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AMD Ryzen 5 3500X 6-Core testing with a ASRock A520M-HDV (P1.70 BIOS) and MSI NVIDIA GeForce GTX 1070 8GB on Ubuntu 21.04 via the Phoronix Test Suite.

Automated Executive Summary

4x8GB 3200CL15 SMT OFF had the most wins, coming in first place for 30% of the tests.

Based on the geometric mean of all complete results, the fastest (3500X 4x8GB 3200CL15) was 2.213x the speed of the slowest (1x8GB 2400CL17).

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

Unigine Superposition (Resolution: 1920 x 1080 - Mode: Windowed - Quality: Low - Renderer: OpenGL) at 10.748x
Unigine Valley (Resolution: 1920 x 1080 - Mode: Windowed - Renderer: OpenGL) at 8.772x
Tesseract (Resolution: 1920 x 1080) at 7.135x
Stream (Type: Copy) at 2.825x
Stream (Type: Scale) at 2.764x
Stream (Type: Triad) at 2.704x
Stream (Type: Add) at 2.704x
NAS Parallel Benchmarks (Test / Class: LU.C) at 1.943x
Redis (Test: LPOP) at 1.894x

IPC_benchmark (Type: TCP Socket - Message Bytes: 512) at 1.469x.

Test Systems:

2x4GB 2400CL17

1x8GB 2400CL17

Processor: AMD Ryzen 5 PRO 4650G @ 3.70GHz (6 Cores / 12 Threads), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Renoir Root Complex, Memory: 8GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: Gigabyte AMD Renoir 512MB (1900/400MHz), Audio: AMD Device 1637, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.1 (LLVM 11.0.1), Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8600106
Graphics Notes: GLAMOR
Python Notes: Python 3.9.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

2x8 3200CL22

Processor: AMD Ryzen 5 PRO 4650G @ 3.70GHz (6 Cores / 12 Threads), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Renoir Root Complex, Memory: 16GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: Gigabyte AMD Renoir 512MB (1900/400MHz), Audio: AMD Device 1637, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.1 (LLVM 11.0.1), Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8600106
Graphics Notes: GLAMOR
Python Notes: Python 3.9.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

2x4GB 2666CL20 SODIMM

Processor: AMD Ryzen 5 PRO 4650G @ 3.70GHz (6 Cores / 12 Threads), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Renoir Root Complex, Memory: 8GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: Gigabyte AMD Renoir 512MB (1900/400MHz), Audio: AMD Device 1637, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.1 (LLVM 11.0.1), Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8600106
Graphics Notes: GLAMOR
Python Notes: Python 3.9.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

4x4GB 2666CL20 SODIMM

2x8GB 3200CL15

Processor: AMD Ryzen 5 PRO 4650G @ 3.70GHz (6 Cores / 12 Threads), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Renoir Root Complex, Memory: 16GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: Gigabyte AMD Renoir 512MB (1900/400MHz), Audio: AMD Device 1637, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.1 (LLVM 11.0.1), Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8600106
Graphics Notes: GLAMOR
Python Notes: Python 3.9.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

4x8GB 3200CL15

Processor: AMD Ryzen 5 PRO 4650G @ 3.70GHz (6 Cores / 12 Threads), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Renoir Root Complex, Memory: 32GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: Gigabyte AMD Renoir 512MB (1900/400MHz), Audio: AMD Device 1637, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.1 (LLVM 11.0.1), Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8600106
Graphics Notes: GLAMOR
Python Notes: Python 3.9.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

4x8GB 3200CL15 SMT OFF

Processor: AMD Ryzen 5 PRO 4650G @ 3.70GHz (6 Cores), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Renoir Root Complex, Memory: 32GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: Gigabyte AMD Renoir 512MB (1900/400MHz), Audio: AMD Device 1637, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.1 (LLVM 11.0.1), Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8600106
Graphics Notes: GLAMOR
Python Notes: Python 3.9.4
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: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

3500X 2x8GB 3200CL22

3500X 2x8GB 3200CL22 v2

Processor: AMD Ryzen 5 3500X 6-Core @ 3.60GHz (6 Cores), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: MSI NVIDIA GeForce GTX 1070 8GB, Audio: NVIDIA GP104 HD Audio, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, Display Driver: NVIDIA 460.73.01, OpenGL: 4.6.0, Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8701021
OpenCL Notes: GPU Compute Cores: 1920
Python Notes: Python 3.9.4
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 STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

3500X 2x4GB 2666CL20 SODIMM

3500X 2x4GB 2400CL17

Processor: AMD Ryzen 5 3500X 6-Core @ 3.60GHz (6 Cores), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Starship/Matisse, Memory: 8GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: MSI NVIDIA GeForce GTX 1070 8GB, Audio: NVIDIA GP104 HD Audio, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, Display Driver: NVIDIA 460.73.01, OpenGL: 4.6.0, Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8701021
OpenCL Notes: GPU Compute Cores: 1920
Python Notes: Python 3.9.4
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 STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

3500X 4x8GB 3200CL15

Processor: AMD Ryzen 5 3500X 6-Core @ 3.60GHz (6 Cores), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: MSI NVIDIA GeForce GTX 1070 8GB, Audio: NVIDIA GP104 HD Audio, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, Display Driver: NVIDIA 460.73.01, OpenGL: 4.6.0, Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8701021
OpenCL Notes: GPU Compute Cores: 1920
Python Notes: Python 3.9.4
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 STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

3500X 2x8GB 3200CL15

Processor: AMD Ryzen 5 3500X 6-Core @ 3.60GHz (6 Cores), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: MSI NVIDIA GeForce GTX 1070 8GB, Audio: NVIDIA GP104 HD Audio, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, Display Driver: NVIDIA 460.73.01, OpenGL: 4.6.0, Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8701021
OpenCL Notes: GPU Compute Cores: 1920
Python Notes: Python 3.9.4
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 STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

3500X 1x8GB 2400CL17

Processor: AMD Ryzen 5 3500X 6-Core @ 3.60GHz (6 Cores), Motherboard: Gigabyte B450M DS3H-CF (F61a BIOS), Chipset: AMD Starship/Matisse, Memory: 8GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: MSI NVIDIA GeForce GTX 1070 8GB, Audio: NVIDIA GP104 HD Audio, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, Display Driver: NVIDIA 460.73.01, OpenGL: 4.6.0, Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8701021
OpenCL Notes: GPU Compute Cores: 1920
Python Notes: Python 3.9.4
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 STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

2x8GB 3600CL16

Processor: AMD Ryzen 5 PRO 4650G @ 3.70GHz (6 Cores / 12 Threads), Motherboard: ASRock A520M-HDV (P1.70 BIOS), Chipset: AMD Renoir Root Complex, Memory: 16GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: AMD Renoir (1900/400MHz), Audio: AMD Device 1637, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.1 (LLVM 11.0.1), Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8600106
Graphics Notes: GLAMOR
Python Notes: Python 3.9.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

3500X 2x8GB 3600CL16

rams

Processor: AMD Ryzen 5 3500X 6-Core @ 3.60GHz (6 Cores), Motherboard: ASRock A520M-HDV (P1.70 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 512GB SAMSUNG MZVKW512HMJP-000L7, Graphics: MSI NVIDIA GeForce GTX 1070 8GB, Audio: NVIDIA GP104 HD Audio, Monitor: Optix MAG24C, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 21.04, Kernel: 5.11.0-16-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, Display Driver: NVIDIA 460.73.01, OpenGL: 4.6.0, Compiler: GCC 10.3.0, 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-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8701021
OpenCL Notes: GPU Compute Cores: 1920
Python Notes: Python 3.9.4
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 STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	2x4GB 2400 CL17	1x8GB 2400 CL17	2x8 3200 CL22	2x4GB 2666 CL20 SODIMM	4x4GB 2666 CL20 SODIMM	2x8GB 3200 CL15	4x8GB 3200 CL15	4x8GB 3200 CL15 SMT OFF	3500X 2x8GB 3200 CL22	3500X 2x8GB 3200 CL22 v2	3500X 2x4GB 2666 CL20 SODIMM	3500X 2x4GB 2400 CL17	3500X 4x8GB 3200 CL15	3500X 2x8GB 3200 CL15	3500X 1x8GB 2400 CL17	2x8GB 3600 CL16	3500X 2x8GB 3600 CL16
Tesseract - 1920 x 1080 (FPS)	121.0406	74.42457	138.8252	114.4562	115.9020	142.3187	145.9609	152.8337	523.9431	522.6266	522.6710	519.9214	527.4971	520.2020	518.7055	192.1625	531.0512
Normalized	22.79%	14.01%	26.14%	21.55%	21.83%	26.8%	27.49%	28.78%	98.66%	98.41%	98.42%	97.9%	99.33%	97.96%	97.68%	36.19%	100%
Standard Deviation	0.9%	0.3%	0.8%	0.6%	0.8%	1%	0.4%	0.7%	2%	1.3%	1.3%	2.2%	0.8%	2.3%	0.8%	1.5%	1%

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Unigine Superposition - 1920 x 1080 - Windowed - Low - OpenGL (FPS)	27.9	**16.3**	31.6	26.0	31.6	32.7	33.0	172.5	171.5	169.5	169.0	172.9	173.2	168.6	38.4	**175.2**
Normalized	15.92%	9.3%	18.04%	14.84%	18.04%	18.66%	18.84%	98.46%	97.89%	96.75%	96.46%	98.69%	98.86%	96.23%	21.92%	100%
Standard Deviation	0.7%	0.4%	0.4%	0.2%	0.3%	0.2%	0.6%	0.5%	0.3%	0.4%	0.1%	0.8%	0.2%	0.3%	0.3%	2.7%
Unigine Valley - 1920 x 1080 - Windowed - OpenGL (FPS)	22.72	**14.50**	24.91	21.48	24.98	25.70	25.68	126.9	126.5	126.7	127.1	127.2	**127.2**	126.2	28.17	127.1
	66	**50**	12	44	41	05	84	33	46	06	12	29	**44**	77	33	88
Normalized	17.86%	11.4%	19.58%	16.88%	19.63%	20.2%	20.19%	99.76%	99.45%	99.58%	99.9%	99.99%	100%	99.24%	22.14%	99.96%
Standard Deviation	0%	0.4%	0.3%	0.3%	0.1%	0.4%	1.3%	0.1%	0.3%	0.2%	0%	0.2%	0.1%	0.2%	0.1%	0.7%
Stream - Copy	3210	**1517**	3741	2716	2766	3686	3844	4154	3741	3739	2763	3122	4156	3897	1637	4027	**4288**
	2	**7**	1	1	5	7	8	1	3	5	1	8	8	4	8	9	**0**
Normalized	74.86%	35.39%	87.24%	63.34%	64.52%	85.98%	89.66%	96.88%	87.25%	87.21%	64.44%	72.83%	96.94%	90.89%	38.19%	93.94%	100%
Standard Deviation	0%	0%	0.2%	0.1%	0.4%	0.1%	0%	0%	0.4%	0.3%	0.1%	0.1%	0.1%	0.2%	0%	0.1%	0.1%
Stream - Scale (MB/s)	1930	**9474**	2245	1456	1726	2155	2575	**2618**	2114	2107	1461	1934	2565	2051	1052	2414	2288
	8		1	3	1	4	4	**3**	5	2	4	0	8	5	3	1	3
Normalized	73.74%	36.18%	85.75%	55.62%	65.93%	82.32%	98.36%	100%	80.76%	80.48%	55.81%	73.86%	98%	78.35%	40.19%	92.2%	87.4%
Standard Deviation	0.2%	0%	0.1%	0.1%	0.4%	0.1%	0.1%	0.1%	0.5%	0.1%	0.3%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%
Stream - Triad	2185	**1078**	2510	1692	1957	2394	2826	**2916**	2316	2277	1581	2086	2803	2130	1190	2632	2450
	1	**4**	9	6	3	9	5	**4**	1	0	4	0	6	8	1	7	2
Normalized	74.92%	36.98%	86.1%	58.04%	67.11%	82.12%	96.92%	100%	79.42%	78.07%	54.22%	71.53%	96.13%	73.06%	40.81%	90.27%	84.01%
Standard Deviation	0.2%	0%	0%	0%	0.1%	0%	0.1%	0%	2.4%	0.8%	0.4%	0.1%	0.2%	0.1%	0.1%	0.1%	0.4%
Stream - Add (MB/s)	2204	**1079**	2517	1701	1968	2405	2829	**2917**	2295	2266	1574	2091	2791	2132	1188	2632	2444
	1	**1**	5	8	7	5	0	**8**	1	0	3	3	5	5	7	9	8
Normalized	75.54%	36.98%	86.28%	58.33%	67.47%	82.44%	96.96%	100%	78.66%	77.66%	53.96%	71.67%	95.67%	73.09%	40.74%	90.24%	83.79%
Standard Deviation	0.3%	0.1%	0%	0%	0.3%	0.1%	0%	0%	2.4%	0.3%	0.1%	0.3%	0.1%	0.5%	0.1%	0%	0.6%

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IPC_benchmark - TCP Socket - 512 (Messages/	2925550	2938356	**2965826**	2951951	**2018273**	2908667	2935397	2904198	2762542	2768836	2769904	2767878	2778458	2798555	2779379	2902930	2721210
Normalized	98.64%	99.07%	100%	99.53%	68.05%	98.07%	98.97%	97.92%	93.15%	93.36%	93.39%	93.33%	93.68%	94.36%	93.71%	97.88%	91.75%
Standard Deviation	0.6%	1.1%	0.9%	1.2%	26%	2.4%	1.4%	0.6%	0.2%	0.4%	0.5%	1.4%	0.2%	1.4%	0.7%	1.1%	2.3%
IPC_benchmark - Unnamed Pipe - 512 (Messages/ sec)	4684056	4633884	**4792991**	4743057	3766447	4741746	4746627	4712701	3745149	**3528949**	3754167	3640542	3601641	3607238	3822056	4382708	3892079
Normalized	97.73%	96.68%	100%	98.96%	78.58%	98.93%	99.03%	98.32%	78.14%	73.63%	78.33%	75.96%	75.14%	75.26%	79.74%	91.44%	81.2%
Standard Deviation	2.2%	2.3%	2.5%	3.2%	16.9%	2%	2.3%	1.8%	2.9%	6.3%	1.5%	2.4%	1.2%	4.1%	2.3%	10.3%	2.3%
IPC_benchmark - FIFO Named Pipe - 512 (Messages/ sec)	4772787	4792135	**4884133**	4832916		4789813	4870875	4719191	3651016	3654257	3830350	**3638771**	3785171	3679624	3864190	4624051	3790589
Normalized	97.72%	98.12%	100%	98.95%		98.07%	99.73%	96.62%	74.75%	74.82%	78.42%	74.5%	77.5%	75.34%	79.12%	94.67%	77.61%
Standard Deviation	2.3%	2.8%	1.1%	0.8%		2.1%	2.1%	1.7%	9.5%	8%	4.2%	7.9%	0.6%	2.4%	2.1%	4.9%	8%
IPC_benchmark - U.U.D.S - 512 (Messages/ sec)	1815250	1810794	1825580	**1832870**		1820497	1808806	1784497	1672042	1670946	1675674	1651069	**1650652**	1665753	1668271	1767265	1651216
Normalized	99.04%	98.8%	99.6%	100%		99.32%	98.69%	97.36%	91.23%	91.17%	91.42%	90.08%	90.06%	90.88%	91.02%	96.42%	90.09%
Standard Deviation	0.4%	1.7%	0.2%	0.5%		0.1%	0.9%	0.4%	0.7%	0.4%	0.3%	2.5%	2.4%	2.5%	0.1%	4.2%	2.4%
NAS Parallel Benchmarks - EP.C	563.32	560.10	569.46	564.73		564.91	570.90	**578.56**	540.41	540.57	540.81	539.28	540.34	541.16	541.41	569.72	**535.44**
Normalized	97.37%	96.81%	98.43%	97.61%		97.64%	98.68%	100%	93.41%	93.43%	93.48%	93.21%	93.39%	93.54%	93.58%	98.47%	92.55%
Standard Deviation	0.2%	1.4%	0.3%	0.7%		0.3%	0.7%	0.2%	0.2%	0.2%	0.1%	0.3%	0.1%	0.2%	0.2%	0.4%	0.3%

