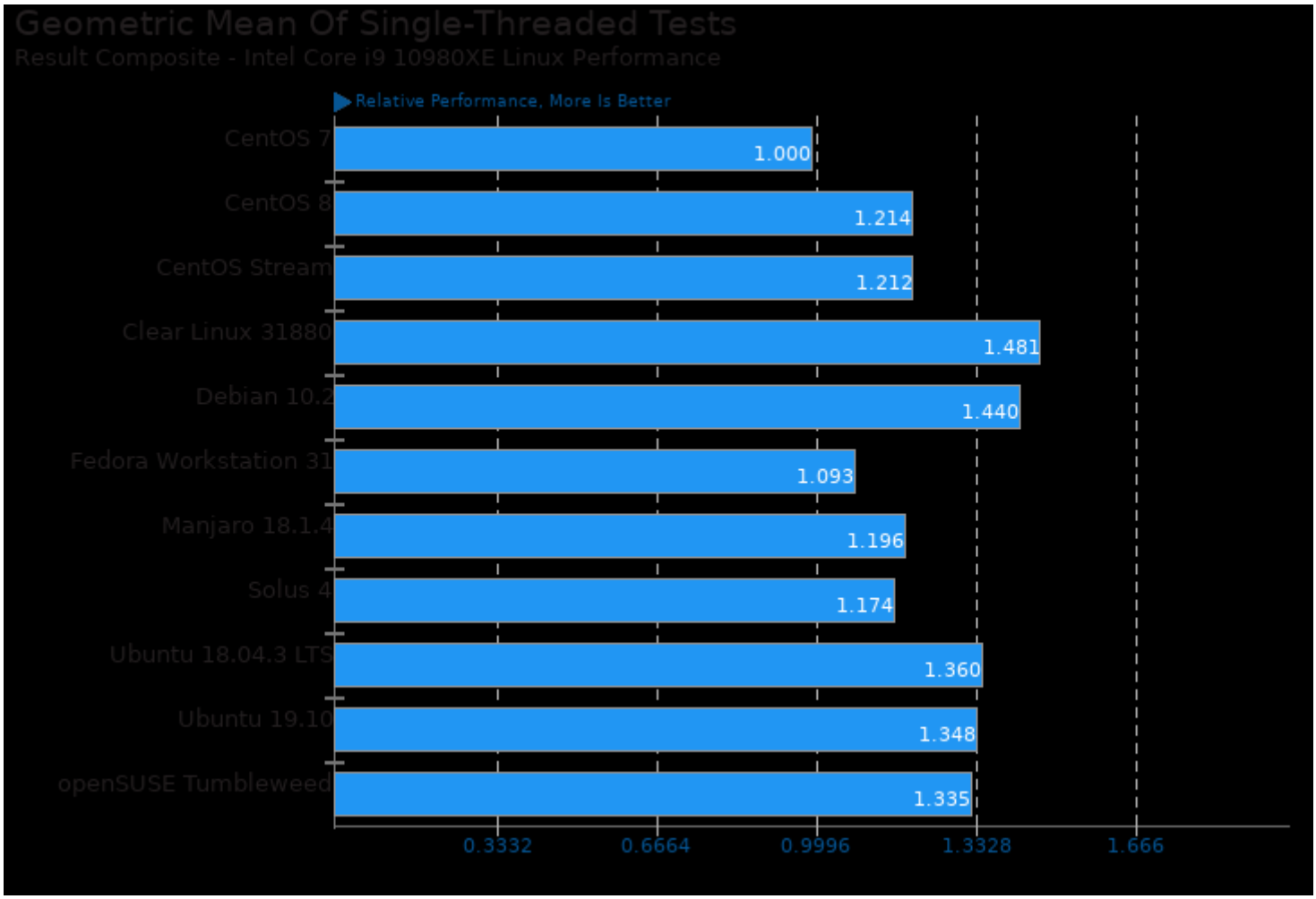
Geometric mean based upon tests: pts/blender, pts/appleseed, pts/radiance and pts/smallpt

