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Kernel Bench

AMD Ryzen 7 PRO 5850U testing with a LENOVO 20X7003WFR (R1KET39W 1.24 BIOS) and AMD Radeon Vega / Mobile 1GB on Gentoo 2.9 via the Phoronix Test Suite.

Automated Executive Summary

Manjaro GCC 11.2 KVER=5.16 had the most wins, coming in first place for 16% of the tests.

Test Systems:

Ubuntu 21.10 CC 11.2 kver=5.16

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 16GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK Device 7961

OS: Ubuntu 21.10, Kernel: 5.16.14-051614-generic (x86_64), Desktop: MATE 1.26.0, Display Server: X Server 1.20.13,

OpenGL: 4.6 Mesa 21.2.6 (LLVM 12.0.1), Vulkan: 1.2.182, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-ZPT0kp/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-ZPT0kp/gcc-11-11.2.0/debian/tmp-gcn/usr --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

OpenMandriva znver1 GCC 11.2 kver=5.16

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 16GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: OpenMandrivaLinux 4.3, Kernel: 5.16.7-desktop-1omv4003 (x86_64), Desktop: KDE Plasma 5.23.5, Display Server: X Server 1.21.1.3, OpenGL: 4.6 Mesa 21.3.7 (LLVM 13.0.0), Vulkan: 1.2.195, Compiler: Clang 13.0.0 + GCC 11.2.0 20210728 + LLVM 13.0.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: dm_mod.use_blk_mq=1 - Transparent Huge Pages: always
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

FreeBSD 13.1 Beta1 Clang 13 Default package

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (16 Cores), Motherboard: LENOVO 20X7003WFR ThinkPad L15 Gen 2a, Chipset: AMD [AMD] Renoir/Cezanne Root Complex, Memory: 16GB, Disk: Generic NVMe Device, Graphics: AMD RENOIR 1GB, Audio: ATI (0x1637) HDA

OS: FreeBSD, Kernel: 13.1-STABLE (x86_64), Display Server: X Server 1.20.13, OpenGL: 4.6 Mesa 21.3.7 (LLVM 13.0.1), Compiler: Clang 13.0.0 + GCC 10.3.0, File-System: zfs, Screen Resolution: 1920x1080

Manjaro GCC 11.2 KVER=5.16

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: ManjaroLinux 21.2.5, Kernel: 5.16.14-1-MANJARO (x86_64), Desktop: KDE Plasma 5.24.3, Display Server: X Server 1.21.1.3, OpenGL: 4.6 Mesa 21.3.7 (LLVM 13.0.1), Vulkan: 1.2.195, Compiler: GCC 11.2.0 + Clang 13.0.1 + LLVM 13.0.1, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on

RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Fedora 36 pre-ver GCC 12 kver=5.17

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Fedora Linux 36, Kernel: 5.17.0-300.fc36.x86_64 (x86_64), Desktop: MATE 1.26.0, Display Server: X Server 1.20.14, OpenGL: 4.6 Mesa 21.3.8 (LLVM 13.0.1), Compiler: GCC 12.0.1 20220308, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: DEBUGINFOD_URLS=https://debuginfod.fedoraproject.org/
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: SELinux + itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

ClearLinux 36070 GCC 11.2

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir Root Complex, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD RENOIR 1GB (2000/400MHz), Audio: AMD Device 1637, Network: Realtek RTL8111/8168/8411 + MEDIATEK Device 7961

OS: Clear Linux OS 36070, Kernel: 5.16.17-1136.native (x86_64), Desktop: GNOME Shell 42.0, Display Server: X Server 1.21.1.3, OpenGL: 4.6 Mesa 22.0.0 (LLVM 13.0.0 DRM 3.44), Vulkan: 1.3.204, Compiler: GCC 11.2.1 20220322 releases/gcc-11.2.0-884-gf45603f39b + Clang 13.0.0 + LLVM 13.0.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Environment Notes: FFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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" CXXFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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=native -fvisibility-inlines-hidden -Wl,--enable-new-dtags" MESA_GLSL_CACHE_DISABLE=0 FCFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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" CFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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=native" 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-host-shared --enable-languages=c,c++,fortran,go,jit --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=x86-64-v3 --with-gcc-major-version-only --with-glibc-version=2.35 --with-gnu-ld --with-isl --with-pic --with-ppl=yes --with-tune=skylake-avx512
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Musl Stable W:znver3-O2

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK Device 7961

OS: Gentoo/Linux, Kernel: 5.15.26-gentoo-x86_64 (x86_64), Display Server: X Server 1.21.1.3, Compiler: GCC 11.2.1 20220115 + Clang 13.0.1 + LLVM 13.0.1, File-System: btrfs, Screen Resolution: 1920x1080

Compiler Notes: --bindir=/usr/x86_64-gentoo-linux-musl/gcc-bin/11.2.1 --build=x86_64-gentoo-linux-musl --datadir=/usr/share/gcc-data/x86_64-gentoo-linux-musl/11.2.1 --disable-cet --disable-esp --disable-fixed-point --disable-libada --disable-libsanitizer --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-libvtv --disable-multilib --disable-nls --disable-systemtap --disable-valgrind-annotations --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-default-pie --enable-default-ssp --enable-languages=c,c++,fortran --enable-libgomp --enable-libstdcxx-time --enable-lto --enable-obsolete --enable-secureplt --enable-shared --enable-targets=all --enable-threads=posix --host=x86_64-gentoo-linux-musl --includedir=/usr/lib/gcc/x86_64-gentoo-linux-musl/11.2.1/include --mandir=/usr/share/gcc-data/x86_64-gentoo-linux-musl/11.2.1/man --with-multilib-list=m64 --with-python-dir=/share/gcc-data/x86_64-gentoo-linux-musl/11.2.1/python --with-zstd --without-isl
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Musl Edge W:znver3-O2

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo Linux 2.8, Kernel: 5.17.1-gentoo-x86_64 (x86_64), Display Server: X Server 1.21.1.3, Compiler: GCC 11.2.1 20220115 + Clang 14.0.0 + LLVM 14.0.0, File-System: btrfs, Screen Resolution: 1920x1080

Compiler Notes: --bindir=/usr/x86_64-gentoo-linux-musl/gcc-bin/11.2.1 --build=x86_64-gentoo-linux-musl --datadir=/usr/share/gcc-data/x86_64-gentoo-linux-musl/11.2.1 --disable-cet --disable-esp --disable-fixed-point --disable-libada --disable-libsanitizer --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-libvtv --disable-multilib --disable-nls --disable-systemtap --disable-valgrind-annotations --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-default-pie --enable-default-ssp --enable-languages=c,c++,fortran --enable-libgomp --enable-libstdcxx-time --enable-lto --enable-obsolete --enable-secureplt --enable-shared --enable-targets=all --enable-threads=posix --host=x86_64-gentoo-linux-musl --includedir=/usr/lib/gcc/x86_64-gentoo-linux-musl/11.2.1/include --mandir=/usr/share/gcc-data/x86_64-gentoo-linux-musl/11.2.1/man --with-build-config=bootstrap-lto --with-multilib-list=m64 --with-python-dir=/share/gcc-data/x86_64-gentoo-linux-musl/11.2.1/python --with-zstd --without-isl
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

FreeBSD 13.1 RC1 Clang 13 znver3

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (16 Cores), Motherboard: LENOVO 20X7003WFR ThinkPad L15 Gen 2a, Chipset: AMD [AMD] Renoir/Cezanne Root Complex, Memory: 32GB, Disk: Generic NVMe Device, Graphics: AMD RENOIR 1GB, Audio: ATI (0x1637) HDA

OS: FreeBSD, Kernel: 13.1-STABLE (x86_64), Desktop: KDE Plasma 5.24.4, Display Server: X Server 1.20.14, OpenGL: 4.6 Mesa 21.3.8 (LLVM 13.0.1), Vulkan: 1.2.195, Compiler: Clang 13.0.0, File-System: zfs, Screen Resolution: 1920x1080

Gentoo Glibc Stable W:znver3-O2 k5.16

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK Device 7961

OS: Gentoo/Linux, Kernel: 5.16.18-gentoo-r1 (x86_64), Desktop: KDE Plasma 5.23.5, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 21.3.7 (LLVM 13.0.1), Compiler: GCC 11.2.1 20220115 + Clang 13.0.1 + LLVM 13.0.1, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on

RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge W:znver3-O2 k5.17 acpi

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.17.3-gentoo (x86_64), Desktop: KDE Plasma 5.24.4, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.0.1 (LLVM 13.0.1 DRM 3.44), Vulkan: 1.3.204, Compiler: GCC 11.2.1 20220115 + Clang 14.0.1 + LLVM 14.0.1, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge W:znver3-O2 k5.17 p-state

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.17.3-gentoo (x86_64), Desktop: KDE Plasma 5.24.4, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.0.1 (LLVM 13.0.1 DRM 3.44), Vulkan: 1.3.204, Compiler: GCC 11.2.1 20220115 + Clang 14.0.1 + LLVM 14.0.1, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge W:znver3-O2 k5.17 clear-p

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.17.3-gentoo-clear (x86_64), Desktop: KDE Plasma 5.24.4, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.0.1 (LLVM 13.0.1 DRM 3.44), Vulkan: 1.3.204, Compiler: GCC 11.2.1 20220115 + Clang 14.0.1 + LLVM 14.0.1, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge W:znver3-O2 k5.17-clang

Gentoo Glibc Edge k5.17-clang-thin

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.17.3-gentoo-clang (x86_64), Desktop: KDE Plasma 5.24.4, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.0.1 (LLVM 13.0.1 DRM 3.44), Vulkan: 1.3.204, Compiler: GCC 11.2.1 20220115 + Clang 14.0.1 + LLVM 14.0.1, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge k5.17 w:clang

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.17.3-gentoo (x86_64), Desktop: KDE Plasma 5.24.4, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.0.1 (LLVM 13.0.1 DRM 3.44), Vulkan: 1.3.204, Compiler: Clang 14.0.1 + GCC 11.2.1 20220115 + LLVM 14.0.1, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Compiler Notes: Optimized build; Default target: x86_64-pc-linux-gnu; Host CPU: znver3
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge k5.17 Xanmod O3

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.17.4-xanmod1-xanmod (x86_64), Desktop: KDE Plasma 5.24.4, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.0.1 (LLVM 13.0.1 DRM 3.44), Vulkan: 1.3.204, Compiler: GCC 11.3.0 + Clang 14.0.1 + LLVM 14.0.1, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge k5.17 Xanmod w:clear