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NAS Parallel Benchmarks - EP.D	564.08	555.03	566.61	562.32	565.43	569.73	**577.47**	539.25	539.45	539.87	540.75	537.89	540.04	561.73	**531.11**
Normalized	97.68%	96.11%	98.12%	97.38%	97.92%	98.66%	100%	93.38%	93.42%	93.49%	93.64%	93.15%	93.52%	97.27%	91.97%
Standard Deviation	0.4%	0.3%	0.3%	0.4%	0.1%	0.1%	0%	0.5%	0.3%	0.3%	0%	0.2%	0.2%	0.1%	0.1%
NAS Parallel Benchmarks - LU.C	21383	**13367**	23118	18425	22554	25461	**25966**	22132	17562	21040	24906	21516	14253	24198	22888
Normalized	82.35%	51.48%	89.03%	70.96%	86.86%	98.06%	100%	85.23%	67.63%	81.03%	95.91%	82.86%	54.89%	93.19%	88.14%
Standard Deviation	0.1%	0%	0.1%	0.1%	0.1%	0.1%	0.1%	0%	0.1%	0.2%	0.1%	0.1%	0%	0.1%	0.1%
7-Zip Compression - C.S.T (MIPS)	33245	**27892**	34326	30663	34878	36487	30883	31912	29975	31401	32675	32111	29857	**38928**	32190
Normalized	85.4%	71.65%	88.18%	78.77%	89.6%	93.73%	79.33%	81.98%	77%	80.66%	83.94%	82.49%	76.7%	100%	82.69%
Standard Deviation	0.2%	0.5%	0.8%	0.1%	0.2%	0.2%	1%	0.4%	0.4%	0.7%	0.7%	1.1%	0.8%	0.1%	0.2%
Swet - Average (Operations /sec)	7980396184	7911652644	7988541944	7926855444	8017403364	8130130284	8086226194	8125262811	7936599684	8012576122	8229814933	8086630566	**7799238449**	8122510077	**8259529199**
Normalized	96.62%	95.79%	96.72%	95.97%	97.07%	98.43%	97.9%	98.37%	96.09%	97.01%	99.64%	97.91%	94.43%	98.34%	100%
Standard Deviation	0.5%	0.4%	1.2%	2.1%	1.5%	0.2%	0.7%	0.3%	0.1%	0.4%	0.3%	0.6%	0.5%	0.6%	1%
Timed Apache Compilation - Time To Compile (sec)	22.848	**25.484**	21.939	23.950	21.579	21.429	22.438	21.312	21.512	21.383	21.268	21.268	21.596	**20.911**	21.344
Normalized	91.52%	82.06%	95.31%	87.31%	96.9%	97.58%	93.19%	98.12%	97.21%	97.79%	98.32%	98.32%	96.83%	100%	97.97%
Standard Deviation	0.2%	0.1%	0.4%	0.3%	0.1%	0.5%	0.1%	0.3%	0.3%	0%	0.2%	0.1%	0.1%	0.2%	0.2%

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Timed Linux Kernel Compilation - Time To Compile	115.726	137.127	111.834	124.660	110.498	108.218	131.625	124.985	127.504	125.353	123.395	123.776	128.083	109.115	124.980
Normalized	93.51%	78.92%	96.77%	86.81%	97.94%	100%	82.22%	86.58%	84.87%	86.33%	87.7%	87.43%	84.49%	99.18%	86.59%
Standard Deviation	0.5%	0.6%	0.6%	0.6%	0.4%	0.4%	0.6%	0.5%	0.6%	0.6%	0.6%	0.5%	0.6%	0.8%	0.4%
C-Ray - Total Time - 4.1.R.P.P (sec)	82.945	82.830	82.666	82.193	82.550	82.958	88.913	94.872	94.688	94.415	94.793	94.689	94.547	84.818	96.536
Normalized	99.09%	99.23%	99.43%	100%	99.57%	99.08%	92.44%	86.64%	86.8%	87.06%	86.71%	86.8%	86.93%	96.91%	85.14%
Standard Deviation	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0%	0.1%	0.1%	0%	0.2%	0.2%	0.1%
Parallel BZIP2 Compression - 2.F.C (sec)	5.523	6.872	5.239	6.226	5.229	4.910	6.283	6.375	6.417	6.419	6.399	6.375	6.433	5.062	6.453
Normalized	88.9%	71.45%	93.72%	78.86%	93.9%	100%	78.15%	77.02%	76.52%	76.49%	76.73%	77.02%	76.33%	97%	76.09%
Standard Deviation	0.8%	0.6%	0.4%	2.4%	1.2%	1.3%	1%	0.1%	1.1%	0.5%	0.6%	0.6%	0.8%	0%	0.1%
Cython Benchmark - N-Queens (sec)	23.294	23.386	23.425	23.308	23.113	23.199	23.576	24.454	24.325	24.352	24.263	24.295	24.323	23.603	24.645
Normalized	99.22%	98.83%	98.67%	99.16%	100%	99.63%	98.04%	94.52%	95.02%	94.91%	95.26%	95.13%	95.03%	97.92%	93.78%
Standard Deviation	0.7%	1%	0.7%	0.3%	0.8%	1.4%	0.8%	0.2%	0.4%	0.5%	1%	0.8%	0.8%	0.5%	0.7%
System BZIP2 Decompression (sec)	10.153	10.020	10.042	9.994	10.006	10.045	10.245	10.065	10.036	10.043	10.070	10.054	10.127	9.752	10.087
Normalized	96.05%	97.33%	97.11%	97.58%	97.46%	97.08%	95.19%	96.89%	97.17%	97.1%	96.84%	97%	96.3%	100%	96.68%
Standard Deviation	1.4%	0.6%	1.3%	0.6%	1.3%	0.8%	1.6%	0.2%	0.6%	0.1%	0.7%	0.1%	0.2%	0.3%	0.3%
Redis - LPOP (Reqs/sec)	2612840	1521639	1678661	1619416	1669794	1630631	1640717	2515707	1512548	1515273	2136096	2170228	1513409	2864839	2511311
Normalized	91.2%	53.11%	58.6%	56.53%	58.29%	56.92%	57.27%	87.81%	52.8%	52.89%	74.56%	75.75%	52.83%	100%	87.66%
Standard Deviation	1.6%	1.3%	1.7%	2.5%	1.1%	0.3%	1.3%	1%	2.2%	2%	20.3%	18.8%	4.5%	4.9%	1.9%

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Redis - SADD (Reqs/sec)	2160339	1900402	2143382	2167550	2132767	2215594	2175029	1992534	1923594	1967685	1993300	2007463	1923579	2277650	1980133
Normalized	94.85%	83.44%	94.11%	95.17%	93.64%	97.28%	95.49%	87.48%	84.46%	86.39%	87.52%	88.14%	84.45%	100%	86.94%
Standard Deviation	1.1%	4.3%	1.2%	4.7%	1.2%	1.9%	2.3%	2.6%	1.9%	0.6%	0.3%	1.3%	1.9%	4.9%	0.6%
Redis - LPUSH (Reqs/sec)	1558445	1479425	1623300	1637592	1597438	1606181	1647434	1467803	1447041	1450574	1466678	1491054	1450716	1651781	1483303
Normalized	94.35%	89.57%	98.28%	99.14%	96.71%	97.24%	99.74%	88.86%	87.6%	87.82%	88.79%	90.27%	87.83%	100%	89.8%
Standard Deviation	2.8%	1.8%	2%	3.8%	2.5%	1.3%	2%	2.2%	2.3%	2.2%	1.5%	3.5%	2.6%	3.4%	3.2%
Redis - GET (Reqs/sec)	2446050	2058834	2381553	2308978	2335463	2333622	2373129	2280582	2121562	2115101	2152351	2158518	2142596	2660451	2359495
Normalized	91.94%	77.39%	89.52%	86.79%	87.78%	87.72%	89.2%	85.72%	79.74%	79.5%	80.9%	81.13%	80.54%	100%	88.69%
Standard Deviation	1.7%	0.7%	0%	2.1%	2%	0.6%	2.1%	0.7%	0.7%	3.1%	0.8%	2.6%	5.2%	3.6%	0.6%
Redis - SET (Reqs/sec)	1863736	1733792	1878767	1846677	1911827	1883202	1906767	1718055	1684445	1719721	1711173	1731073	1676698	1958199	1713493
Normalized	95.18%	88.54%	95.94%	94.3%	97.63%	96.17%	97.37%	87.74%	86.02%	87.82%	87.39%	88.4%	85.62%	100%	87.5%
Standard Deviation	0.4%	3.4%	1.6%	1%	3.3%	3.5%	2.3%	2.1%	0.8%	4.4%	1.5%	1.1%	2.5%	2.4%	2.2%
Blender - Classroom - CPU-Only (sec)	542.33	545.87	529.53	540.35	528.24	532.52	743.17	752.70	759.19	753.23	746.96	746.56	756.16	521.06	762.33
Normalized	96.08%	95.45%	98.4%	96.43%	98.64%	97.85%	70.11%	69.23%	68.63%	69.18%	69.76%	69.79%	68.91%	100%	68.35%
Standard Deviation	0.4%	0.7%	0.3%	0.6%	0.6%	0.8%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.6%	0%
PyBench - T.F.A.T.T (Milliseconds)	937	924	918	926	921	929	922	993	973	976	974	976	977	937	996
Normalized	97.97%	99.35%	100%	99.14%	99.67%	98.82%	99.57%	92.45%	94.35%	94.06%	94.25%	94.06%	93.96%	97.97%	92.17%
Standard Deviation	0.3%		0.1%	0.4%	0.4%		0.3%	0.5%		0.5%			0.6%	0.6%	0.8%
PyPerformance - go (Milliseconds)	226	225	223	236	224	225	222	236	234	234	236	235	234	224	236
Normalized	98.23%	98.67%	99.55%	94.07%	99.11%	98.67%	100%	94.07%	94.87%	94.87%	94.07%	94.47%	94.87%	99.11%	94.07%
Standard Deviation				0.9%		0.4%		0.2%	0.2%		0.2%		0.4%		

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PyPerformance - 2to3 (Milliseconds)	326	324	311	319	308	311	308	306	300	300	299	300	300	302	301
Normalized	91.72%	92.28%	96.14%	93.73%	97.08%	96.14%	97.08%	97.71%	99.67%	99.67%	100%	99.67%	99.67%	99.01%	99.34%
Standard Deviation				0.2%											
PyPerformance - chaos (Milliseconds)	105	102	102	103	100.6	101	101.3	107	106	106	106	107	106	101	107
Normalized	95.81%	98.63%	98.63%	97.67%	100%	99.6%	99.31%	94.02%	94.91%	94.91%	94.91%	94.02%	94.91%	99.6%	94.02%
Standard Deviation		1.1%		1.7%	0.7%		1.2%		0.5%						0.5%
PyPerformance - float (Milliseconds)	111	113	107	111	106	106	105	107	107	106	107	106	107	105	107
Normalized	94.59%	92.92%	98.13%	94.59%	99.06%	99.06%	100%	98.13%	98.13%	99.06%	98.13%	99.06%	98.13%	100%	98.13%
Standard Deviation			0.5%		0.5%						0.5%				
PyPerformance - nbody (Milliseconds)	110	110	111	110	111	112	111	115	116	115	116	115	115	111	116
Normalized	100%	100%	99.1%	100%	99.1%	98.21%	99.1%	95.65%	94.83%	95.65%	94.83%	95.65%	95.65%	99.1%	94.83%
Standard Deviation			0.5%		1.4%	1.4%		1.3%			0.5%				
PyPerformance - pathlib (Millisecon	17	16.7	16.5	16.8	16.3	16.4	16.3	16.6	16.4	16.3	16.3	16.3	16.3	16.1	16.4
Normalized	94.71%	96.41%	97.58%	95.83%	98.77%	98.17%	98.77%	96.99%	98.17%	98.77%	98.77%	98.77%	98.77%	100%	98.17%
Standard Deviation		0%	0.6%	0%	0%	0.4%	0.4%	0.3%	0.4%	0%	0%	0%	0%	0%	0%
PyPerformance - raytrace (Milliseconds)	472	452	450	471	450	451	448	476	481	477	478	476	476	450	480
Normalized	94.92%	99.12%	99.56%	95.12%	99.56%	99.33%	100%	94.12%	93.14%	93.92%	93.72%	94.12%	94.12%	99.56%	93.33%
Standard Deviation	0.2%		0.6%	0.6%	0.5%	0.5%		0.6%	0.1%	0.4%		0.2%	0.4%	0.7%	0.2%