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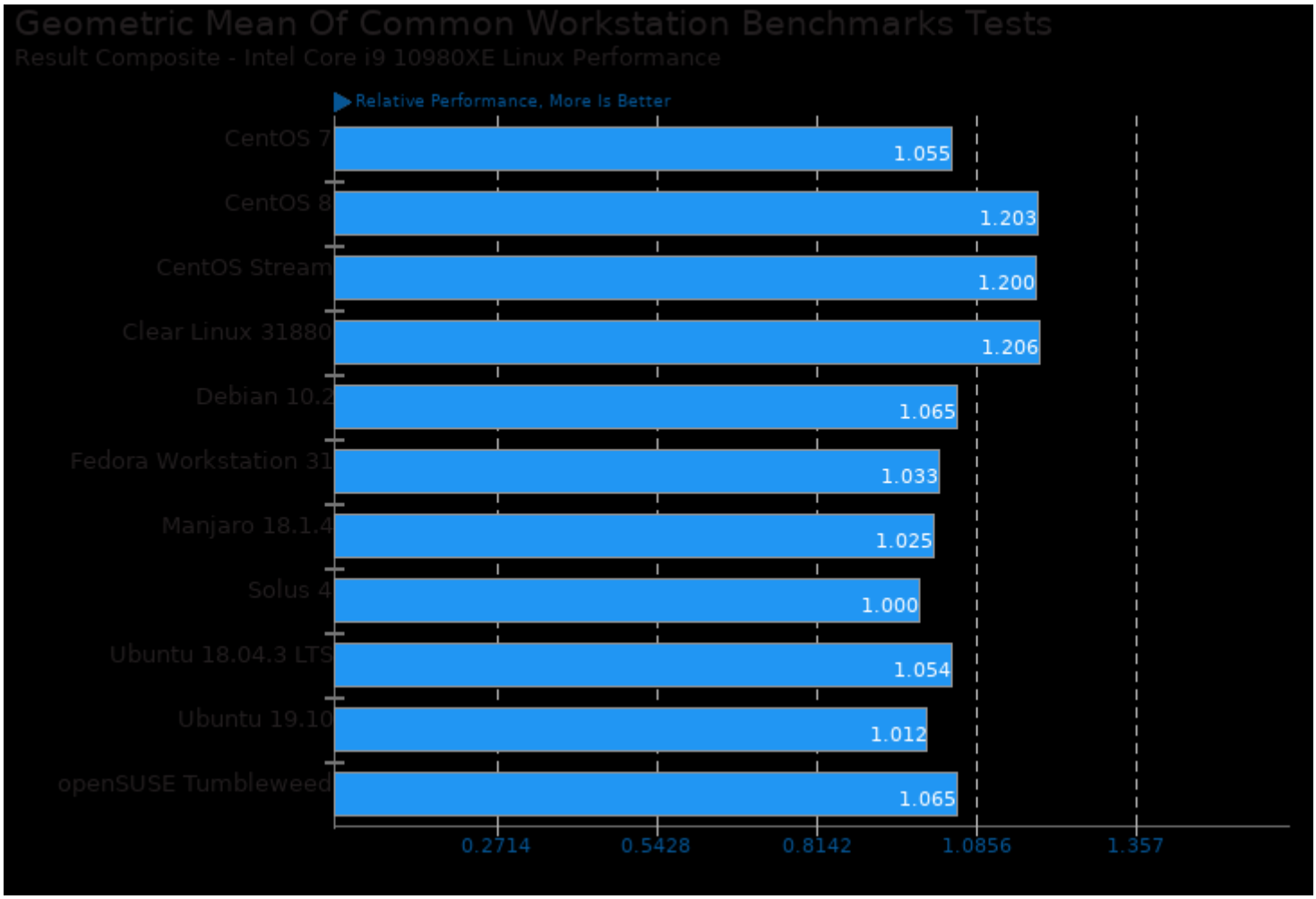
Geometric mean based upon tests: pts/apache, pts/nginx, pts/pgbench, pts/redis, pts/cassandra, pts/rocksdb, pts/sqlite and pts/sqlite-speedtest

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Geometric mean based upon tests: pts/deepspeech, pts/radiance, pts/redis, pts/pybench and pts/nginx

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Geometric mean based upon tests: pts/blender, pts/x265, pts/paraview and pts/sysbench

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 17:03.