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR

(R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.17.4-xanmod1-xanmod (x86_64), Desktop: KDE Plasma 5.24.4, Display Server: X Server 1.21.1.3, OpenGL: 4.6 Mesa 22.1.0-rc3 (LLVM 14.0.3 DRM 3.44), Vulkan: 1.3.211, Compiler: GCC 11.3.0 + Clang 14.0.3 + LLVM 14.0.3, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: FFLAGS="-O3 -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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" CXXFLAGS="-march=native -O3 -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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=native -fvisibility-inlines-hidden" RUSTFLAGS="-C target-cpu=native" FCFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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" CFLAGS="-march=native -O3 -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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=native" COMMON_FLAGS="-march=native -O3 -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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=native"
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge k5.17 PF-kernel lite

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.17.0-pf5-gd4f12e0431e1 (x86_64), Desktop: KDE Plasma 5.24.5, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.1.0-rc5 (LLVM 14.0.3 DRM 3.44), Vulkan: 1.3.211, Compiler: GCC 12.1.0 + Clang 14.0.3 + LLVM 14.0.3, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge k5.17.7 PF-kernel lite

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: ATI Generic, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.17.0-pf5-gd4f12e0431e1 (x86_64), Desktop: KDE Plasma 5.24.5, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.1.0 (LLVM 14.0.3 DRM 3.44), Vulkan: 1.3.211, Compiler: GCC 12.1.0 + Clang 14.0.3 + LLVM 14.0.3, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge k5.18

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.18.0-gentoo-clang (x86_64), Desktop: KDE Plasma 5.24.5, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.1.1 (LLVM 14.0.4 DRM 3.46), Vulkan: 1.3.211, Compiler: Clang 14.0.4 + GCC 12.1.1 20220604 + LLVM 14.0.4, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Compiler Notes: Optimized build; Default target: x86_64-pc-linux-gnu; Host CPU: znver3
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge k5.18-pf clang

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: ATI Generic, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.18.0-pf2-00057-ge7e0fd1241fc (x86_64), Desktop: KDE Plasma 5.24.5, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.1.1 (LLVM 14.0.4 DRM 3.46), Vulkan: 1.3.211, Compiler: Clang 14.0.4 + GCC 12.1.1 20220604 + LLVM 14.0.4, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Compiler Notes: Optimized build; Default target: x86_64-pc-linux-gnu; Host CPU: znver3
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - Platform Profile: low-power - CPU Microcode: 0xa50000c - ACPI Profile: low-power
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc Edge k5.18 clang

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET36W 1.21 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: ATI Generic, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.8, Kernel: 5.18.1-gentoo-r2 (x86_64), Desktop: KDE Plasma 5.24.5, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.1.1 (LLVM 14.0.4 DRM 3.46), Vulkan: 1.3.211, Compiler: GCC 12.1.1 20220604 + Clang 14.0.4 + LLVM 14.0.4, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: RUSTFLAGS="-C target-cpu=native"
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - Platform Profile: low-power - CPU Microcode: 0xa50000c - ACPI Profile: low-power
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Ubuntu 22.04 CC=11.2 kver=5.18.14

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR

(R1KET37W 1.22 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Ubuntu 22.04, Kernel: 5.18.14-051814-generic (x86_64), Desktop: KDE Plasma 5.24.4, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.0.1 (LLVM 13.0.1 DRM 3.46), Vulkan: 1.2.204, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-gcn/usr --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

OpenMandriva LX 4.2 kver=5.17

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET37W 1.22 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: OpenMandrivaLinux 4.3, Kernel: 5.17.1-desktop-2omv4050 (x86_64), Desktop: KDE Plasma 5.23.5, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 21.3.7 (LLVM 13.0.0), Vulkan: 1.2.195, Compiler: Clang 13.0.0 + GCC 11.2.0 20210728 + LLVM 13.0.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: dm_mod.use_blk_mq=1 - Transparent Huge Pages: always
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Fedora 36 k5.18 performance

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET37W 1.22 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Fedora Linux 36, Kernel: 5.18.16-200.fc36.x86_64 (x86_64), Desktop: KDE Plasma 5.25.4, Display Server: X Server 1.20.14 + Wayland, OpenGL: 4.6 Mesa 22.1.4 (LLVM 14.0.0 DRM 3.46), Compiler: GCC 12.1.1 20220507 + Clang 14.0.0 + LLVM 14.0.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - Platform Profile: performance - CPU Microcode: 0xa50000c - ACPI Profile: performance
Security Notes: SELinux + itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Calculate GCC 11.3 k5.19

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET37W 1.22 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N,

Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Calculate Linux Desktop 22.0.1 KDE, Kernel: 5.19.4-calculate (x86_64), Desktop: KDE Plasma 5.24.6, Display Server: X Server 1.21.1.4 + Wayland, OpenGL: 4.6 Mesa 22.1.3 (LLVM 14.0.4 DRM 3.47), Compiler: GCC 11.3.0 + Clang 14.0.6 + LLVM 14.0.6, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

ClearLinux 36930 K5.19 GCC 12.1

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET37W 1.22 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Clear Linux OS 36930, Kernel: 5.19.4-1181.native (x86_64), Desktop: KDE Plasma 5.25.4, Display Server: X Server 1.21.1.4 + Wayland, OpenGL: 4.6 Mesa 22.2.0-rc3 (LLVM 14.0.6 DRM 3.47), Vulkan: 1.3.224, Compiler: GCC 12.2.1 20220822 releases/gcc-12.2.0-4-g55b6abd9f2 + Clang 14.0.6 + LLVM 14.0.6, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Environment Notes: FFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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" CXXFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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 -mrelax-cmpxchg-loop -fvisibility-inlines-hidden -Wl,--enable-new-dtags" MESA_GLSL_CACHE_DISABLE=0 FCFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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" CFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -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 -mrelax-cmpxchg-loop" 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-gnu-indirect-function --enable-host-shared --enable-languages=c,c++,fortran,go,jit --enable-ld=default --enable-libstdcxx-pch --enable-linux-futex --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=x86-64-v3 --with-gcc-major-version-only --with-glibc-version=2.35 --with-gnu-ld --with-isl --with-pic --with-ppl=yes --with-tune=skylake-avx512 --with-zstd
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Musl Clang Edge W:znver3-O3

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET37W 1.22 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.9, Kernel: 5.19.10-gentoo (x86_64), Desktop: Lumina 1.6.0, Display Server: X Server 1.21.1.4, Compiler: Clang 15.0.1, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: Optimized build; Default target: x86_64-gentoo-linux-musl; Host CPU: znver3
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - Platform Profile: low-power - CPU Microcode: 0xa50000c - ACPI Profile: low-power
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Vulnerable + spectre_v1: Vulnerable: __user pointer sanitization and usercopy barriers only; no swapgs barriers + spectre_v2: Vulnerable IBPB:

disabled STIBP: disabled PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc GCC 12.2 W:znver3+O2+cfi

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET39W 1.24 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.9, Kernel: 5.19.12-xanmod1-xanmod (x86_64), Desktop: KDE Plasma 5.25.5, Display Server: X Server 1.21.1.4 + Wayland, OpenGL: 4.6 Mesa 22.2.0 (LLVM 15.0.1 DRM 3.47), Vulkan: 1.3.224, Compiler: GCC 12.2.0 + Clang 15.0.1 + LLVM 15.0.1, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - Platform Profile: performance - CPU Microcode: 0xa50000c - ACPI Profile: performance
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Glibc GCC 12.2 W:znver3+O2+cfi k5.20

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET39W 1.24 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.9, Kernel: 6.0.0-gentooclang (x86_64), Desktop: KDE Plasma 5.25.5, Display Server: X Server 1.21.1.4 + Wayland, OpenGL: 4.6 Mesa 22.2.0 (LLVM 15.0.2 DRM 3.48), Vulkan: 1.3.224, Compiler: GCC 12.2.0 + Clang 15.0.2 + LLVM 15.0.2, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - Platform Profile: performance - CPU Microcode: 0xa50000c - ACPI Profile: performance
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Vulnerable IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

Fedora 36 k6.0 performance

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET39W 1.24 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB, Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Fedora Linux 36, Kernel: 6.0.5-200.fc36.x86_64 (x86_64), Desktop: KDE Plasma 5.25.5, Display Server: X Server 1.20.14 + Wayland, OpenGL: 4.6 Mesa 22.1.7 (LLVM 14.0.0 DRM 3.48), OpenCL: OpenCL 2.1 AMD-APP (3452.0), Vulkan: 1.3.211, Compiler: GCC 12.2.1 20220819 + Clang 14.0.5 + LLVM 14.0.5, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - Platform Profile: performance - CPU Microcode: 0xa50000c - ACPI Profile: performance
Security Notes: SELinux + itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

Fedora 36 k6.0 Xanmod performance v2

Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR

(R1KET39W 1.24 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Cezanne 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Fedora Linux 36, Kernel: 6.0.2-xm1.0.fc36.x86_64 (x86_64), Desktop: KDE Plasma 5.25.5, Display Server: X Server 1.20.14, OpenGL: 4.6 Mesa 22.1.7 (LLVM 14.0.0 DRM 3.48), OpenCL: OpenCL 2.1 AMD-APP (3452.0), Vulkan: 1.3.211, Compiler: GCC 12.2.1 20220819 + Clang 14.0.5 + LLVM 14.0.5, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: FFLAGS="-O3 -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -m64 -fasynchronous-unwind-tables -Wp,-D_REENTRANT -ftree-loop-distribute-patterns -Wl,-z,now -Wl,-z,relro -malign-data=abi -fno-semantic-interposition -ftree-vectorize -ftree-loop-vectorize -Wl,--enable-new-dtags" CXXFLAGS="-O3 -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -Wformat -Wformat-security -m64 -fasynchronous-unwind-tables -Wp,-D_REENTRANT -ftree-loop-distribute-patterns -Wl,-z,now -Wl,-z,relro -fno-semantic-interposition -ffat-lto-objects -fno-trapping-math -Wl,-sort-common -Wl,--enable-new-dtags -mtune=znver3 -mrelax-cmpxchg-loop -fvisibility-inlines-hidden -Wl,--enable-new-dtags" FCFLAGS="-O3 -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -m64 -fasynchronous-unwind-tables -Wp,-D_REENTRANT -ftree-loop-distribute-patterns -Wl,-z,now -Wl,-z,relro -malign-data=abi -fno-semantic-interposition -ftree-vectorize -ftree-loop-vectorize -Wl,-sort-common -Wl,--enable-new-dtags" CFLAGS="-O3 -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -Wformat -Wformat-security -m64 -fasynchronous-unwind-tables -Wp,-D_REENTRANT -ftree-loop-distribute-patterns -Wl,-z,now -Wl,-z,relro -fno-semantic-interposition -ffat-lto-objects -fno-trapping-math -Wl,-sort-common -Wl,--enable-new-dtags -mtune=znver3 -mrelax-cmpxchg-loop"
Processor Notes: Scaling Governor: amd-pstate performance (Boost: Enabled) - Platform Profile: performance - CPU Microcode: 0xa50000c - ACPI Profile: performance
Security Notes: SELinux + itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