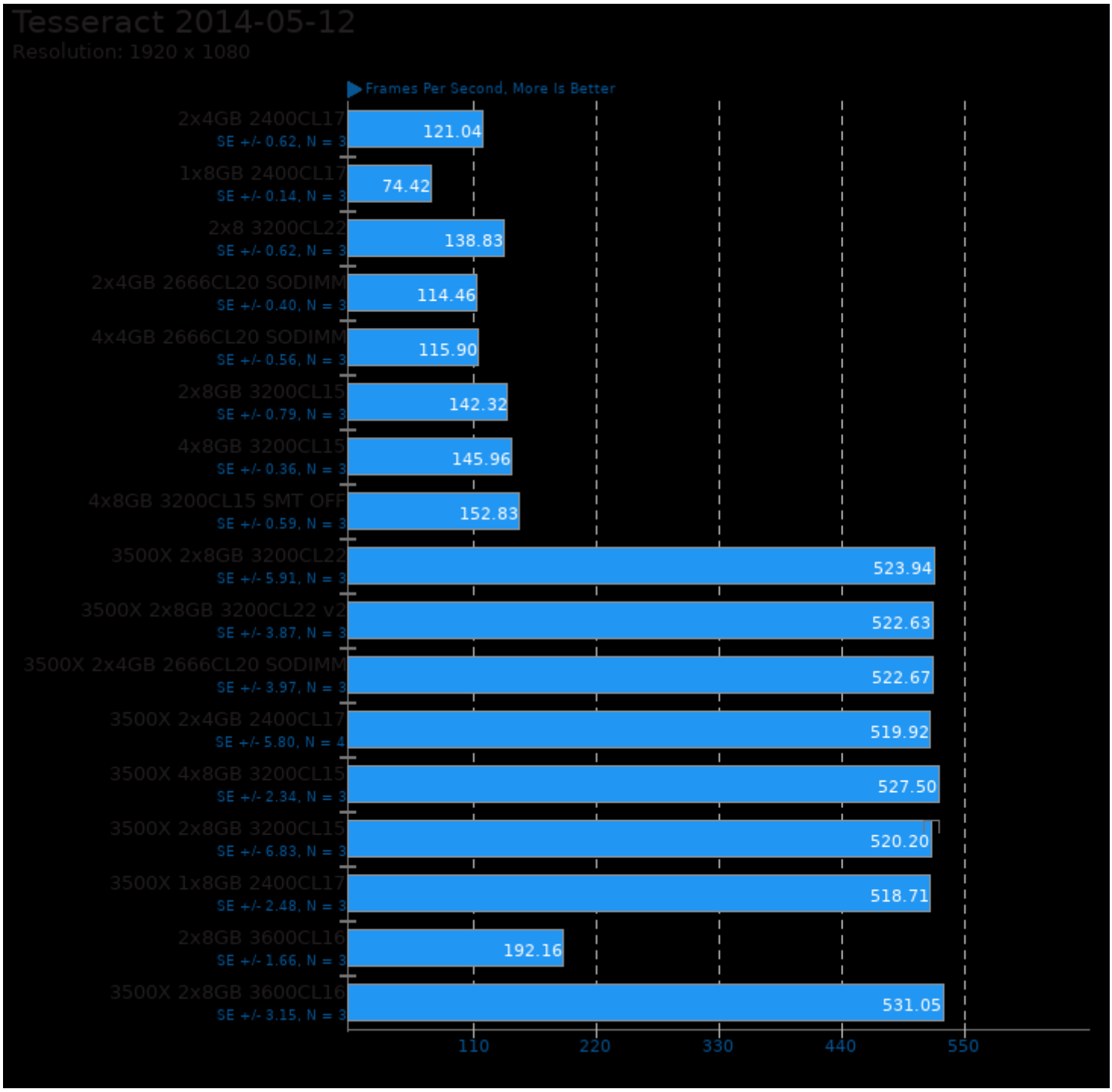
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PyPerformance - json_loads (Milliseconds)	23.7	23.5	23.5	23.4	23.5	24.2	23.3	24.7	24.7	24.7	24.8	24.7	24.6	23.6	24.7
Normalized	98.31%	99.15%	99.15%	99.57%	99.15%	96.28%	100%	94.33%	94.33%	94.33%	93.95%	94.33%	94.72%	98.73%	94.33%
Standard Deviation	0.2%	0.4%	0.2%	0.2%	0%	0.2%	0.2%	0.2%	0.2%	0.2%	0%	0%	0.2%	0%	0.2%
PyPerformance - crypto_pyaes (Milliseconds)	103	102	101	102	101	102	99.5	106	105	105	106	105	105	102	106
Normalized	96.6%	97.55%	98.51%	97.55%	98.51%	97.55%	100%	93.87%	94.76%	94.76%	93.87%	94.76%	94.76%	97.55%	93.87%
Standard Deviation		0.6%	0.6%	0.6%			0%				0.5%				
PyPerformance - regex_compile (Milliseconds)	159	157	157	157	156	157	156	169	165	165	166	165	164	158	166
Normalized	98.11%	99.36%	99.36%	99.36%	100%	99.36%	100%	92.31%	94.55%	94.55%	93.98%	94.55%	95.12%	98.73%	93.98%
Standard Deviation						0.4%							0.4%		
PyPerformance - python_startup (Milliseconds)	7.89	8.05	7.58	7.80	7.42	7.51	7.41	6.85	6.83	6.85	6.80	6.82	6.85	7.1	6.82
Normalized	86.19%	84.47%	89.71%	87.18%	91.64%	90.55%	91.77%	99.27%	99.56%	99.27%	100%	99.71%	99.27%	95.77%	99.71%
Standard Deviation	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0%	0%	0.2%
PyPerformance - django_template (Milliseconds)	44.1	42.1	42.2	42.4	41.9	42.3	42.1	45.1	44.1	44.3	45.3	44.4	44.2	42.1	44.6
Normalized	95.01%	99.52%	99.29%	98.82%	100%	99.05%	99.52%	92.9%	95.01%	94.58%	92.49%	94.37%	94.8%	99.52%	93.95%
Standard Deviation	0.3%	0.2%	0.3%	0.1%	0.1%	0.1%	0%	0%	0.1%	0.1%	0.3%	0.3%	0.1%	0.1%	0.1%

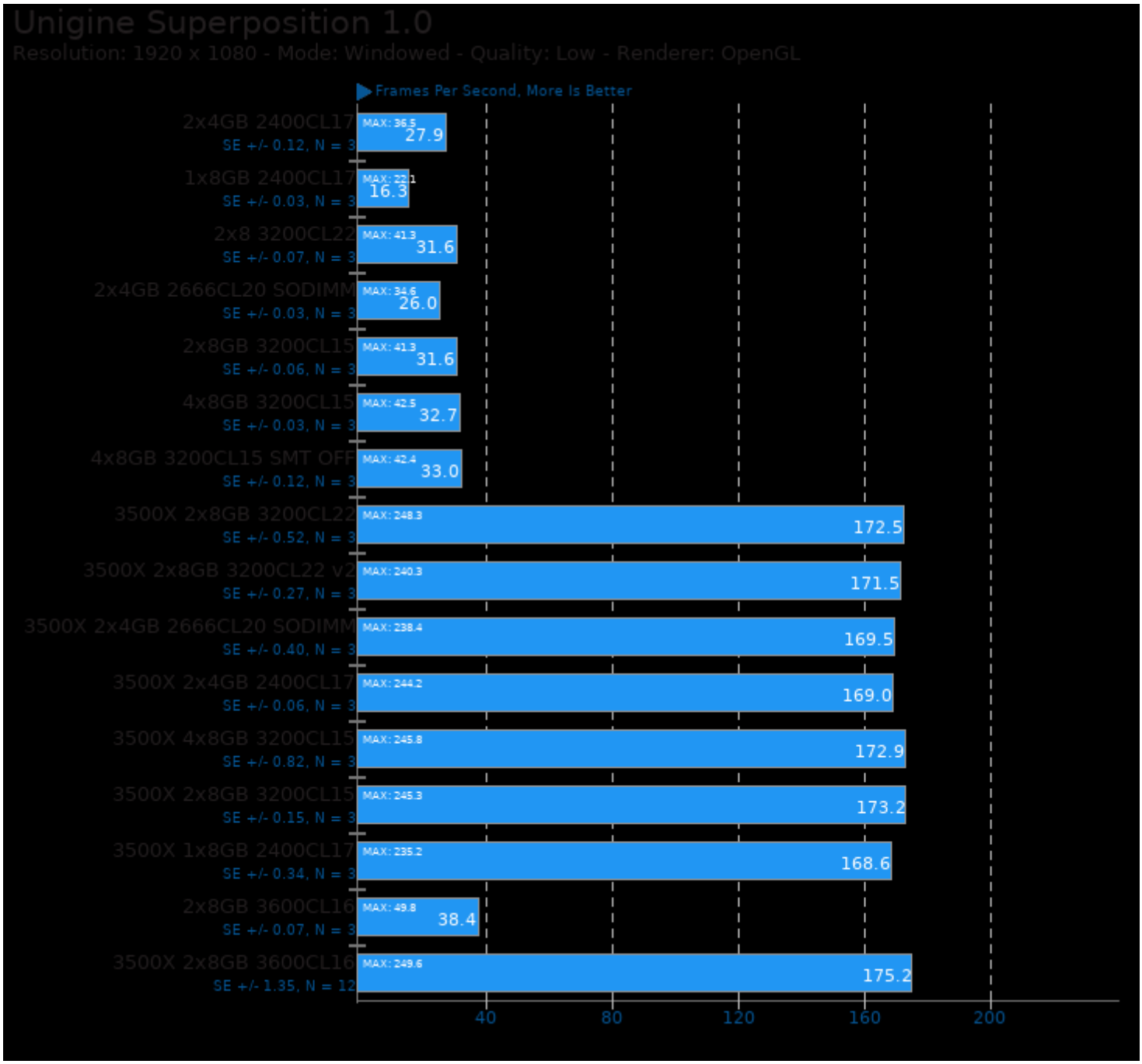
rams

PyPerformance - pickle_pure_python (Milliseconds)	413	407	410	408	404	407	**402**	**452**	431	428	428	429	427	407	431
Normalized	97.34%	98.77%	98.05%	98.53%	99.5%	98.77%	100%	88.94%	93.27%	93.93%	93.93%	93.71%	94.15%	98.77%	93.27%
Standard Deviation	0.2%	0.1%	0.2%	0.2%		0.4%							0.1%		0.1%
Scikit-Learn (sec)	104.783	106.879	105.385	107.854	104.453	104.980	**104.167**	110.054	110.288	108.839	109.691	109.437	**110.533**	104.733	109.515
Normalized	99.41%	97.46%	98.84%	96.58%	99.73%	99.23%	100%	94.65%	94.45%	95.71%	94.96%	95.18%	94.24%	99.46%	95.12%
Standard Deviation	0.3%	0.3%	0.2%	6.6%	0.1%	0.1%	0.2%	0.1%	0.1%	0.3%	0.2%	0.1%	0.2%	0.1%	0.2%

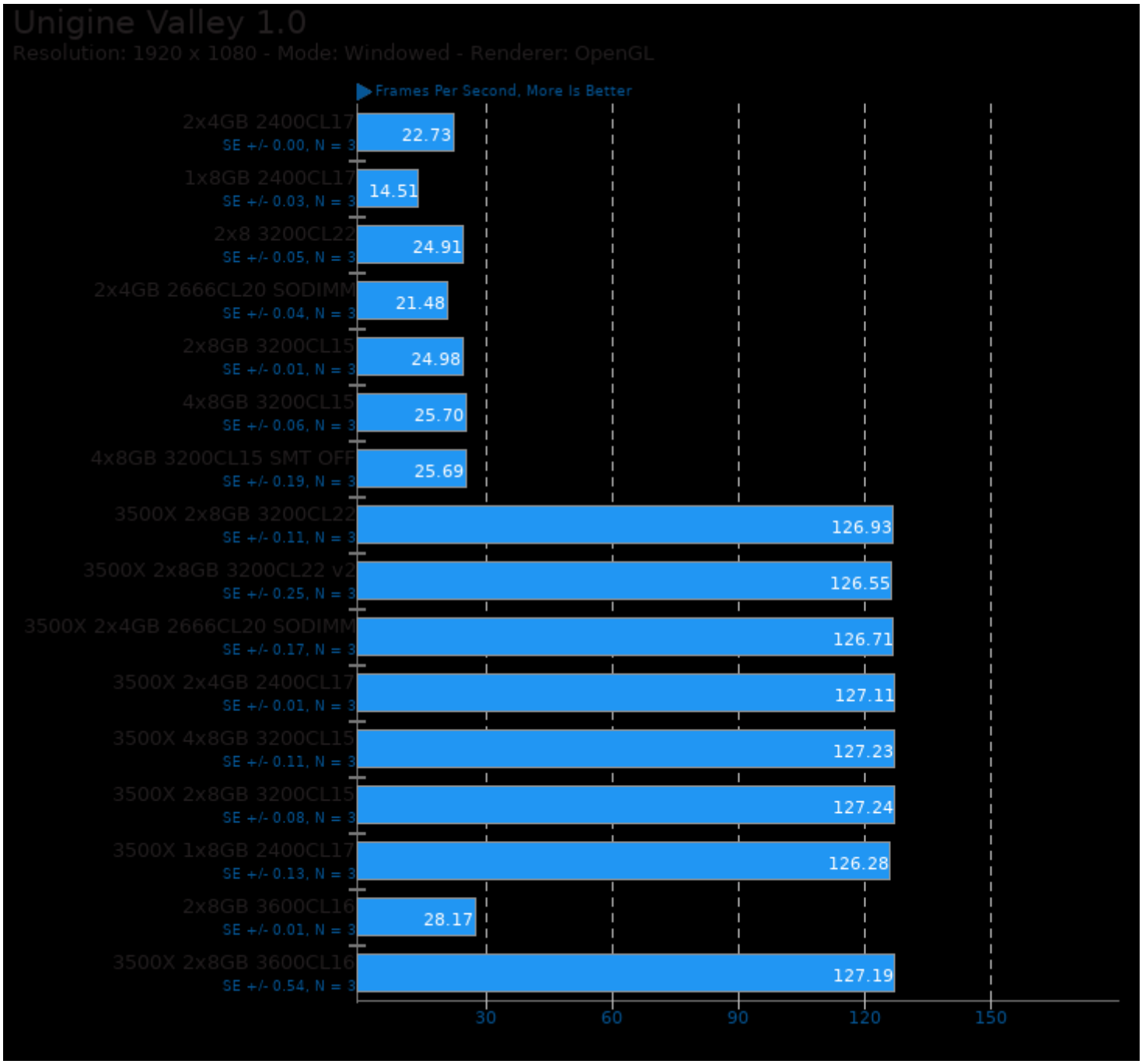
rams


Tesseract 2014-05-12
Resolution: 1920 x 1080
Frames Per Second, More Is Better
2x4GB 2400CL17
SE +/- 0.62, N = 3
121.04
1x8GB 2400CL17
SE +/- 0.14, N = 3
74.42
2x8 3200CL22
SE +/- 0.62, N = 3
138.83
2x4GB 2666CL20 SODIMM
SE +/- 0.40, N = 3
114.46
4x4GB 2666CL20 SODIMM
SE +/- 0.56, N = 3
115.90
2x8GB 3200CL15
SE +/- 0.79, N = 3
142.32
4x8GB 3200CL15
SE +/- 0.36, N = 3
145.96
4x8GB 3200CL15 SMT OFF
SE +/- 0.59, N = 3
152.83
3500X 2x8GB 3200CL22
SE +/- 5.91, N = 3
523.94
3500X 2x8GB 3200CL22 v2
SE +/- 3.87, N = 3
522.63
3500X 2x4GB 2666CL20 SODIMM
SE +/- 3.97, N = 3
522.67
3500X 2x4GB 2400CL17
SE +/- 5.80, N = 4
519.92
3500X 4x8GB 3200CL15
SE +/- 2.34, N = 3
527.50
3500X 2x8GB 3200CL15
SE +/- 6.83, N = 3
520.20
3500X 1x8GB 2400CL17
SE +/- 2.48, N = 3
518.71
2x8GB 3600CL16
SE +/- 1.66, N = 3
192.16
3500X 2x8GB 3600CL16
SE +/- 3.15, N = 3
531.05
110
220
330
440
550

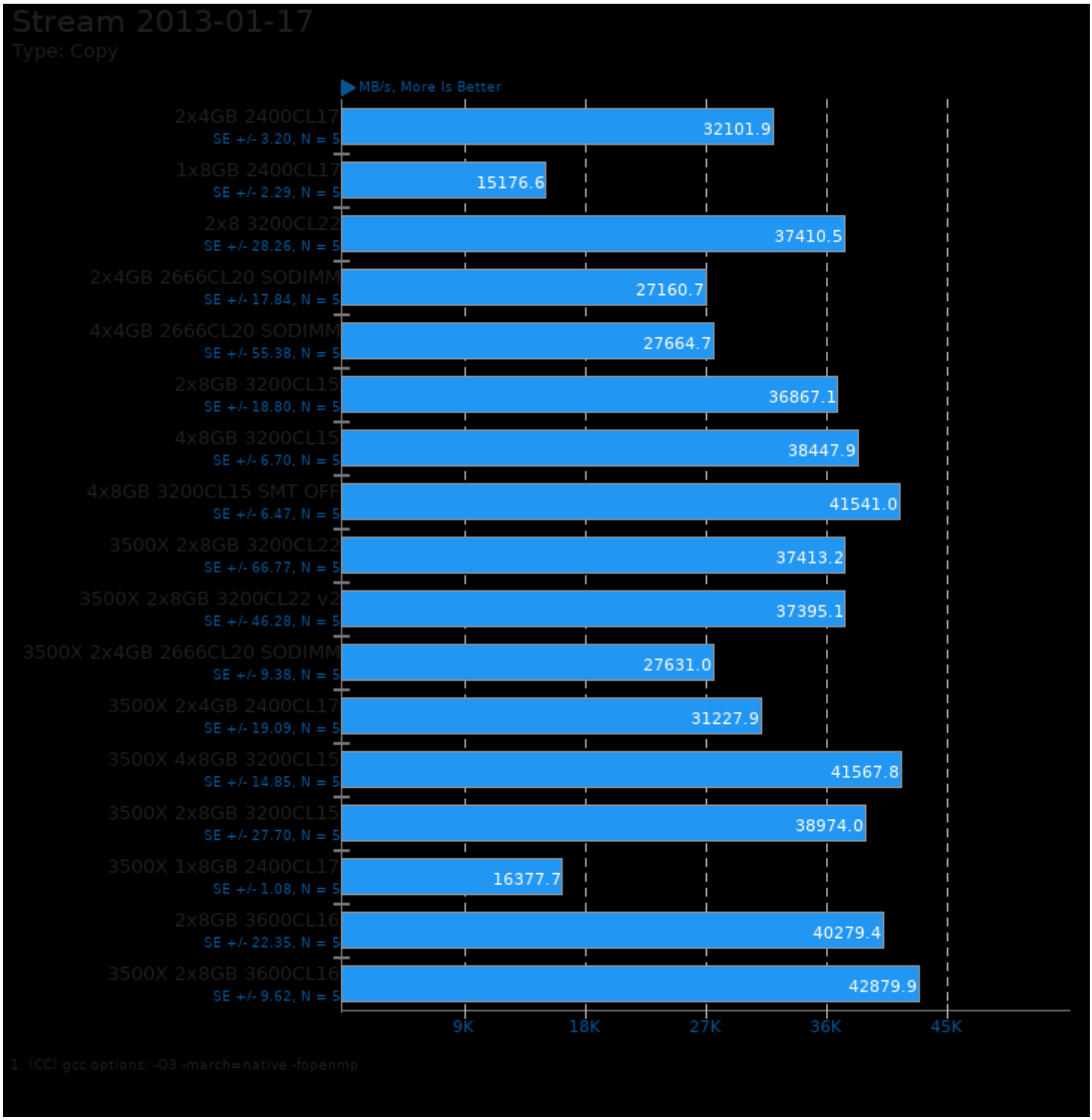
rams


Unigine Superposition 1.0
Resolution: 1920 x 1080 - Mode: Windowed - Quality: Low - Renderer: OpenGL
Frames Per Second, More Is Better
2x4GB 2400CL17
SE +/- 0.12, N = 3
MAX: 36.5
27.9
1x8GB 2400CL17
SE +/- 0.03, N = 3
MAX: 22.1
16.3
2x8 3200CL22
SE +/- 0.07, N = 3
MAX: 41.3
31.6
2x4GB 2666CL20 SODIMM
SE +/- 0.03, N = 3
MAX: 34.6
26.0
2x8GB 3200CL15
SE +/- 0.06, N = 3
MAX: 41.3
31.6
4x8GB 3200CL15
SE +/- 0.03, N = 3
MAX: 42.5
32.7
4x8GB 3200CL15 SMT OFF
SE +/- 0.12, N = 3
MAX: 42.4
33.0
3500X 2x8GB 3200CL22
SE +/- 0.52, N = 3
MAX: 248.3
172.5
3500X 2x8GB 3200CL22 v2
SE +/- 0.27, N = 3
MAX: 240.3
171.5
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.40, N = 3
MAX: 238.4
169.5
3500X 2x4GB 2400CL17
SE +/- 0.06, N = 3
MAX: 244.2
169.0
3500X 4x8GB 3200CL15
SE +/- 0.82, N = 3
MAX: 245.8
172.9
3500X 2x8GB 3200CL15
SE +/- 0.15, N = 3
MAX: 245.3
173.2
3500X 1x8GB 2400CL17
SE +/- 0.34, N = 3
MAX: 235.2
168.6
2x8GB 3600CL16
SE +/- 0.07, N = 3
MAX: 49.8
38.4
3500X 2x8GB 3600CL16
SE +/- 1.35, N = 12
MAX: 249.6
175.2
40
80
120
160
200

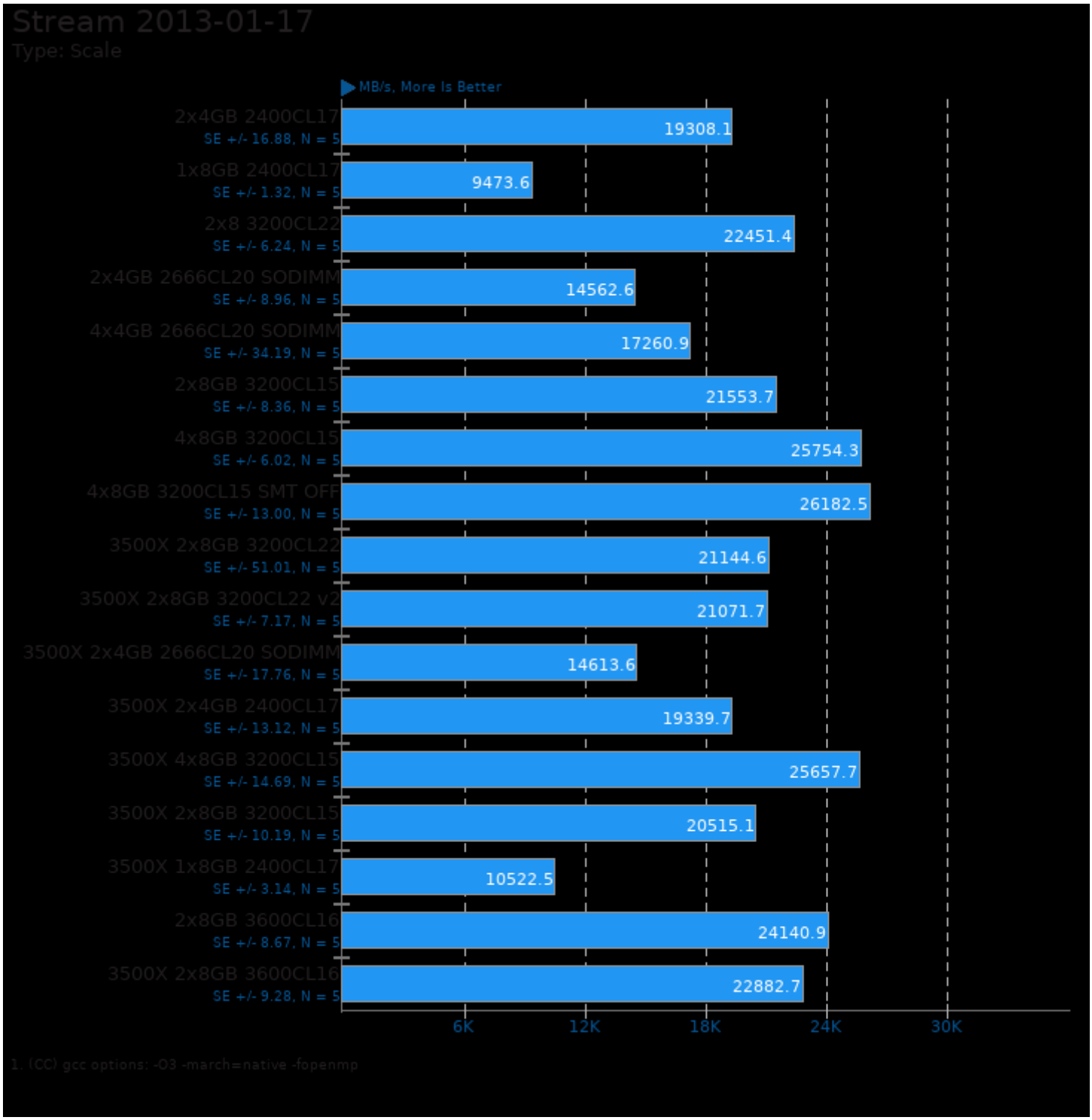
rams


Unigine Valley 1.0
Resolution: 1920 x 1080 - Mode: Windowed - Renderer: OpenGL
Frames Per Second, More Is Better
2x4GB 2400CL17
SE +/- 0.00, N = 3
22.73
1x8GB 2400CL17
SE +/- 0.03, N = 3
14.51
2x8 3200CL22
SE +/- 0.05, N = 3
24.91
2x4GB 2666CL20 SODIMM
SE +/- 0.04, N = 3
21.48
2x8GB 3200CL15
SE +/- 0.01, N = 3
24.98
4x8GB 3200CL15
SE +/- 0.06, N = 3
25.70
4x8GB 3200CL15 SMT OFF
SE +/- 0.19, N = 3
25.69
3500X 2x8GB 3200CL22
SE +/- 0.11, N = 3
126.93
3500X 2x8GB 3200CL22 v2
SE +/- 0.25, N = 3
126.55
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.17, N = 3
126.71
3500X 2x4GB 2400CL17
SE +/- 0.01, N = 3
127.11
3500X 4x8GB 3200CL15
SE +/- 0.11, N = 3
127.23
3500X 2x8GB 3200CL15
SE +/- 0.08, N = 3
127.24
3500X 1x8GB 2400CL17
SE +/- 0.13, N = 3
126.28
2x8GB 3600CL16
SE +/- 0.01, N = 3
28.17
3500X 2x8GB 3600CL16
SE +/- 0.54, N = 3
127.19
30
60
90
120
150