Gentoo Stable Clang 15 kver6.1-gcc W:znver3+O2

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: LENOVO 20X7003WFR (R1KET39W 1.24 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 512GB SK hynix HFS512GDE9X081N, Graphics: AMD Radeon Vega / Mobile 1GB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Gentoo 2.9, Kernel: 6.1.1-gentoo-gcc (x86_64), Desktop: KDE Plasma 5.25.5, Display Server: X Server 1.21.1.6 + Wayland, OpenGL: 4.6 Mesa 22.2.3 (LLVM 15.0.6 DRM 3.49), Vulkan: 1.3.224, Compiler: Clang 15.0.6 + GCC 11.3.1 20221209, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: Optimized build; Default target: x86_64-pc-linux-gnu; Host CPU: znver3
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - Platform Profile: performance - CPU Microcode: 0xa50000c - ACPI Profile: performance
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

Kernel Bench

Ubuntu 21.10 Cascade Lake 1.12 kvm-range=5.16	OpenMandriva Lx 4.2 Cooker 2k kvm-range=5.16	Fresh Blend 1.2 Cooker 2k kvm-range=5.16	Mesa Git 1.2 Kvm-range=5.16	Fedora 36 Server Edition Beta 2k kvm-range=5.17	Clear Linux OS 35210 Cascade Lake 1.12	GNOME Mutter 3-OVN	GNOME Mutter 3-OVN2	Fresh Blend 1.2 Cascade Lake 3	GNOME Mutter 3-OVN2k5.16	GNOME Mutter 3-OVN2k5.17-acpi	GNOME Mutter 3-OVN2k5.17-pstate	GNOME Mutter 3-OVN2k5.17-clear-p	GNOME Mutter 3-OVN2k5.17-clang	GNOME Mutter 3-OVN2k5.17-clang-thin	GNOME Mutter 3-OVN2k5.17-clang-thinlto	GNOME Mutter 3-OVN2k5.17-clang-woodO3	GNOME Mutter 3-OVN2k5.17-clang-woodcleaner	GNOME Mutter 3-OVN2k5.17-clang-woodwclean	GNOME Mutter 3-OVN2k5.17-PF-kernelelite	GNOME Mutter 3-OVN2k5.17-PF-kernelelite-clang	GNOME Mutter 3-OVN2k5.18-pf-clang	GNOME Mutter 3-OVN2k5.18-clang	Ubuntu 20.04 Cascade Lake 1.12 kvm-range=5.18	OpenMandriva Lx 4.2 Cooker 2k kvm-range=5.17	Fedora 36 Server Edition Beta 2k kvm-range=5.18	Calculate Linux 23 Cascade Lake 1.13k 5.19 Generic	Clear Linux OS 35210 Cascade Lake 1.12 kvm-range=5.19 Generic	GNOME Mutter 3-OVN2k5.19 Generic	GNOME Mutter 3-OVN2k5.19-WV:znver3+	GNOME Mutter 3-OVN2k5.19-WV:znver3+O2+cfi	GNOME Mutter 3-OVN2k5.19-WV:znver3+O2+cfik5.20	Fedora 36 Server Edition Beta 6.0pre-mandoc-perf-mandcec	Fedora 36 Server Edition Beta 6.0Xanmk 1 5kver 6.1-gccW:znver3+

Kernel Bench

MBW - Memory Copy - 512 MiB (MiB/s)	7366	7451	4016	11065	10934	11051	7627	6281	6839	10768	10869	10690	10632	10608	10819	10485	10891	11028	10589	10847	10745	11033	10697	10960	10802	10787	11053	9062	11025	11036	10578	11033	10932
Normalized	66.57%	67.34%	36.3%	100%	98.82%	99.87%	68.94%	56.77%	61.81%	97.32%	98.23%	96.61%	96.09%	95.87%	97.78%	94.76%	98.43%	99.67%	95.7%	98.03%	97.11%	99.72%	96.68%	99.06%	97.63%	97.49%	99.9%	81.9%	99.64%	99.74%	95.61%	99.71%	98.8%
Standard Deviat	0.6%	0.2%	0.9%	1.1%	0.7%	0.4%	7.3%	0.1%	1.1%	0.2%	0.4%	1.5%	1.1%	2.3%	0.2%	1.1%	1.9%	1.6%	0.8%	0.7%	0.2%	1.7%	1%	1.3%	0.4%	1.3%	0.2%	0.4%	1.1%	1.2%	1.1%	1.8%	0.7%
t-test1 - 1 (sec)	15.657	5.718	24.794	13.633	16.407	16.103	28.465	27.164	24.150	12.240	16.633	15.498	15.773	15.286	14.970	16.744	15.511	15.188	17.297	15.915	16.080	17.133	16.558	6.793	18.083	15.483	14.316	25.936	15.773	16.413	17.913	15.938	16.563
Normalized	36.52%	100%	23.06%	41.94%	34.85%	35.51%	20.09%	21.05%	23.68%	46.72%	34.38%	36.9%	36.25%	37.41%	38.2%	34.15%	36.86%	37.65%	33.06%	35.93%	35.56%	33.37%	34.53%	84.17%	31.62%	36.93%	39.94%	22.05%	36.25%	34.84%	31.92%	35.88%	34.52%
Standard Deviat	2.5%	1.4%	0.2%	2.5%	0.6%	0.5%	0.3%	0.1%	0.5%	1.5%	1.8%	0.9%	0.1%	0.2%	0.6%	0.6%	0.7%	0.7%	1.5%	0.8%	0.6%	0.5%	0.1%	1.4%	0.7%	1.4%	0.7%	0.3%	0.4%	0.9%	0.1%	1.8%	0.4%
Tiny memory benchmark - Standard Memcpy (MB/s)	11096	10823		15940	15746	17605	7827	8432		18096	17366	17423	17391	17369	17396		15592	15592	15256			15518	15758	17582	15447	15543	17656		15782	15704	15210	15625	
Normalized	61.32%	59.81%		88.08%	87.01%	97.29%	43.25%	46.6%		100%	95.97%	96.28%	96.11%	95.98%	96.13%		86.17%	86.16%	84.31%			85.75%	87.08%	97.16%	85.36%	85.89%	97.57%		87.21%	86.78%	84.05%	86.35%	
Standard Deviation	0.4%	0.1%		1.2%	1.4%	0.4%	0.3%	0.2%		0.1%	0.4%	0.4%	0.4%	0.1%	0.3%		0.3%	0.5%	0.2%			0.2%	0.5%	0.4%	0.3%	0.2%	0.2%		0.2%	0%	0.2%	1.6%	

Kernel Bench

Tiny mem bench - Standard Memset (MB/s)	**10075**	11046		15267	15106	16679	10965	15019		16590	16381	16562	16479	16491	16323		14895	15122		14864			15006	15090	16436	15038	15065	16664		35043	35481	34321	**35537**	
Normalized	28.35	31.08		42.96	42.51	46.93	30.86	42.26		46.68	46.1%	46.6%	46.37	46.41	45.93		41.91	42.55		41.83			42.23	42.46	46.25	42.31	42.39	46.89		98.61	99.84	96.58	100%	
Standard Deviation	0.3%	0.7%		0.7%	2.5%	0.5%	0.8%	0.1%		0.1%	0.6%	0.5%	0.1%	0.2%	0.3%		1.8%	0.2%		0.1%			0.1%	0.2%	0.1%	0.2%	0.2%	0.4%		2.8%	1%	2.7%	2.5%	
ctx_clock - C.S.T (Cloc	95	95		**114**	**76**	**76**	95	95		**76**	77	77	80	95	95	95	95	95		95	95	95	95	95	95	95	**76**	**76**	**114**	95	95	95	95	95
Normalized	80%	80%		66.67	100%	100%	80%	80%		100%	98.7%	98.7%	95%	80%	80%	80%	80%	80%		80%	80%	80%	80%	80%	80%	80%	100%	100%	66.67	80%	80%	80%	80%	80%
Standard Deviation	0%	0%		0%	0%	0%	0%	0%		0%	6.6%	6.6%	9.9%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Hackbench - 4 - Thread (sec)	10.946	8.715		11.567	12.373	8.673	13.645	9.398		7.555	7.613	7.182	7.284	7.461	7.039	6.804	9.225	10.244		8.517	7.062	9.599	9.436	12.335	8.901	12.193	**6.475**	8.697	8.225	**13.994**	7.370	12.464	11.318	6.757
Normalized	59.15	74.3%		55.98	52.33	74.66	47.45	68.9%		85.7%	85.05	90.16	88.89	86.78	91.99	95.16	70.19	63.21		76.02	91.69	67.45	68.62	52.49	72.74	53.1%	100%	74.45	78.72	46.27	87.86	51.95	57.21	95.83
Standard Deviation	2.3%	1.6%		1.9%	1.4%	1.8%	0.4%	1.4%		1.5%	1.2%	2%	1.5%	1.6%	1.4%	1.2%	16.8%	12.2%		1.5%	1.4%	0.7%	0.9%	1.2%	1.3%	0.5%	1.1%	2.5%	1.5%	2.4%	0.9%	0.9%	27.1%	0.4%

IPC_benchmark - TCP Socket - 128 (Messages/sec)	813547	**5076304**		3557408	3623030	4238983	4077707	776017		4370617	811222	810781	811037	811647	811551	4462396	810081	815655		803147	813862	781660	802521	3296985	4944928	757766	815469	4339145	4181149	3815036	822659	**738562**	3690352	4161500
Normalized	16.03	100%		70.08	71.37	83.51	80.33	15.29		86.1%	15.98	15.97	15.98	15.99	15.99	87.91	15.96	16.07		15.82	16.03	15.4%	15.81	64.95	97.41	14.93	16.06	85.48	82.37	75.15	16.21	14.55	72.7%	81.98
Standard Deviat	0.5%	1.5%		0.1%	0.5%	0.8%	0.6%	0.2%		1.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.6%	0.1%		1.7%	0.2%	0.6%	0.7%	0.2%	3.4%	0.2%	0%	0.9%	2.4%	0.2%	0%	0.1%	2.2%	0.3%
OSBench - Create Threads (us/Event)	11.523565	10.073821	**1.513163**	9.713173	11.313756	8.771419	**13.545831**	11.698518	1.525879	8.320014	10.693868	11.072556	10.752837	11.105378	10.925333	7.897218	9.833177	9.894768		10.399818	10.278702	9.709994	10.286967	10.075569	9.662469	12.912750		8.747578	6.320476	8.246899	9.299914	13.343493	12.263457	11.090597
Normalized	13.13	15.02	100%	15.58	13.37	17.25	11.17	12.93	99.17	18.19	14.15	13.67	14.07	13.63	13.85	19.16	15.39	15.29		14.55	14.72	15.58	14.71	15.02	15.66	11.72		17.3%	23.94	18.35	16.27	11.34	12.34	13.64
Standard Deviation	0.8%	7.2%	1.3%	1.5%	1.4%	4.8%	4.5%	2.5%	1%	1.4%	1.1%	6.3%	4.2%	5.6%	5.9%	2.4%	1.7%	2.4%		2.2%	5.4%	1.5%	1.4%	1.3%	4.4%	2%		0.9%	1.2%	0.9%	0.3%	0.5%	1.1%	5.2%