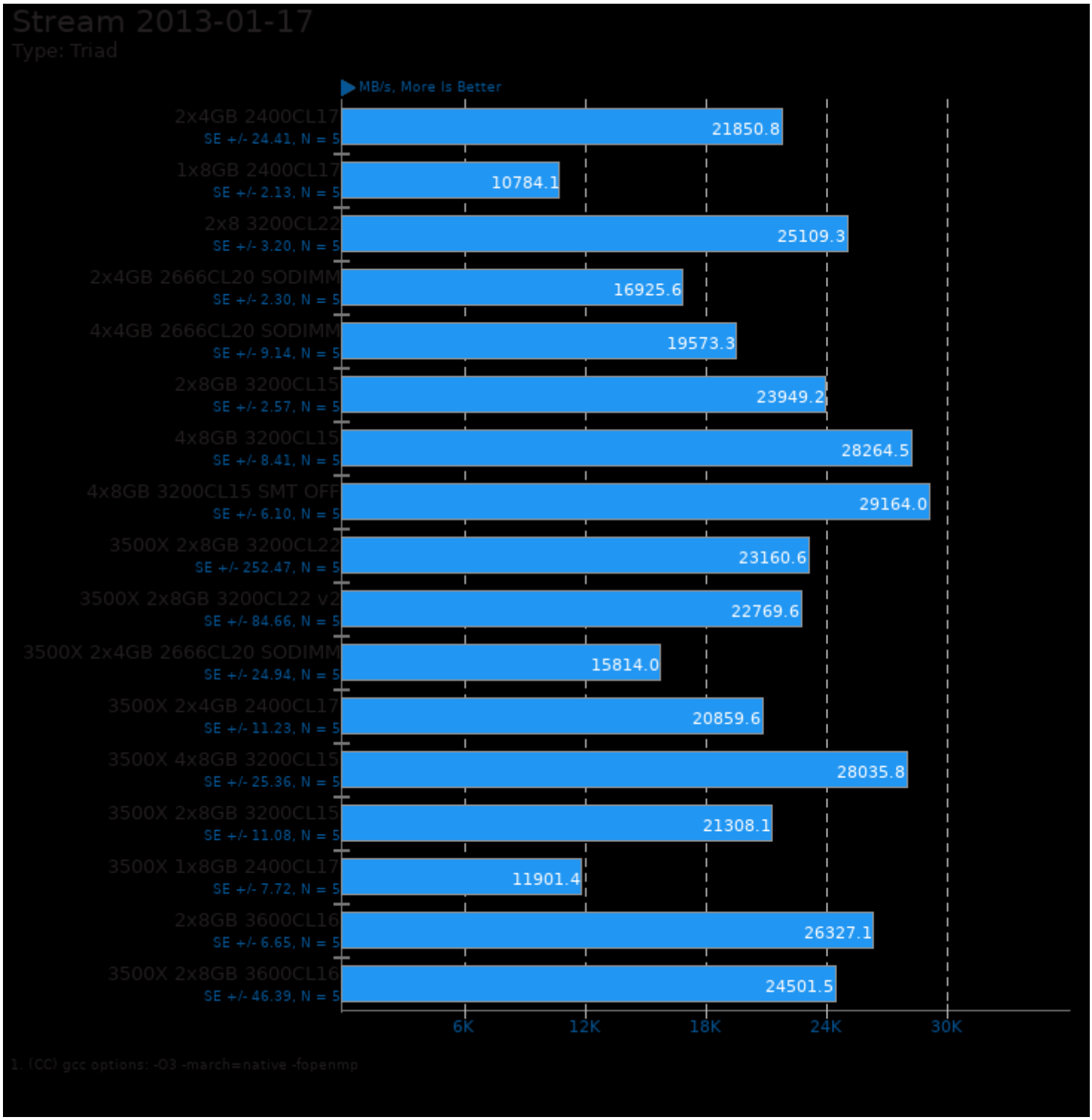
rams


Stream 2013-01-17
Type: Copy
MB/s, More Is Better
2x4GB 2400CL17
SE +/- 3.20, N = 5
32101.9
1x8GB 2400CL17
SE +/- 2.29, N = 5
15176.6
2x8 3200CL22
SE +/- 28.26, N = 5
37410.5
2x4GB 2666CL20 SODIMM
SE +/- 17.84, N = 5
27160.7
4x4GB 2666CL20 SODIMM
SE +/- 55.38, N = 5
27664.7
2x8GB 3200CL15
SE +/- 18.80, N = 5
36867.1
4x8GB 3200CL15
SE +/- 6.70, N = 5
38447.9
4x8GB 3200CL15 SMT OFF
SE +/- 6.47, N = 5
41541.0
3500X 2x8GB 3200CL22
SE +/- 66.77, N = 5
37413.2
3500X 2x8GB 3200CL22 v2
SE +/- 46.28, N = 5
37395.1
3500X 2x4GB 2666CL20 SODIMM
SE +/- 9.38, N = 5
27631.0
3500X 2x4GB 2400CL17
SE +/- 19.09, N = 5
31227.9
3500X 4x8GB 3200CL15
SE +/- 14.85, N = 5
41567.8
3500X 2x8GB 3200CL15
SE +/- 27.70, N = 5
38974.0
3500X 1x8GB 2400CL17
SE +/- 1.08, N = 5
16377.7
2x8GB 3600CL16
SE +/- 22.35, N = 5
40279.4
3500X 2x8GB 3600CL16
SE +/- 9.62, N = 5
42879.9
9K
18K
27K
36K
45K
1. (CC) gcc options: -O3 -march=native -fopenmp

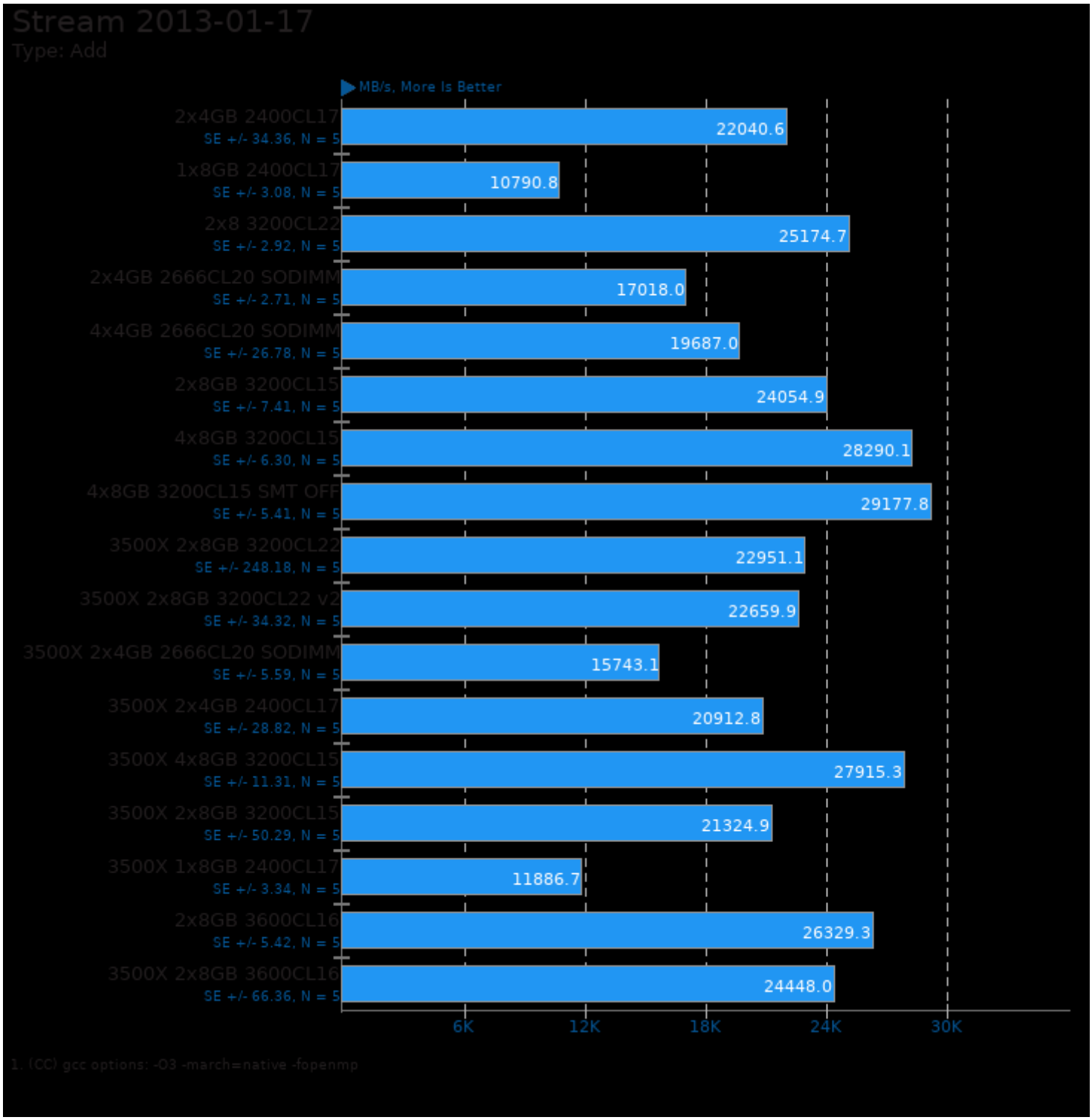
rams


Stream 2013-01-17
Type: Scale
MB/s, More Is Better
2x4GB 2400CL17
SE +/- 16.88, N = 5
19308.1
1x8GB 2400CL17
SE +/- 1.32, N = 5
9473.6
2x8 3200CL22
SE +/- 6.24, N = 5
22451.4
2x4GB 2666CL20 SODIMM
SE +/- 8.96, N = 5
14562.6
4x4GB 2666CL20 SODIMM
SE +/- 34.19, N = 5
17260.9
2x8GB 3200CL15
SE +/- 8.36, N = 5
21553.7
4x8GB 3200CL15
SE +/- 6.02, N = 5
25754.3
4x8GB 3200CL15 SMT OFF
SE +/- 13.00, N = 5
26182.5
3500X 2x8GB 3200CL22
SE +/- 51.01, N = 5
21144.6
3500X 2x8GB 3200CL22 v2
SE +/- 7.17, N = 5
21071.7
3500X 2x4GB 2666CL20 SODIMM
SE +/- 17.76, N = 5
14613.6
3500X 2x4GB 2400CL17
SE +/- 13.12, N = 5
19339.7
3500X 4x8GB 3200CL15
SE +/- 14.69, N = 5
25657.7
3500X 2x8GB 3200CL15
SE +/- 10.19, N = 5
20515.1
3500X 1x8GB 2400CL17
SE +/- 3.14, N = 5
10522.5
2x8GB 3600CL16
SE +/- 8.67, N = 5
24140.9
3500X 2x8GB 3600CL16
SE +/- 9.28, N = 5
22882.7
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native -fopenmp

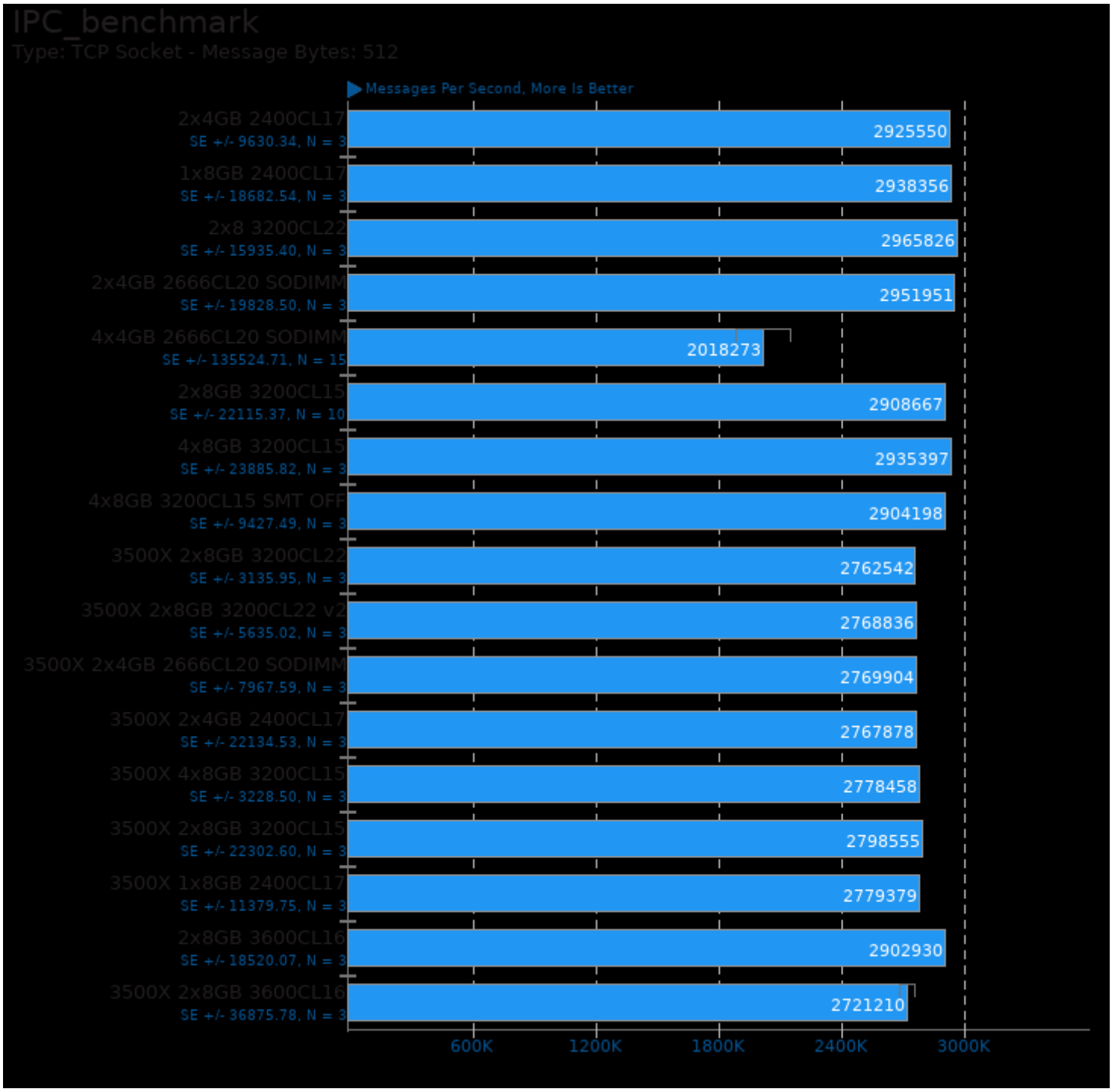
rams


Stream 2013-01-17
Type: Triad
MB/s, More Is Better
2x4GB 2400CL17
SE +/- 24.41, N = 5
21850.8
1x8GB 2400CL17
SE +/- 2.13, N = 5
10784.1
2x8 3200CL22
SE +/- 3.20, N = 5
25109.3
2x4GB 2666CL20 SODIMM
SE +/- 2.30, N = 5
16925.6
4x4GB 2666CL20 SODIMM
SE +/- 9.14, N = 5
19573.3
2x8GB 3200CL15
SE +/- 2.57, N = 5
23949.2
4x8GB 3200CL15
SE +/- 8.41, N = 5
28264.5
4x8GB 3200CL15 SMT OFF
SE +/- 6.10, N = 5
29164.0
3500X 2x8GB 3200CL22
SE +/- 252.47, N = 5
23160.6
3500X 2x8GB 3200CL22 v2
SE +/- 84.66, N = 5
22769.6
3500X 2x4GB 2666CL20 SODIMM
SE +/- 24.94, N = 5
15814.0
3500X 2x4GB 2400CL17
SE +/- 11.23, N = 5
20859.6
3500X 4x8GB 3200CL15
SE +/- 25.36, N = 5
28035.8
3500X 2x8GB 3200CL15
SE +/- 11.08, N = 5
21308.1
3500X 1x8GB 2400CL17
SE +/- 7.72, N = 5
11901.4
2x8GB 3600CL16
SE +/- 6.65, N = 5
26327.1
3500X 2x8GB 3600CL16
SE +/- 46.39, N = 5
24501.5
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native -fopenmp