Kernel Bench

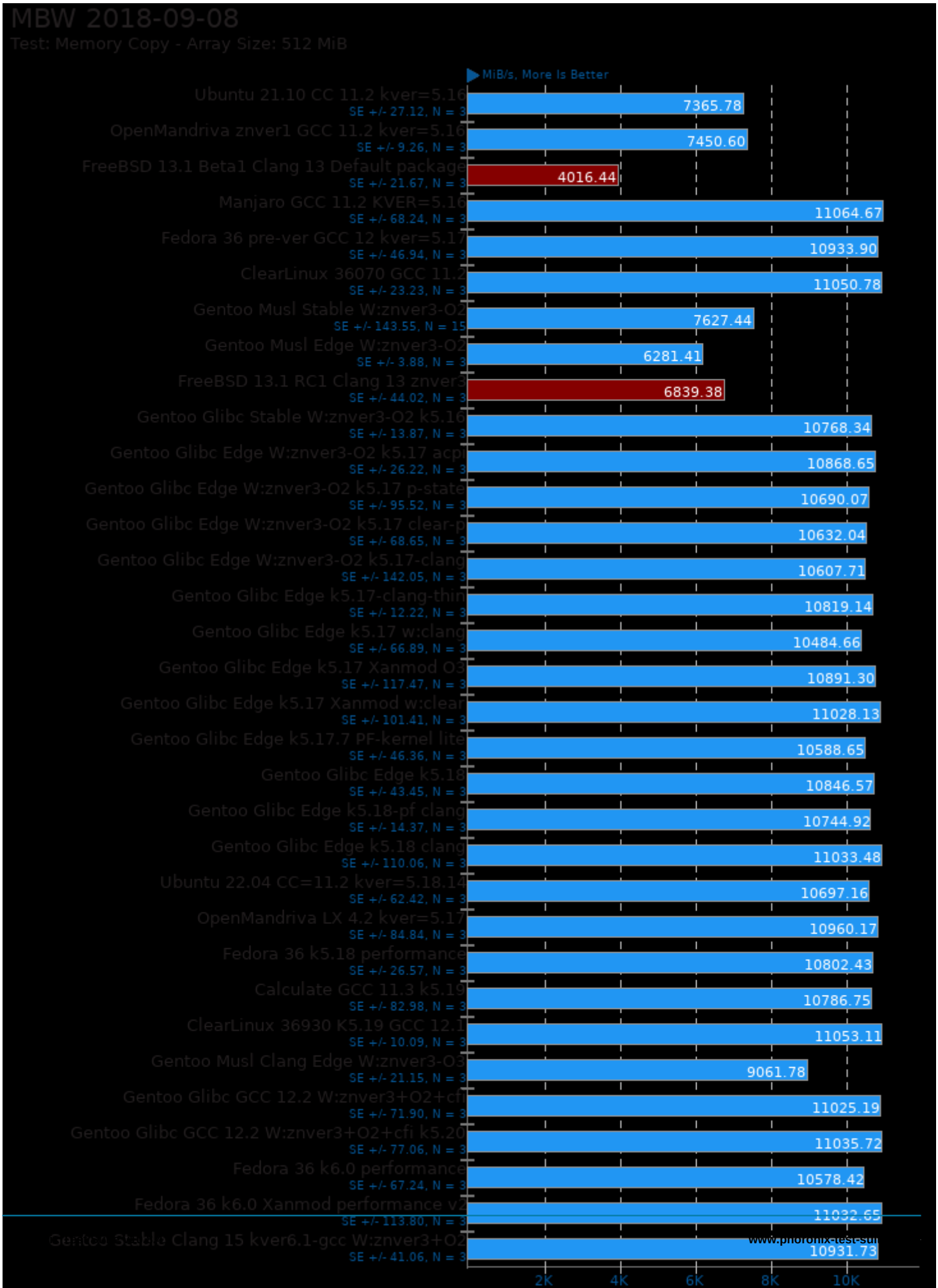
OSBench - Create Processes (us/Event)	2.24	1.90	2.08	2.06	2.47	1.79	2.62	1.78	2.44	1.63	1.99	1.99	1.99	1.98	1.87	1.79	1.95	1.96	1.98	1.90	1.90	2.22	2.55	1.83	1.82	1.87	1.78	2.20	2.05	1.83	1.87
Normalized Standard Deviation	71.63%	78.34%	73.18%	73.82%	61.74%	85.11%	67.13%	81.54%	62.26%	93.25%	76.38%	79.05%	78.12%	77.91%	81.49%	88.96%	78.15%	77.55%	76.29%	84.29%	79.87%	77.67%	67.26%	69.60%	60.57%	82.71%	10.86%	86.32%	83.62%	60.48%	74.46%	83.28%
pmbench - 8 - 50% (us - Page Latency)	0.81	0.82		0.93	0.93	0.98				0.96	0.92	0.96	0.96	0.93	0.96	0.97	0.93	0.92	0.92	0.96	0.90	0.87	0.93	0.95	0.95	0.92	0.97		0.92	0.94	0.94	0.96	0.10
Normalized Standard Deviation	0.66%	0.48%		0.63%	0.01%	0.45%				0.09%	0.83%	0.11%	0.11%	0.63%	0.57%	0.25%	0.54%	0.22%	0.92%	0.33%	0.03%	0.33%	0.71%	0.07%	0.44%	0.71%	0.13%		0.33%	0.25%	0.88%	%	0.06%
	0.01%	0.01%		0.09%	0.01%	0.05%				0.07%	0.05%	0.03%	0.06%	0.01%	0.01%	0.04%	0.01%	0.01%	0.03%	0.09%	0.08%	0.09%	0.06%	0.06%	0.02%	0.04%	0.08%		0.02%	0.01%	%	%	%

Kernel Bench

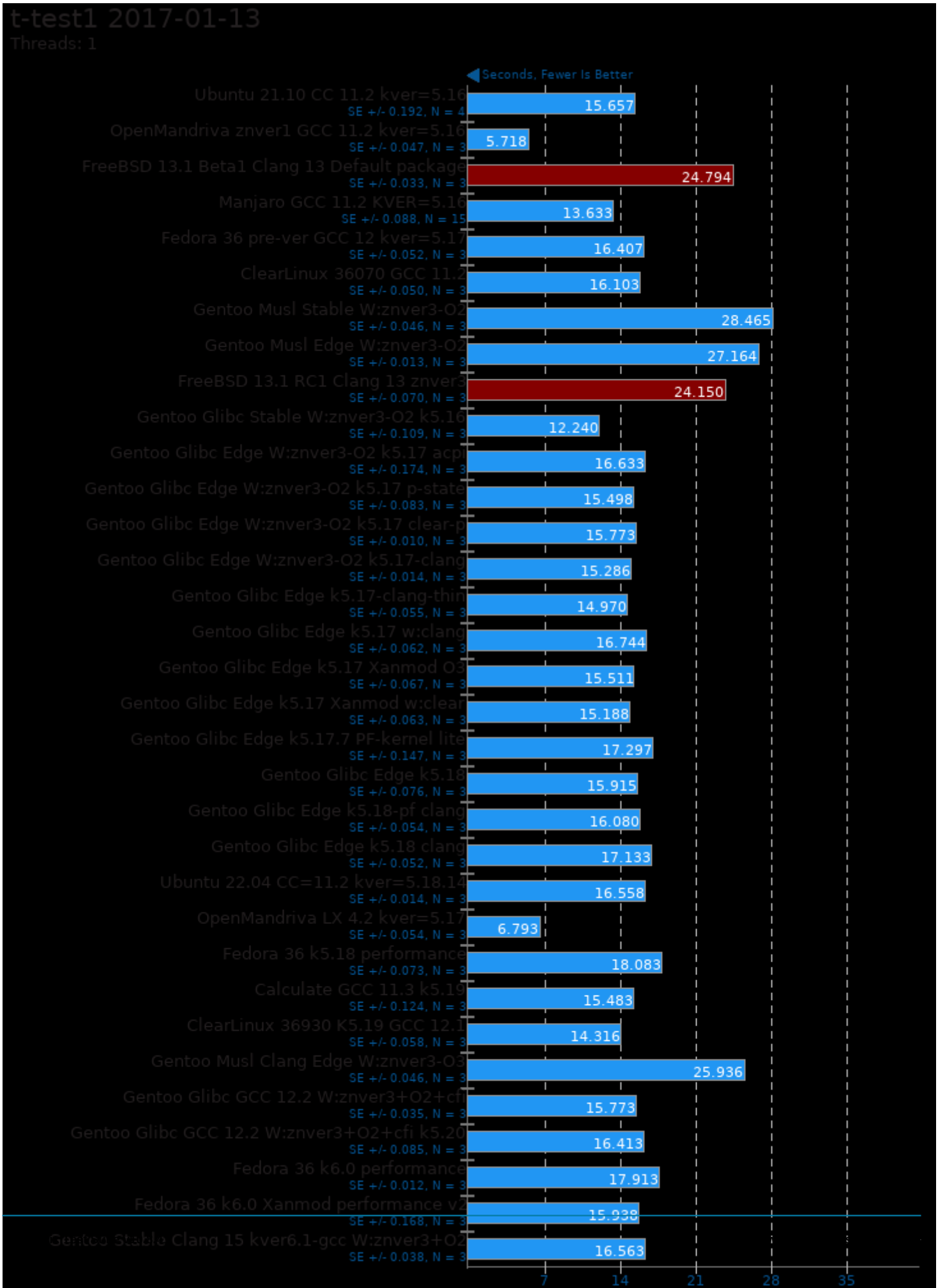
Schbench - 8 - 2 (usec, 99.9th Latency Percentile)	506	589	**444**	797	741	514	509	582	541	533	497	669	644	589	573	475	988	473	507	604	503	634	745	660	**9856**	6576	6721	2431	6150	8396
Normalized	87.75	75.38	100%	55.71	59.92	86.38	87.23	76.29	82.07	83.3%	89.34	66.37	68.94	75.38	78.86	93.47	44.94	93.87	87.57	73.51	88.27	70.03	59.6%	67.27	4.5%	6.75%	6.61%	18.26	7.22%	5.29%
Standard Deviat	10.2%	68.6%	22.3%	111.6	94.5%	13.3%	10.3%	24.4%	17.1%	16.8%	1.9%	71.9%	67.9%	28.8%	9.8%	15.7%	174.4	16.3%	13%	98.2%	13%	41.9%	106.9	1.2%	20.5%	50.5%	67.9%	71%	35.9%	42.3%
Facebook RocksDB - Rand Read (Op/	36572285		37302580		**45081884**	35784679	**34196595**	36318824	36494038	36680964	36094301	34895478	36641020	39351996	36818007	40246563		43762471	41019483		37100134			36449607						
Normalized	81.12		82.74		100%	79.38	75.85	80.56	80.95	81.37	80.06	77.4%	81.28	87.29	81.67	89.27		97.07	90.99		82.29			80.85						
Standard Deviation	0.4%		0.7%		0.4%	0.5%	0.7%	0.1%	0.2%	0.4%	0.3%	2.2%	0.4%	0.6%	0.5%	0.2%		0.2%	0.2%		0.4%			0.3%						

Kernel Bench

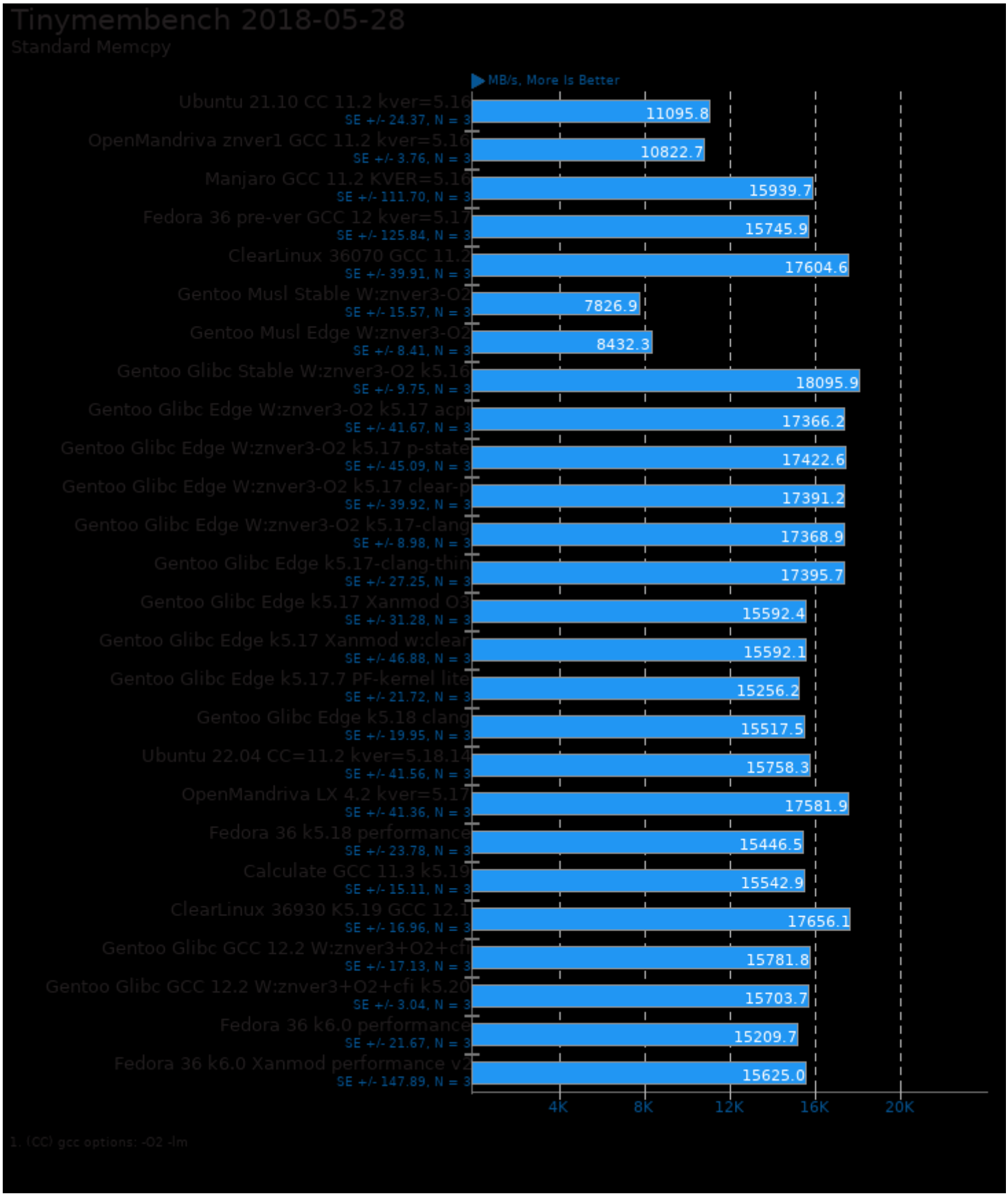
Kernel Bench



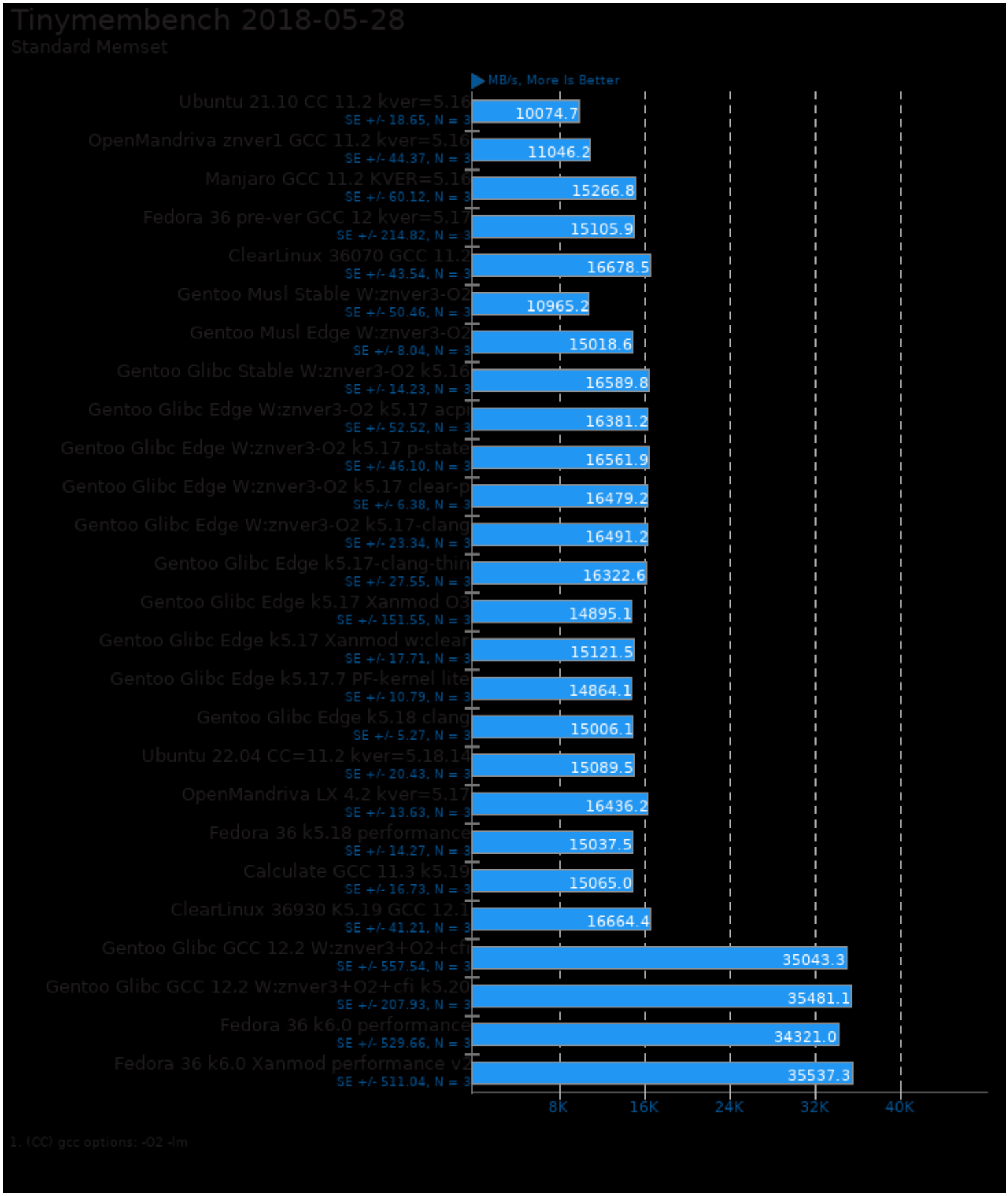
Kernel Bench



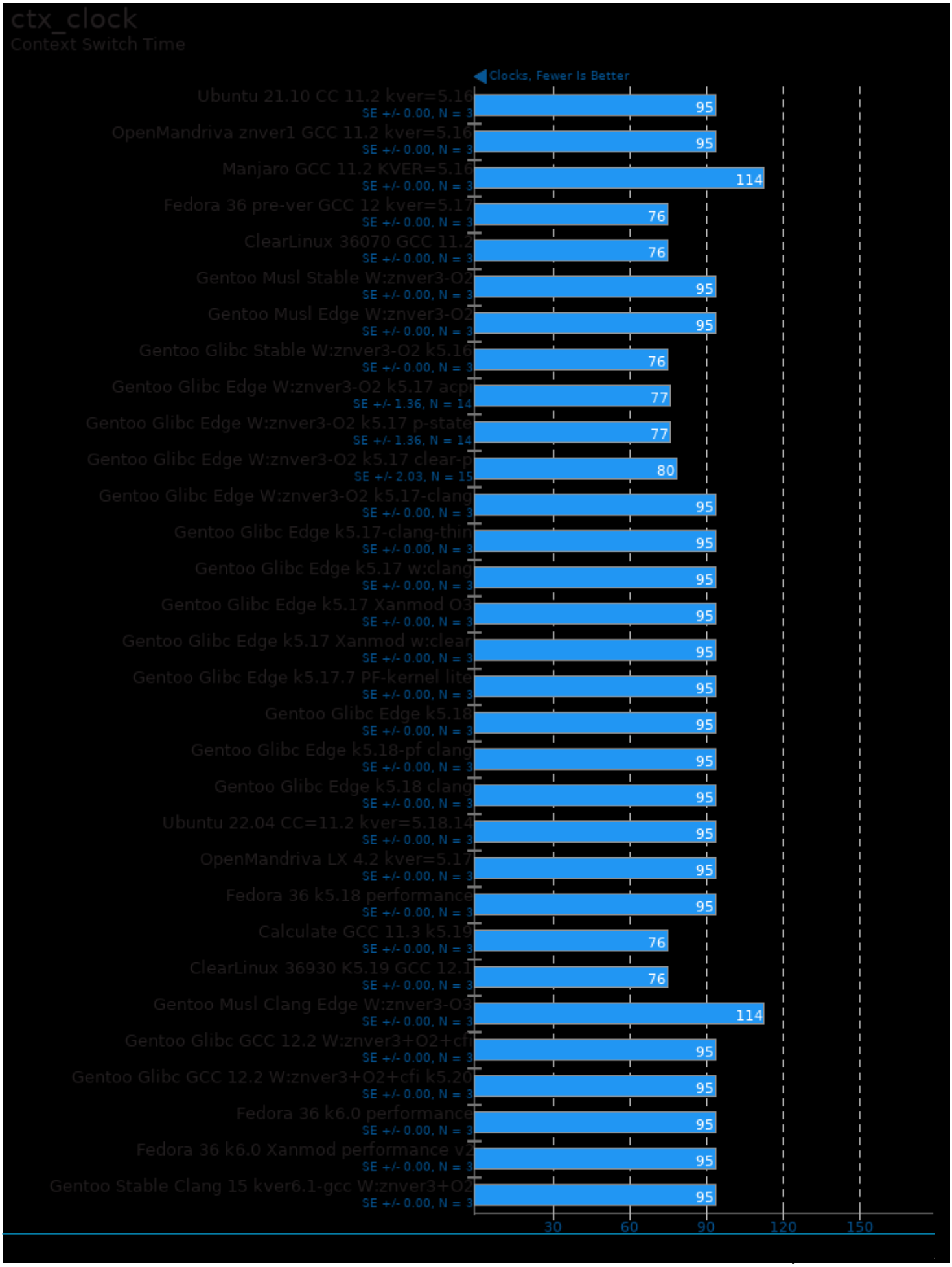
Kernel Bench



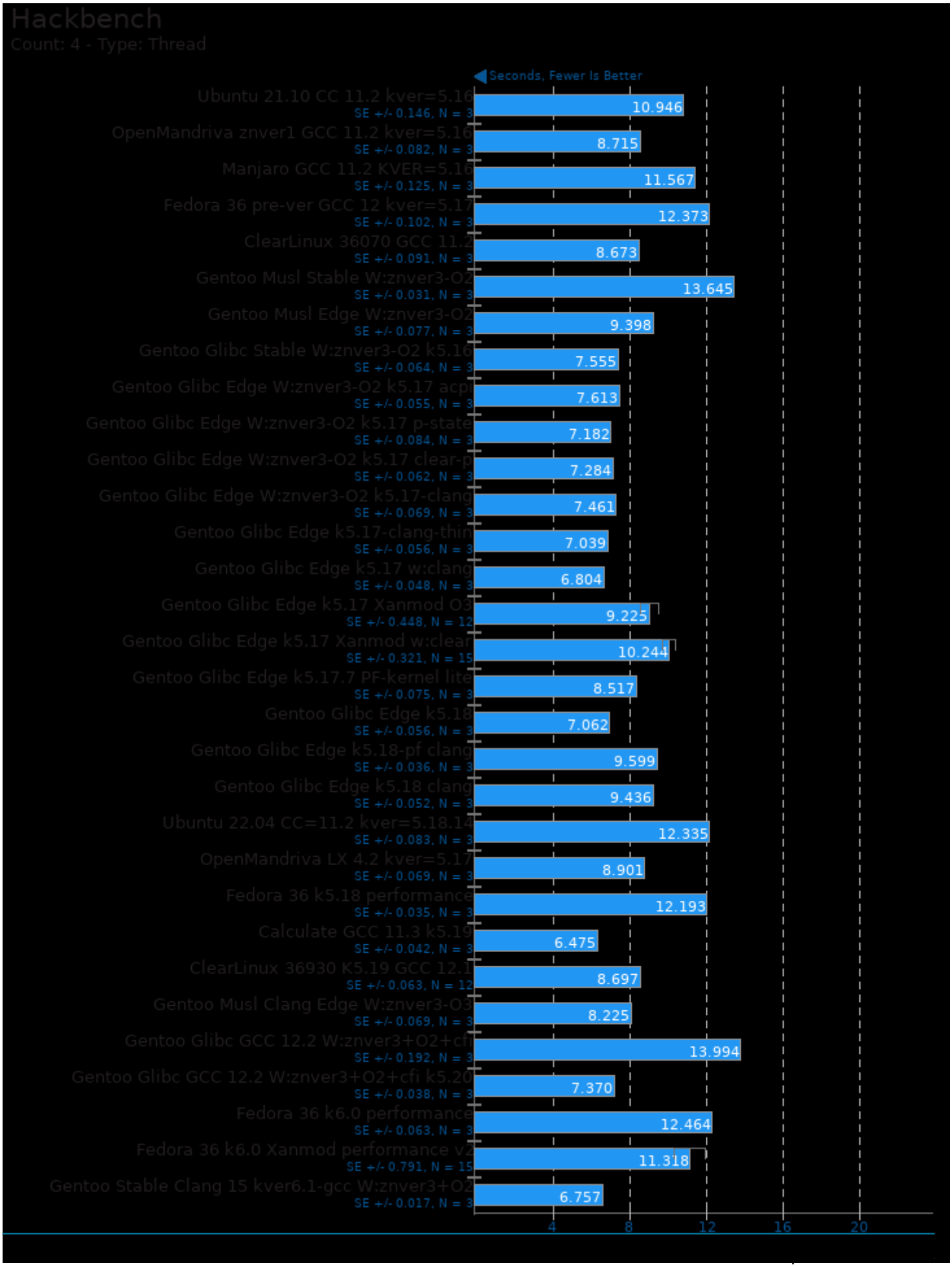
Kernel Bench



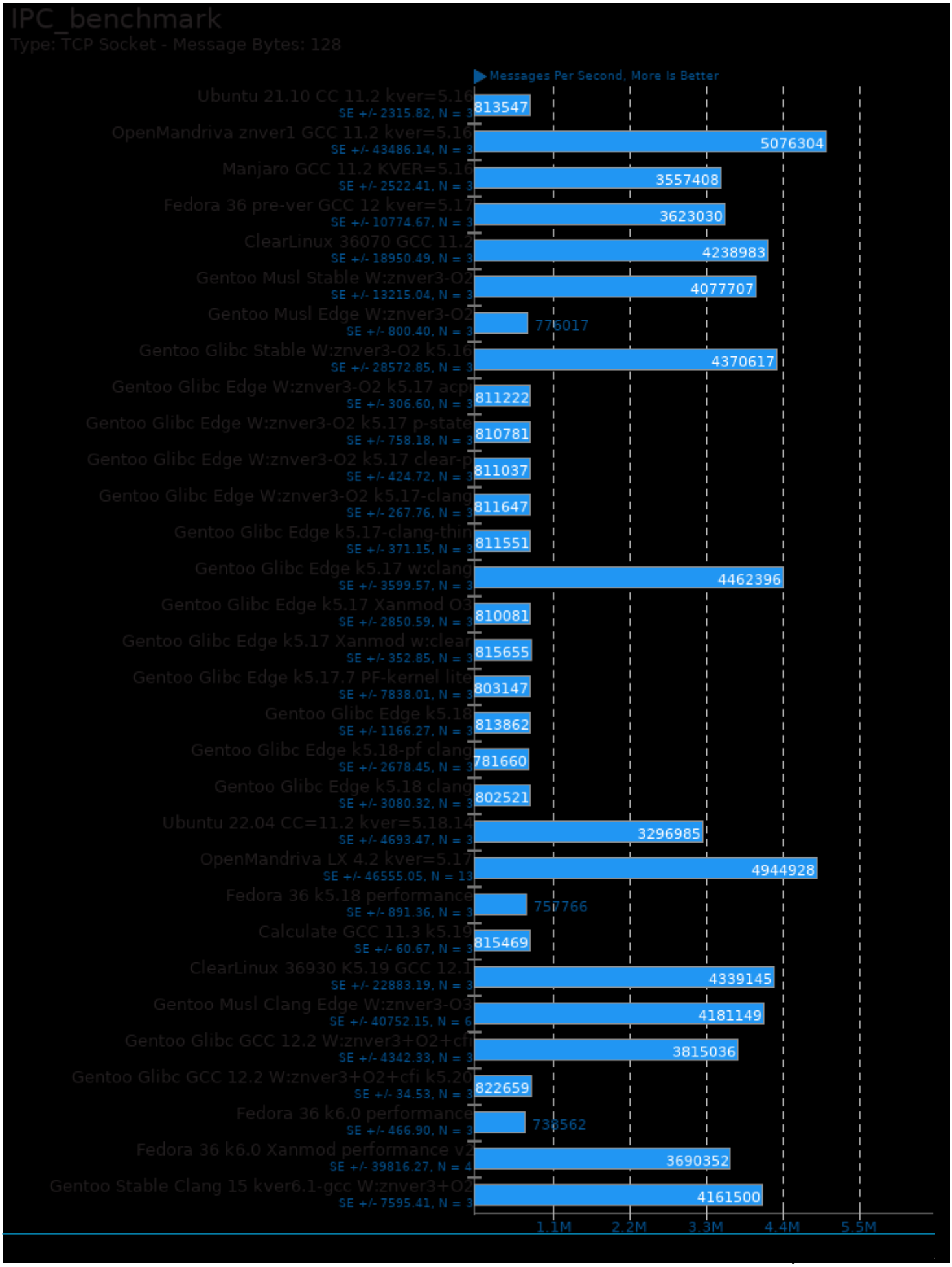
Kernel Bench



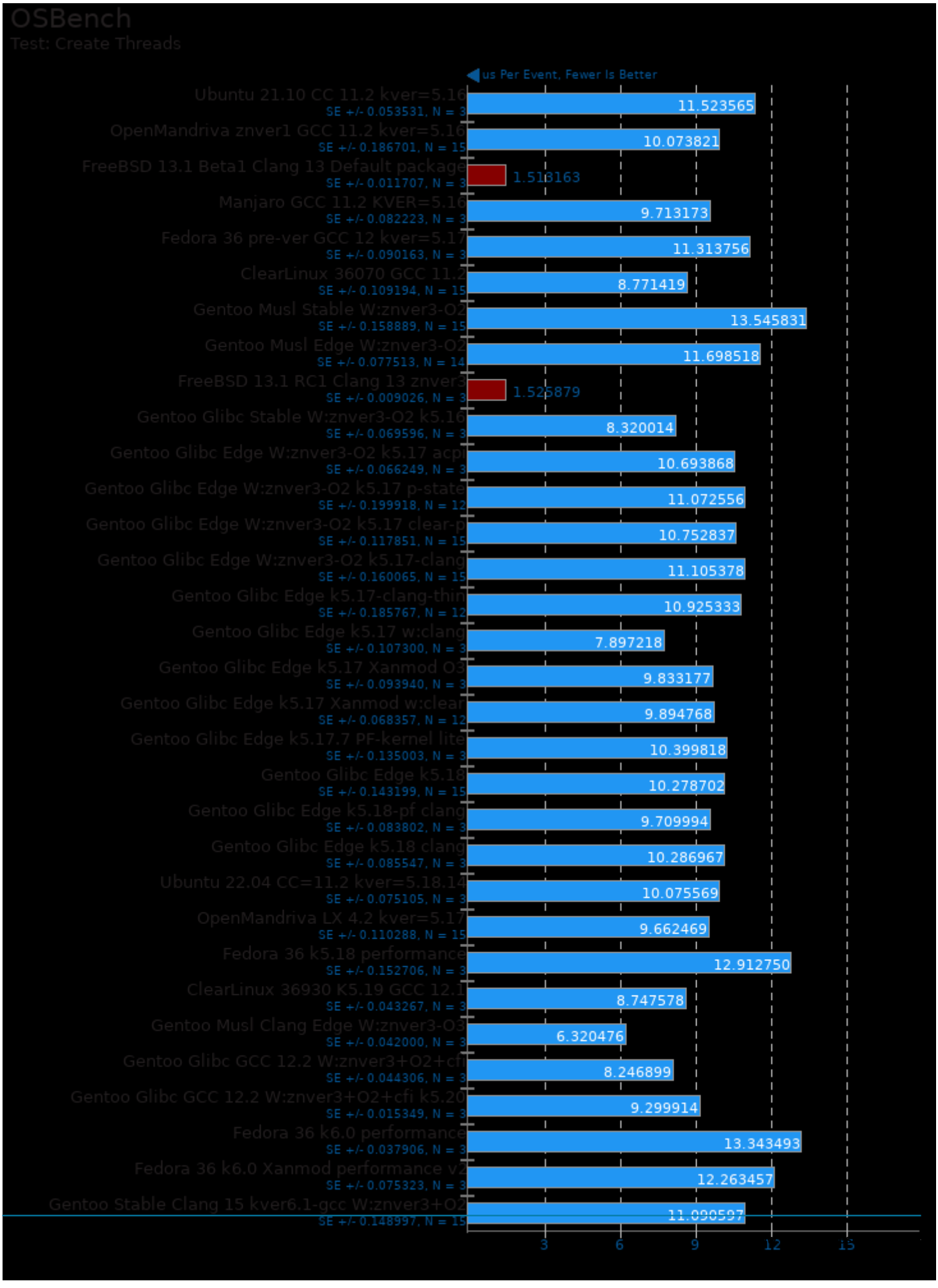
Kernel Bench



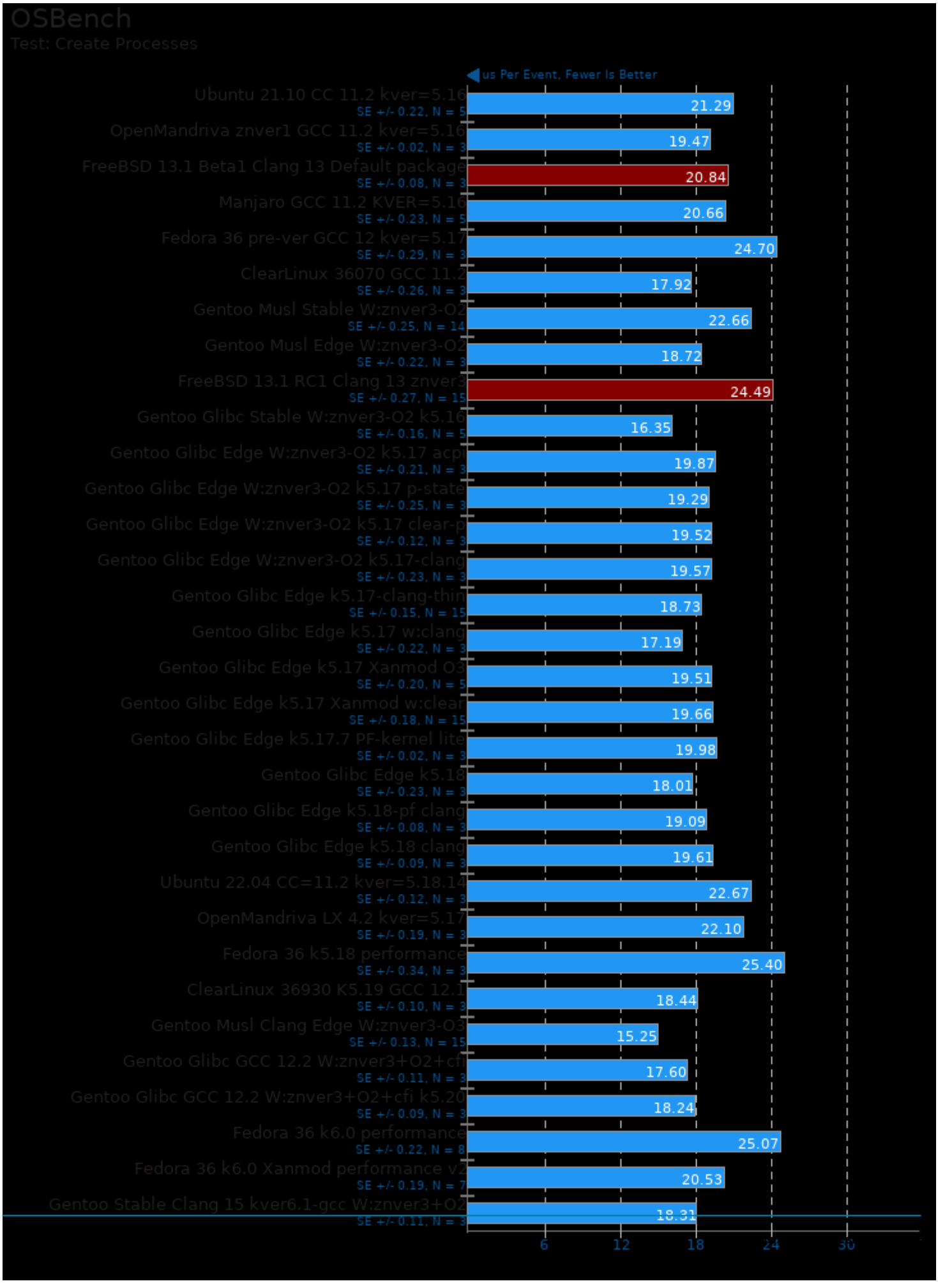
Kernel Bench

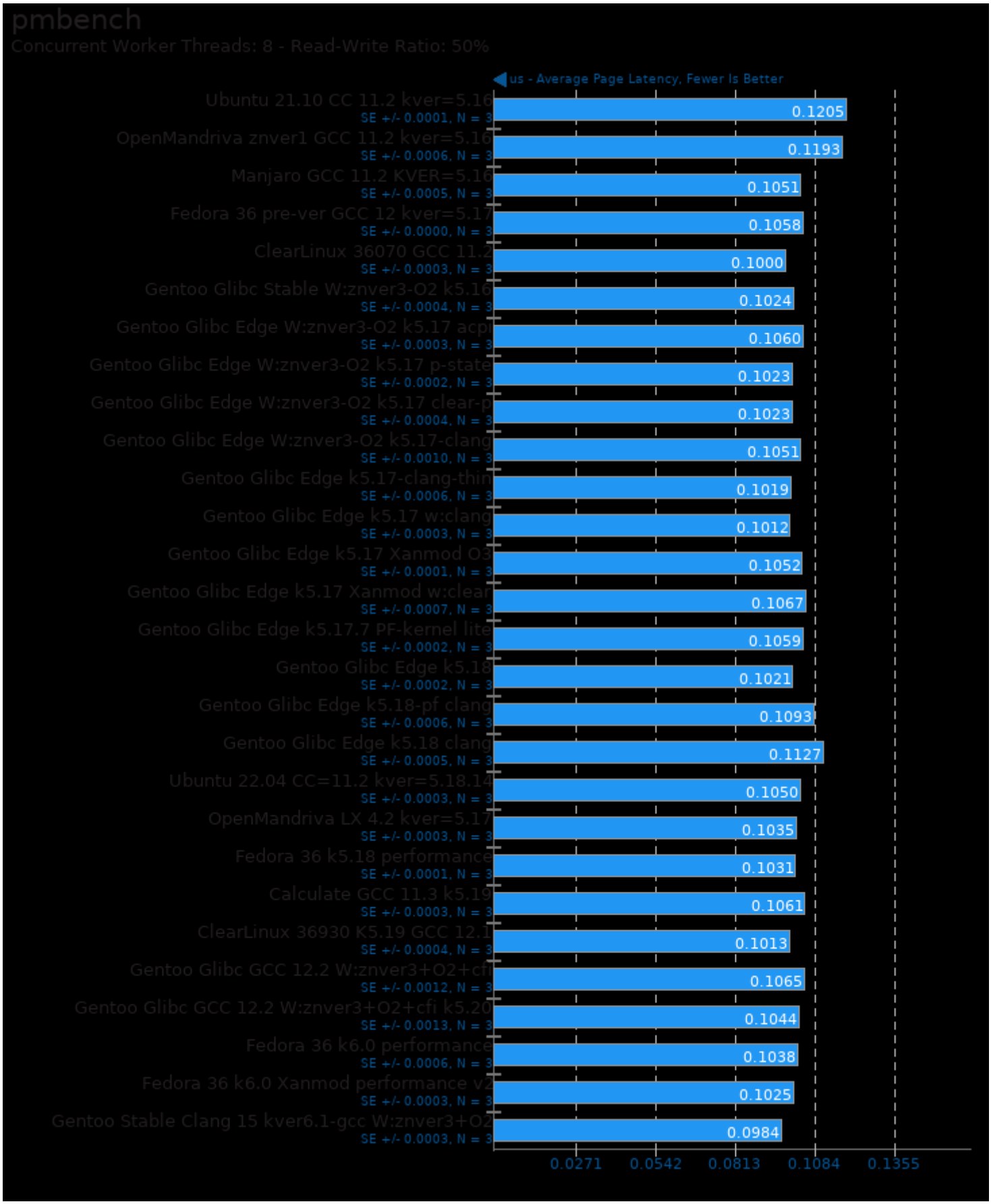


Kernel Bench

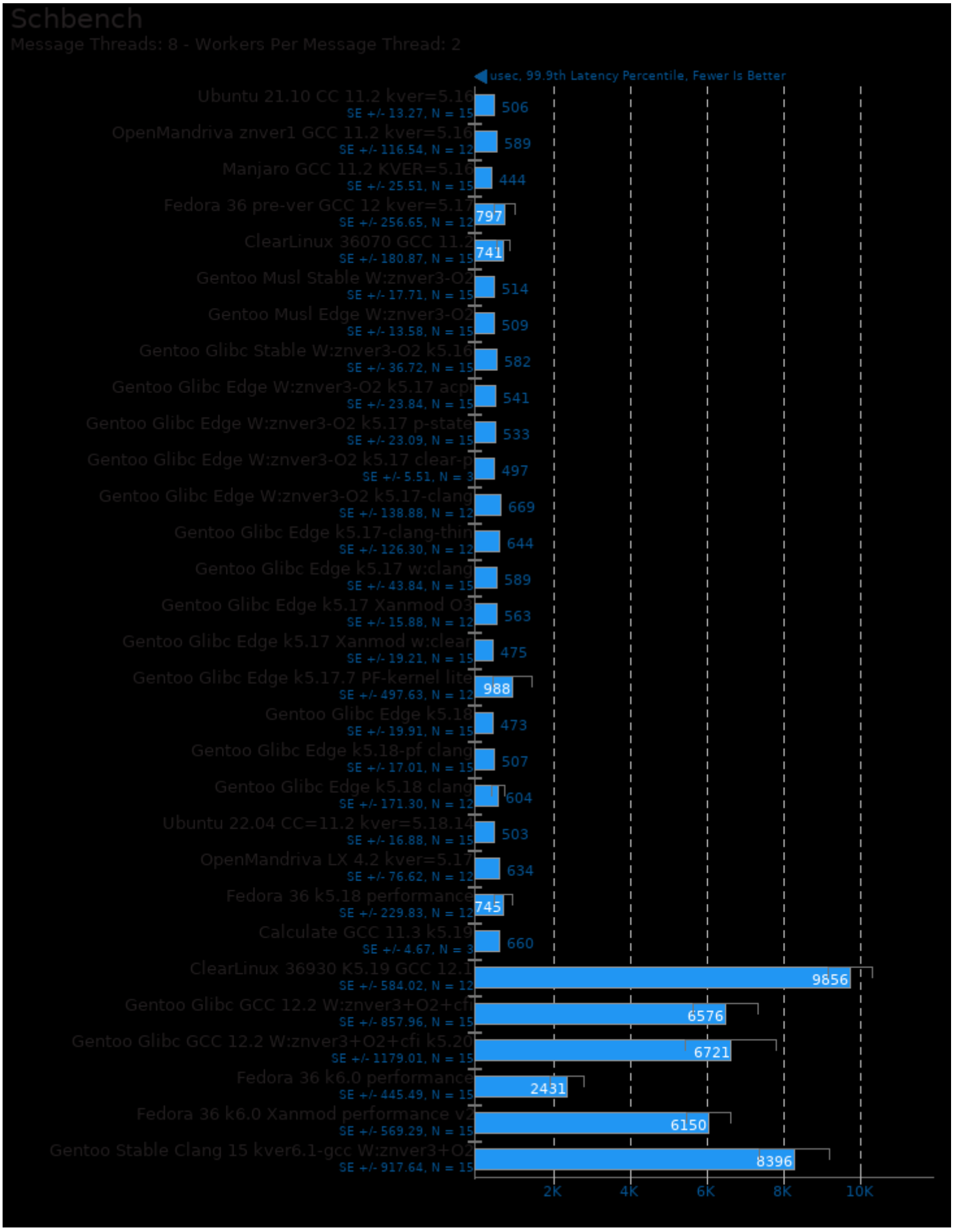


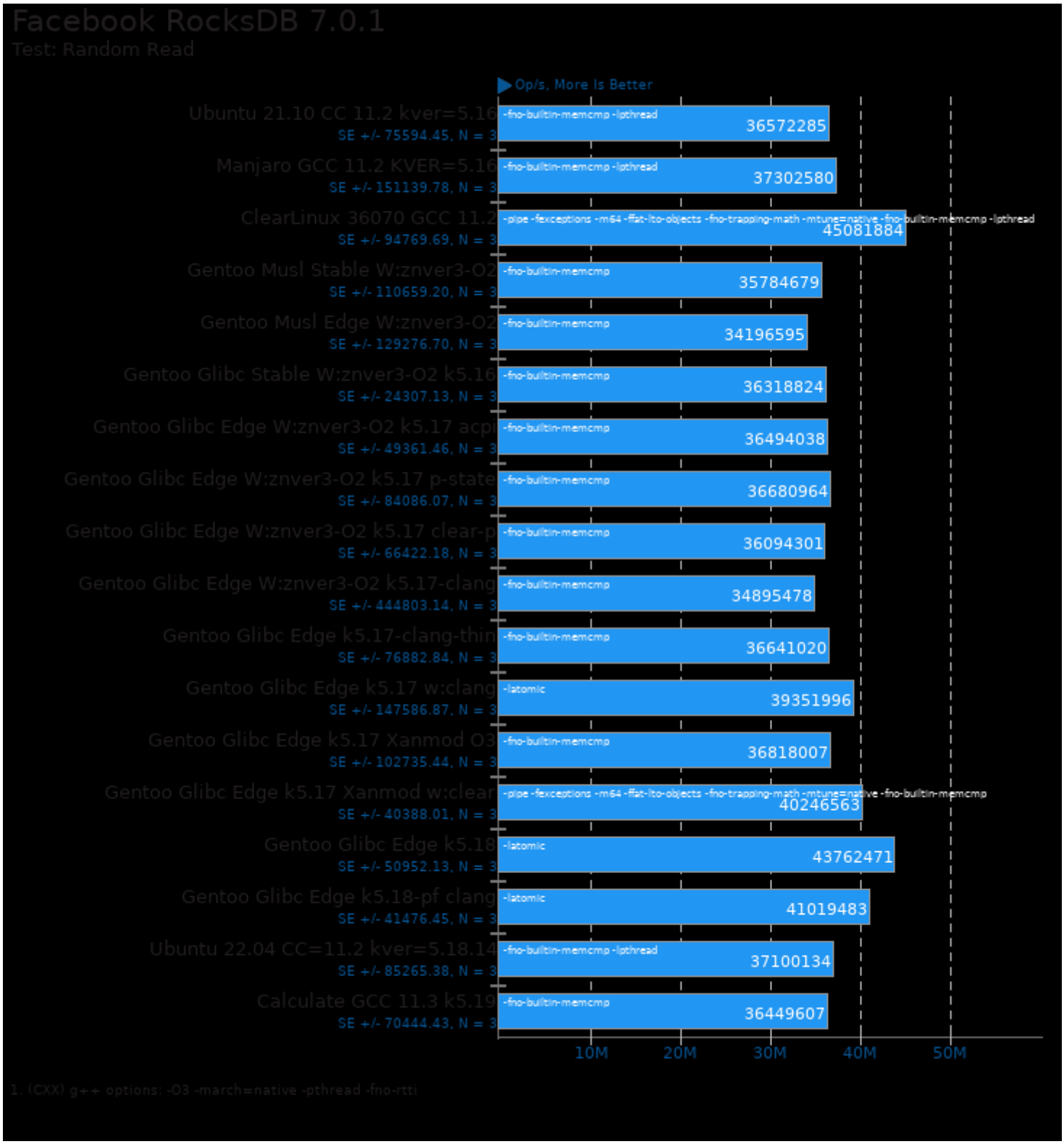
Kernel Bench




pmbench
Concurrent Worker Threads: 8 - Read-Write Ratio: 50%