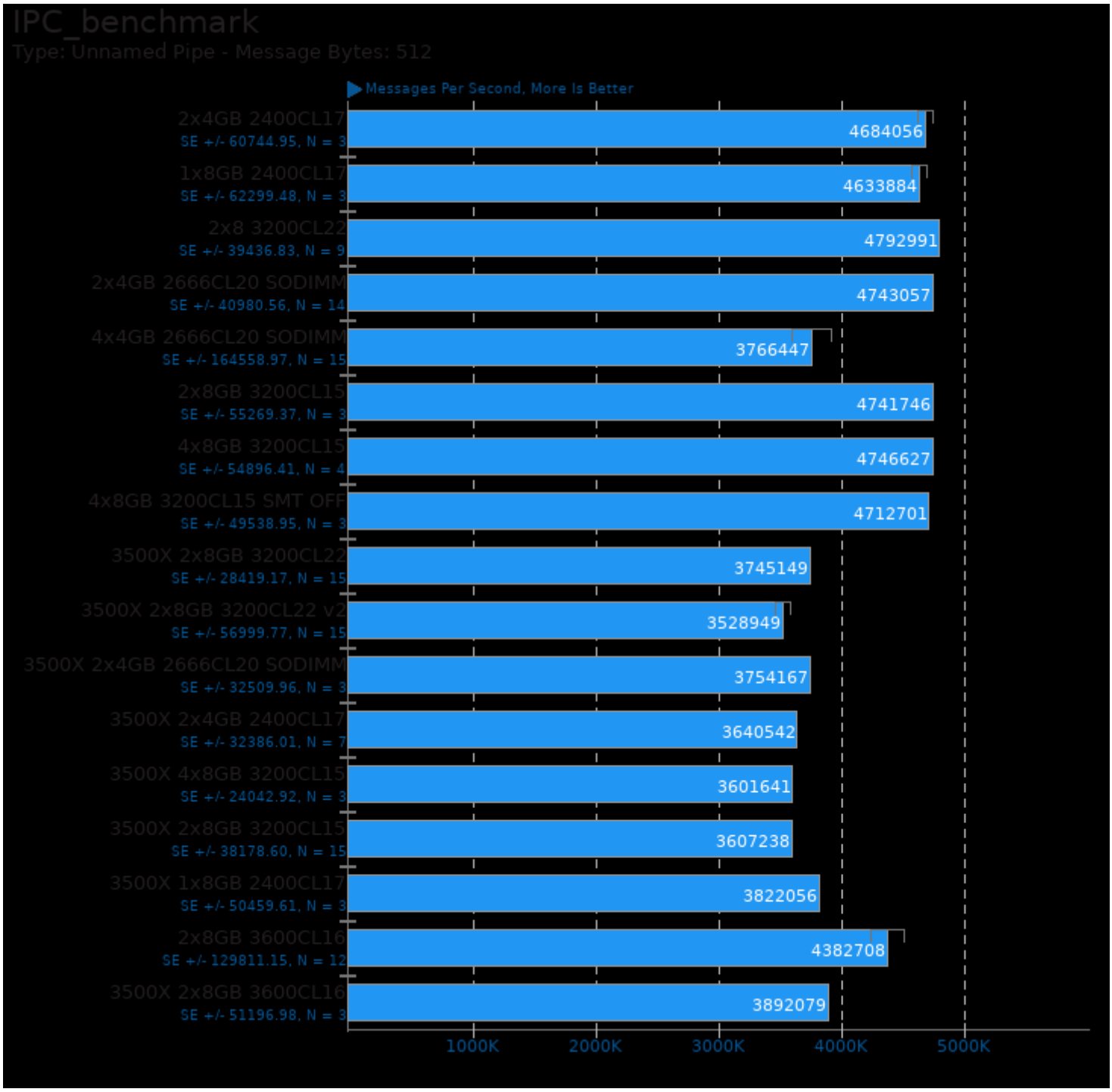
rams


Stream 2013-01-17
Type: Add
MB/s, More Is Better
2x4GB 2400CL17
SE +/- 34.36, N = 5
22040.6
1x8GB 2400CL17
SE +/- 3.08, N = 5
10790.8
2x8 3200CL22
SE +/- 2.92, N = 5
25174.7
2x4GB 2666CL20 SODIMM
SE +/- 2.71, N = 5
17018.0
4x4GB 2666CL20 SODIMM
SE +/- 26.78, N = 5
19687.0
2x8GB 3200CL15
SE +/- 7.41, N = 5
24054.9
4x8GB 3200CL15
SE +/- 6.30, N = 5
28290.1
4x8GB 3200CL15 SMT OFF
SE +/- 5.41, N = 5
29177.8
3500X 2x8GB 3200CL22
SE +/- 248.18, N = 5
22951.1
3500X 2x8GB 3200CL22 v2
SE +/- 34.32, N = 5
22659.9
3500X 2x4GB 2666CL20 SODIMM
SE +/- 5.59, N = 5
15743.1
3500X 2x4GB 2400CL17
SE +/- 28.82, N = 5
20912.8
3500X 4x8GB 3200CL15
SE +/- 11.31, N = 5
27915.3
3500X 2x8GB 3200CL15
SE +/- 50.29, N = 5
21324.9
3500X 1x8GB 2400CL17
SE +/- 3.34, N = 5
11886.7
2x8GB 3600CL16
SE +/- 5.42, N = 5
26329.3
3500X 2x8GB 3600CL16
SE +/- 66.36, N = 5
24448.0
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native -fopenmp

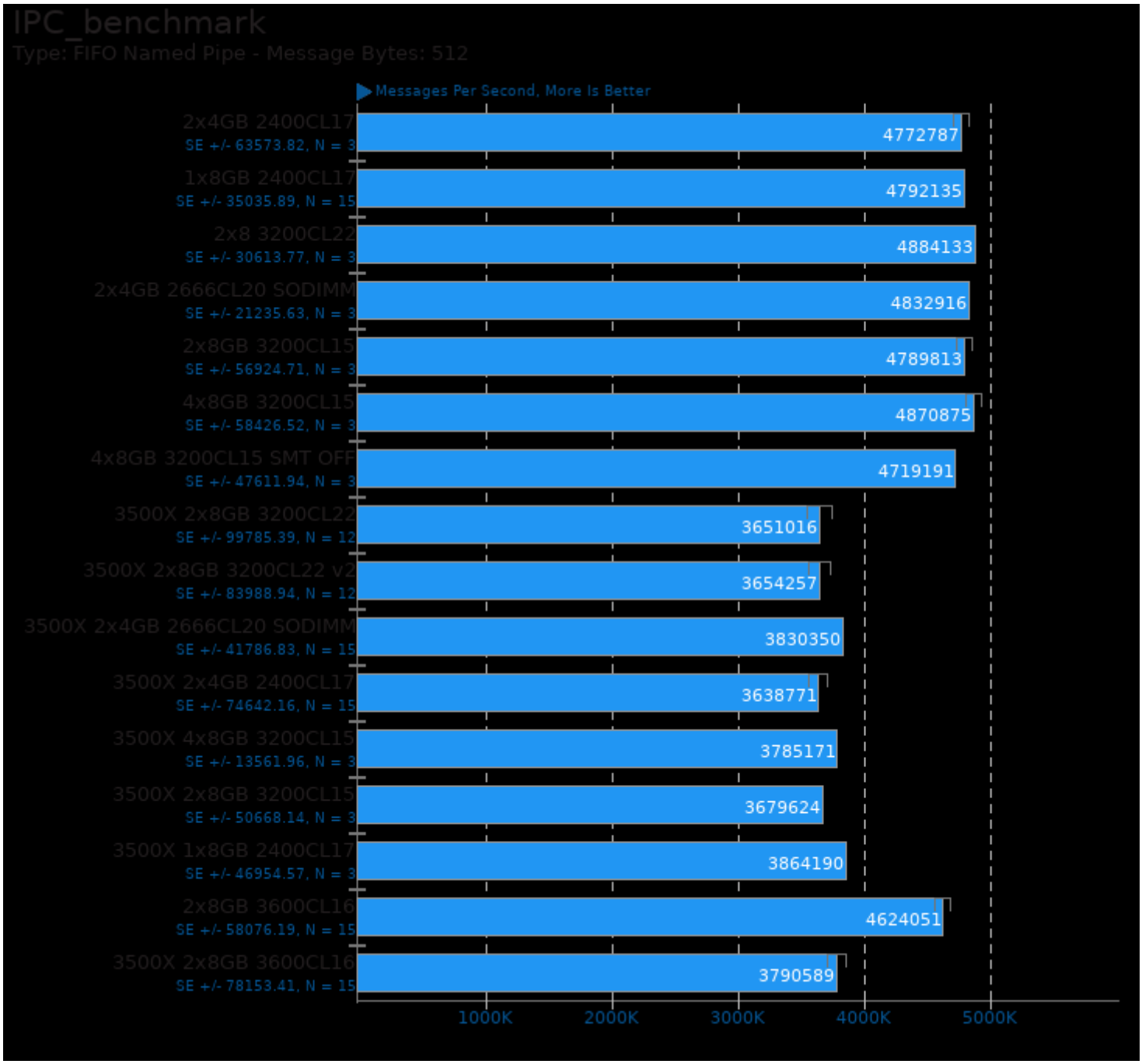
rams


IPC_benchmark
Type: TCP Socket - Message Bytes: 512
Messages Per Second, More Is Better
2x4GB 2400CL17
SE +/- 9630.34, N = 3
2925550
1x8GB 2400CL17
SE +/- 18682.54, N = 3
2938356
2x8 3200CL22
SE +/- 15935.40, N = 3
2965826
2x4GB 2666CL20 SODIMM
SE +/- 19828.50, N = 3
2951951
4x4GB 2666CL20 SODIMM
SE +/- 135524.71, N = 15
2018273
2x8GB 3200CL15
SE +/- 22115.37, N = 10
2908667
4x8GB 3200CL15
SE +/- 23885.82, N = 3
2935397
4x8GB 3200CL15 SMT OFF
SE +/- 9427.49, N = 3
2904198
3500X 2x8GB 3200CL22
SE +/- 3135.95, N = 3
2762542
3500X 2x8GB 3200CL22 v2
SE +/- 5635.02, N = 3
2768836
3500X 2x4GB 2666CL20 SODIMM
SE +/- 7967.59, N = 3
2769904
3500X 2x4GB 2400CL17
SE +/- 22134.53, N = 3
2767878
3500X 4x8GB 3200CL15
SE +/- 3228.50, N = 3
2778458
3500X 2x8GB 3200CL15
SE +/- 22302.60, N = 3
2798555
3500X 1x8GB 2400CL17
SE +/- 11379.75, N = 3
2779379
2x8GB 3600CL16
SE +/- 18520.07, N = 3
2902930
3500X 2x8GB 3600CL16
SE +/- 36875.78, N = 3
2721210
600K
1200K
1800K
2400K
3000K