us - Average Page Latency, Fewer Is Better
Ubuntu 21.10 CC 11.2 kver=5.16
SE +/- 0.0001, N = 3
0.1205
OpenMandriva znver1 GCC 11.2 kver=5.16
SE +/- 0.0006, N = 3
0.1193
Manjaro GCC 11.2 KVER=5.16
SE +/- 0.0005, N = 3
0.1051
Fedora 36 pre-ver GCC 12 kver=5.17
SE +/- 0.0000, N = 3
0.1058
ClearLinux 36070 GCC 11.2
SE +/- 0.0003, N = 3
0.1000
Gentoo Glibc Stable W:znver3-O2 k5.16
SE +/- 0.0004, N = 3
0.1024
Gentoo Glibc Edge W:znver3-O2 k5.17 acpi
SE +/- 0.0003, N = 3
0.1060
Gentoo Glibc Edge W:znver3-O2 k5.17 p-state
SE +/- 0.0002, N = 3
0.1023
Gentoo Glibc Edge W:znver3-O2 k5.17 clear-p
SE +/- 0.0004, N = 3
0.1023
Gentoo Glibc Edge W:znver3-O2 k5.17-clang
SE +/- 0.0010, N = 3
0.1051
Gentoo Glibc Edge k5.17-clang-thin
SE +/- 0.0006, N = 3
0.1019
Gentoo Glibc Edge k5.17 w:clang
SE +/- 0.0003, N = 3
0.1012
Gentoo Glibc Edge k5.17 Xanmod O3
SE +/- 0.0001, N = 3
0.1052
Gentoo Glibc Edge k5.17 Xanmod w:clear
SE +/- 0.0007, N = 3
0.1067
Gentoo Glibc Edge k5.17.7 PF-kernel lite
SE +/- 0.0002, N = 3
0.1059
Gentoo Glibc Edge k5.18
SE +/- 0.0002, N = 3
0.1021
Gentoo Glibc Edge k5.18-pf clang
SE +/- 0.0006, N = 3
0.1093
Gentoo Glibc Edge k5.18 clang
SE +/- 0.0005, N = 3
0.1127
Ubuntu 22.04 CC=11.2 kver=5.18.14
SE +/- 0.0003, N = 3
0.1050
OpenMandriva LX 4.2 kver=5.17
SE +/- 0.0003, N = 3
0.1035
Fedora 36 k5.18 performance
SE +/- 0.0001, N = 3
0.1031
Calculate GCC 11.3 k5.19
SE +/- 0.0003, N = 3
0.1061
ClearLinux 36930 K5.19 GCC 12.1
SE +/- 0.0004, N = 3
0.1013
Gentoo Glibc GCC 12.2 W:znver3+O2+cfi
SE +/- 0.0012, N = 3
0.1065
Gentoo Glibc GCC 12.2 W:znver3+O2+cfi k5.20
SE +/- 0.0013, N = 3
0.1044
Fedora 36 k6.0 performance
SE +/- 0.0006, N = 3
0.1038
Fedora 36 k6.0 Xanmod performance v2
SE +/- 0.0003, N = 3
0.1025
Gentoo Stable Clang 15 kver6.1-gcc W:znver3+O2
SE +/- 0.0003, N = 3
0.0984
0.0271
0.0542
0.0813
0.1084
0.1355

Kernel Bench





This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 18:11.