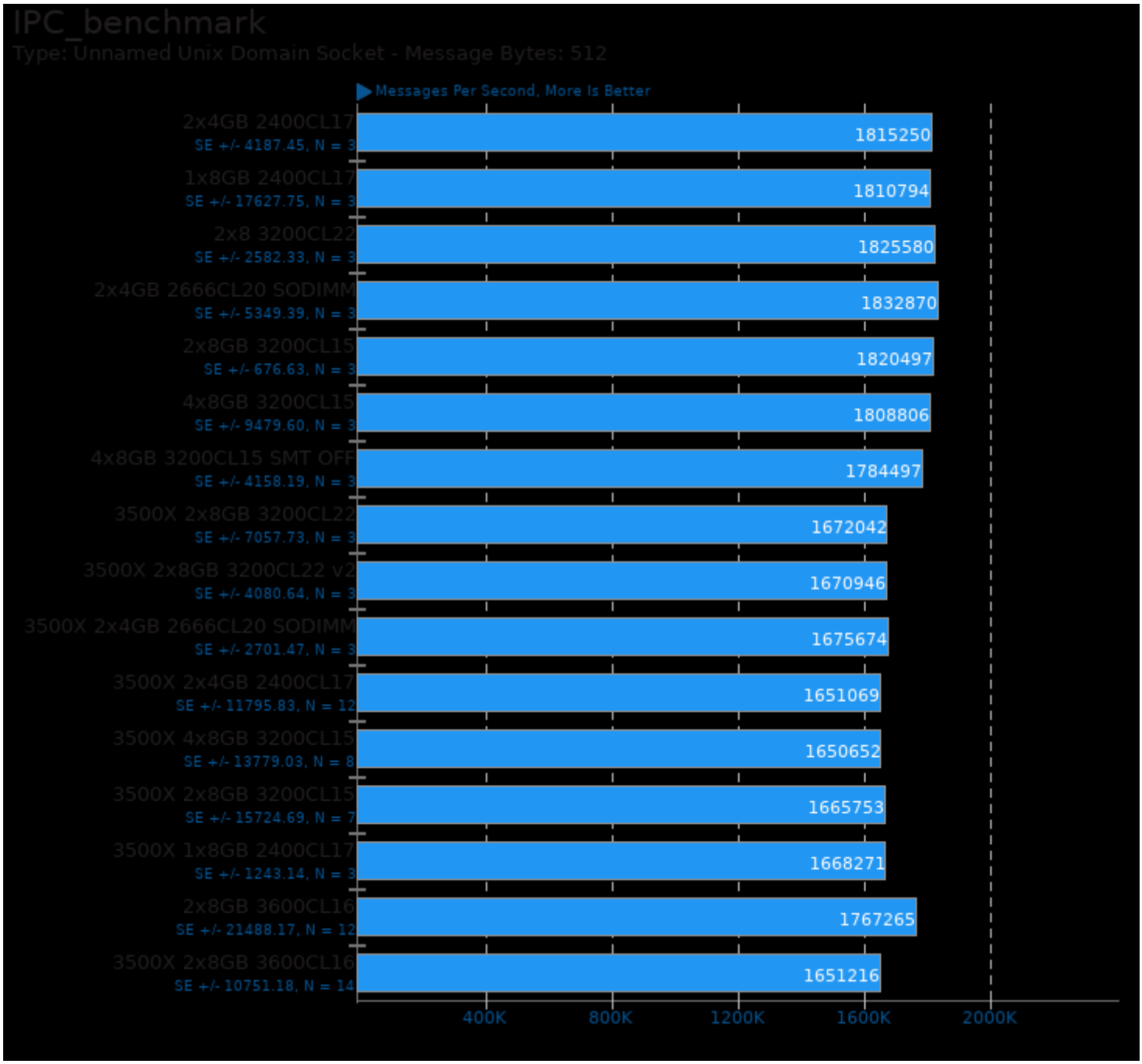
rams

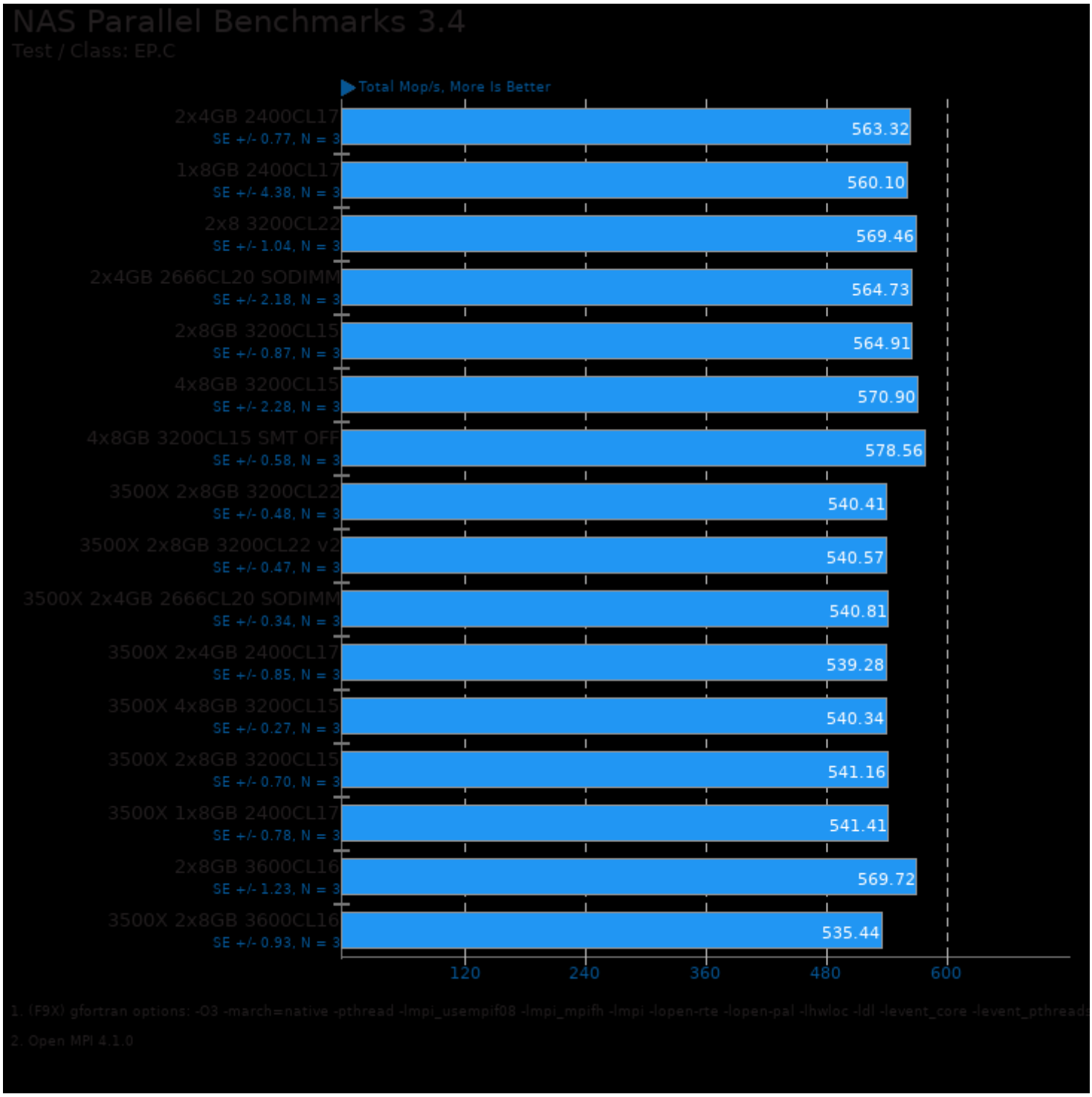

IPC_benchmark
Type: Unnamed Pipe - Message Bytes: 512
Messages Per Second, More Is Better
2x4GB 2400CL17
SE +/- 60744.95, N = 3
4684056
1x8GB 2400CL17
SE +/- 62299.48, N = 3
4633884
2x8 3200CL22
SE +/- 39436.83, N = 9
4792991
2x4GB 2666CL20 SODIMM
SE +/- 40980.56, N = 14
4743057
4x4GB 2666CL20 SODIMM
SE +/- 164558.97, N = 15
3766447
2x8GB 3200CL15
SE +/- 55269.37, N = 3
4741746
4x8GB 3200CL15
SE +/- 54896.41, N = 4
4746627
4x8GB 3200CL15 SMT OFF
SE +/- 49538.95, N = 3
4712701
3500X 2x8GB 3200CL22
SE +/- 28419.17, N = 15
3745149
3500X 2x8GB 3200CL22 v2
SE +/- 56999.77, N = 15
3528949
3500X 2x4GB 2666CL20 SODIMM
SE +/- 32509.96, N = 3
3754167
3500X 2x4GB 2400CL17
SE +/- 32386.01, N = 7
3640542
3500X 4x8GB 3200CL15
SE +/- 24042.92, N = 3
3601641
3500X 2x8GB 3200CL15
SE +/- 38178.60, N = 15
3607238
3500X 1x8GB 2400CL17
SE +/- 50459.61, N = 3
3822056
2x8GB 3600CL16
SE +/- 129811.15, N = 12
4382708
3500X 2x8GB 3600CL16
SE +/- 51196.98, N = 3
3892079
1000K
2000K
3000K
4000K
5000K

rams

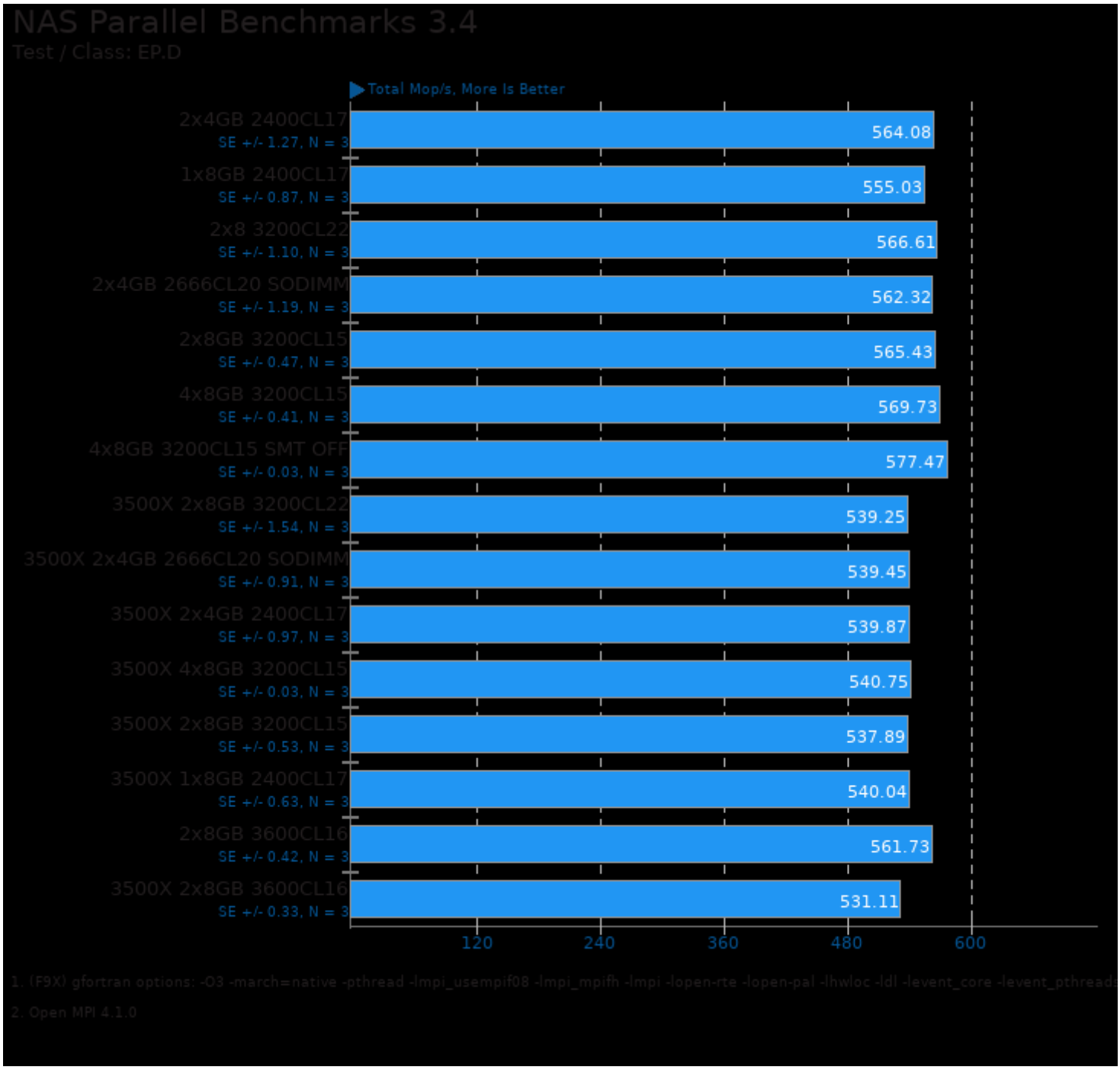

IPC_benchmark
Type: FIFO Named Pipe - Message Bytes: 512
Messages Per Second, More Is Better
2x4GB 2400CL17
SE +/- 63573.82, N = 3
4772787
1x8GB 2400CL17
SE +/- 35035.89, N = 15
4792135
2x8 3200CL22
SE +/- 30613.77, N = 3
4884133
2x4GB 2666CL20 SODIMM
SE +/- 21235.63, N = 3
4832916
2x8GB 3200CL15
SE +/- 56924.71, N = 3
4789813
4x8GB 3200CL15
SE +/- 58426.52, N = 3
4870875
4x8GB 3200CL15 SMT OFF
SE +/- 47611.94, N = 3
4719191
3500X 2x8GB 3200CL22
SE +/- 99785.39, N = 12
3651016
3500X 2x8GB 3200CL22 v2
SE +/- 83988.94, N = 12
3654257
3500X 2x4GB 2666CL20 SODIMM
SE +/- 41786.83, N = 15
3830350
3500X 2x4GB 2400CL17
SE +/- 74642.16, N = 15
3638771
3500X 4x8GB 3200CL15
SE +/- 13561.96, N = 3
3785171
3500X 2x8GB 3200CL15
SE +/- 50668.14, N = 3
3679624
3500X 1x8GB 2400CL17
SE +/- 46954.57, N = 3
3864190
2x8GB 3600CL16
SE +/- 58076.19, N = 15
4624051
3500X 2x8GB 3600CL16
SE +/- 78153.41, N = 15
3790589
1000K
2000K
3000K
4000K
5000K

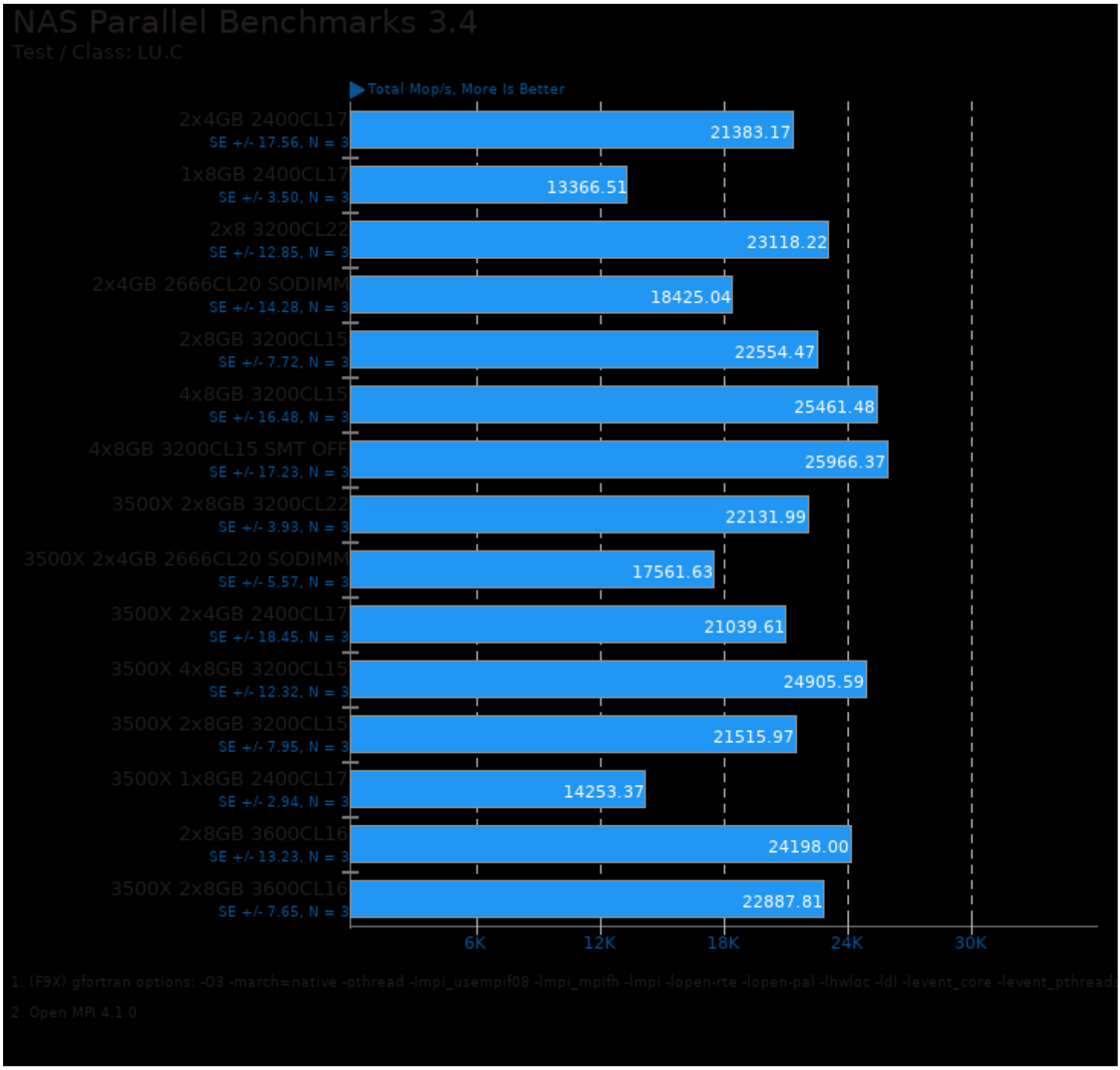
rams

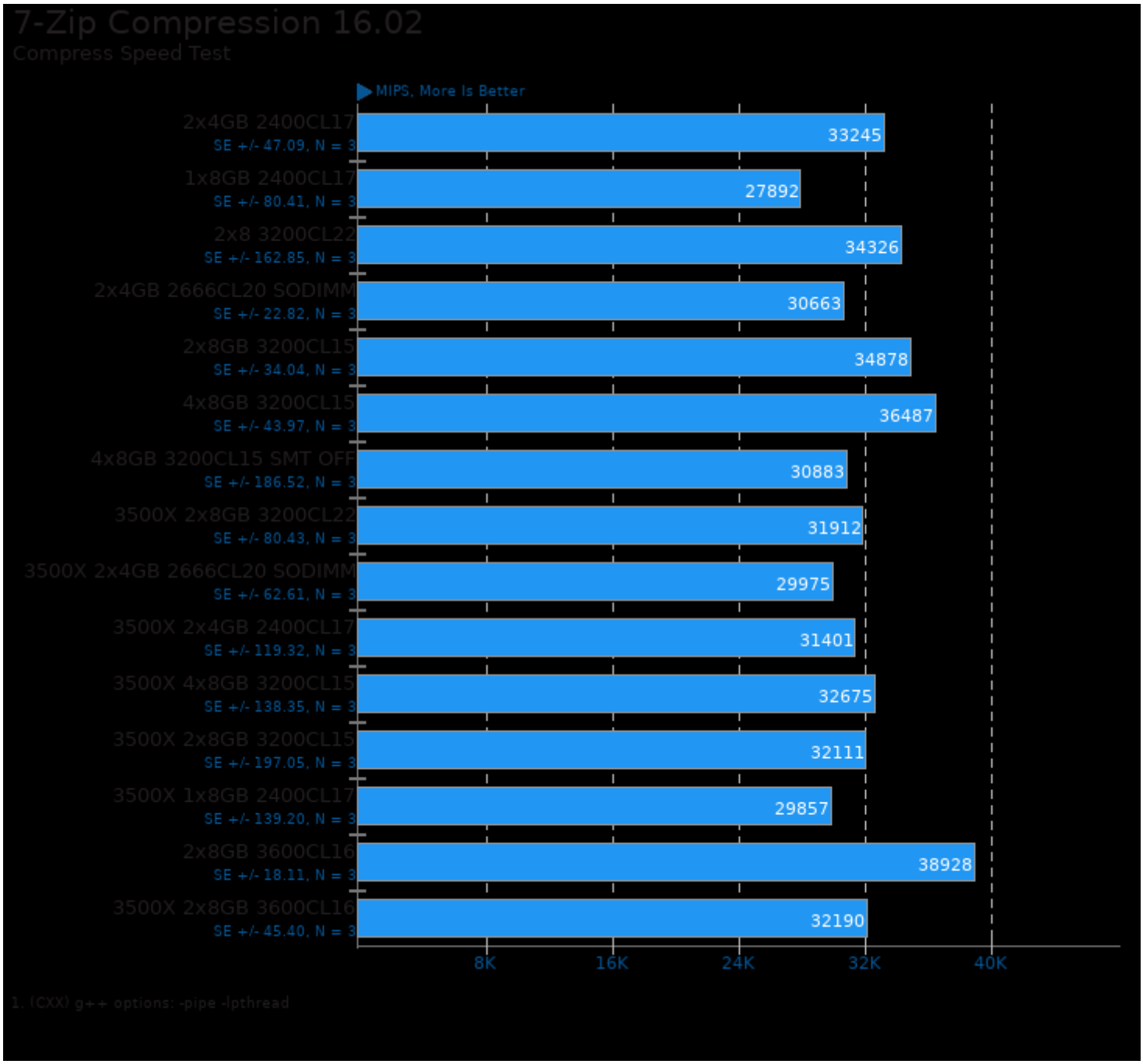

IPC_benchmark
Type: Unnamed Unix Domain Socket - Message Bytes: 512
Messages Per Second, More Is Better
2x4GB 2400CL17
SE +/- 4187.45, N = 3
1815250
1x8GB 2400CL17
SE +/- 17627.75, N = 3
1810794
2x8 3200CL22
SE +/- 2582.33, N = 3
1825580
2x4GB 2666CL20 SODIMM
SE +/- 5349.39, N = 3
1832870
2x8GB 3200CL15
SE +/- 676.63, N = 3
1820497
4x8GB 3200CL15
SE +/- 9479.60, N = 3
1808806
4x8GB 3200CL15 SMT OFF
SE +/- 4158.19, N = 3
1784497
3500X 2x8GB 3200CL22
SE +/- 7057.73, N = 3
1672042
3500X 2x8GB 3200CL22 v2
SE +/- 4080.64, N = 3
1670946
3500X 2x4GB 2666CL20 SODIMM
SE +/- 2701.47, N = 3
1675674
3500X 2x4GB 2400CL17
SE +/- 11795.83, N = 12
1651069
3500X 4x8GB 3200CL15
SE +/- 13779.03, N = 8
1650652
3500X 2x8GB 3200CL15
SE +/- 15724.69, N = 7
1665753
3500X 1x8GB 2400CL17
SE +/- 1243.14, N = 3
1668271
2x8GB 3600CL16
SE +/- 21488.17, N = 12
1767265
3500X 2x8GB 3600CL16
SE +/- 10751.18, N = 14
1651216
400K
800K
1200K
1600K
2000K


NAS Parallel Benchmarks 3.4
Test / Class: EP.C
Total Mop/s, More Is Better
2x4GB 2400CL17
SE +/- 0.77, N = 3
563.32
1x8GB 2400CL17
SE +/- 4.38, N = 3
560.10
2x8 3200CL22
SE +/- 1.04, N = 3
569.46
2x4GB 2666CL20 SODIMM
SE +/- 2.18, N = 3
564.73
2x8GB 3200CL15
SE +/- 0.87, N = 3
564.91
4x8GB 3200CL15
SE +/- 2.28, N = 3
570.90
4x8GB 3200CL15 SMT OFF
SE +/- 0.58, N = 3
578.56
3500X 2x8GB 3200CL22
SE +/- 0.48, N = 3
540.41
3500X 2x8GB 3200CL22 v2
SE +/- 0.47, N = 3
540.57
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.34, N = 3
540.81
3500X 2x4GB 2400CL17
SE +/- 0.85, N = 3
539.28
3500X 4x8GB 3200CL15
SE +/- 0.27, N = 3
540.34
3500X 2x8GB 3200CL15
SE +/- 0.70, N = 3
541.16
3500X 1x8GB 2400CL17
SE +/- 0.78, N = 3
541.41
2x8GB 3600CL16
SE +/- 1.23, N = 3
569.72
3500X 2x8GB 3600CL16
SE +/- 0.93, N = 3
535.44
120
240
360
480
600
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwloc -ldl -levent_core -levent_pthread
2. Open MPI 4.1.0

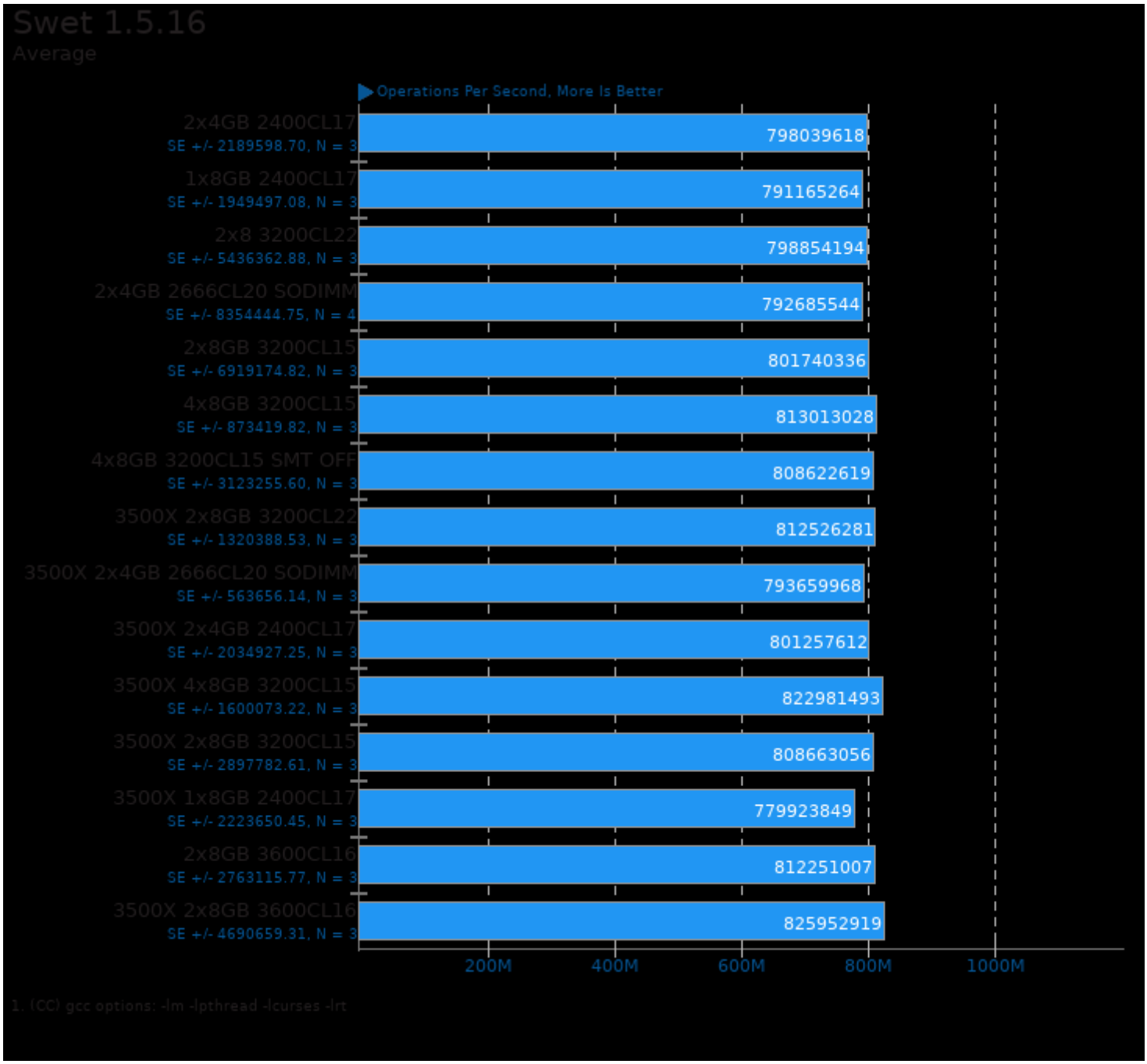
rams

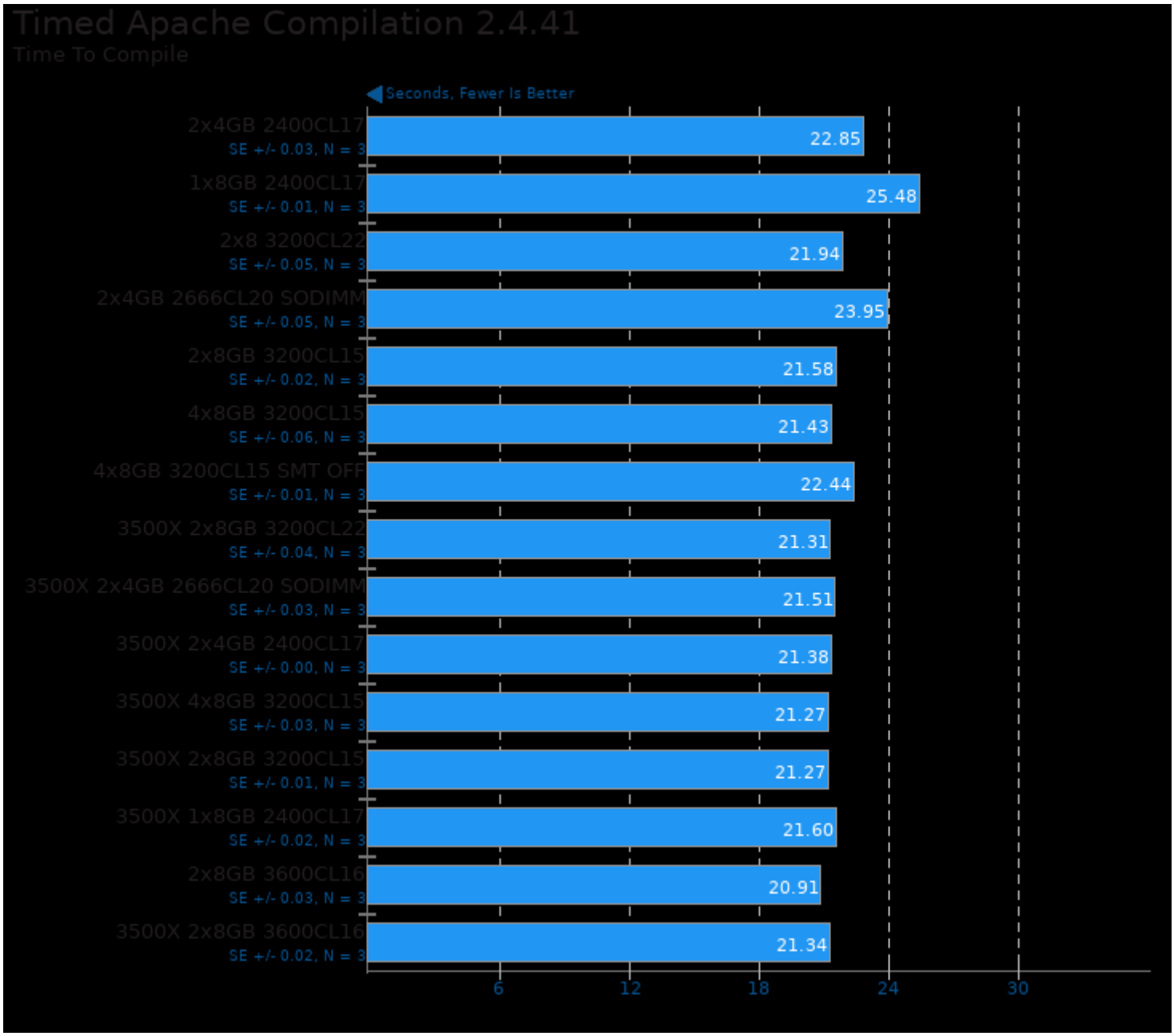

NAS Parallel Benchmarks 3.4
Test / Class: EP.D
Total Mop/s, More Is Better
2x4GB 2400CL17
SE +/- 1.27, N = 3
564.08
1x8GB 2400CL17
SE +/- 0.87, N = 3
555.03
2x8 3200CL22
SE +/- 1.10, N = 3
566.61
2x4GB 2666CL20 SODIMM
SE +/- 1.19, N = 3
562.32
2x8GB 3200CL15
SE +/- 0.47, N = 3
565.43
4x8GB 3200CL15
SE +/- 0.41, N = 3
569.73
4x8GB 3200CL15 SMT OFF
SE +/- 0.03, N = 3
577.47
3500X 2x8GB 3200CL22
SE +/- 1.54, N = 3
539.25
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.91, N = 3
539.45
3500X 2x4GB 2400CL17
SE +/- 0.97, N = 3
539.87
3500X 4x8GB 3200CL15
SE +/- 0.03, N = 3
540.75
3500X 2x8GB 3200CL15
SE +/- 0.53, N = 3
537.89
3500X 1x8GB 2400CL17
SE +/- 0.63, N = 3
540.04
2x8GB 3600CL16
SE +/- 0.42, N = 3
561.73
3500X 2x8GB 3600CL16
SE +/- 0.33, N = 3
531.11
120
240
360
480
600
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwloc -ldl -levent_core -levent_pthread
2. Open MPI 4.1.0

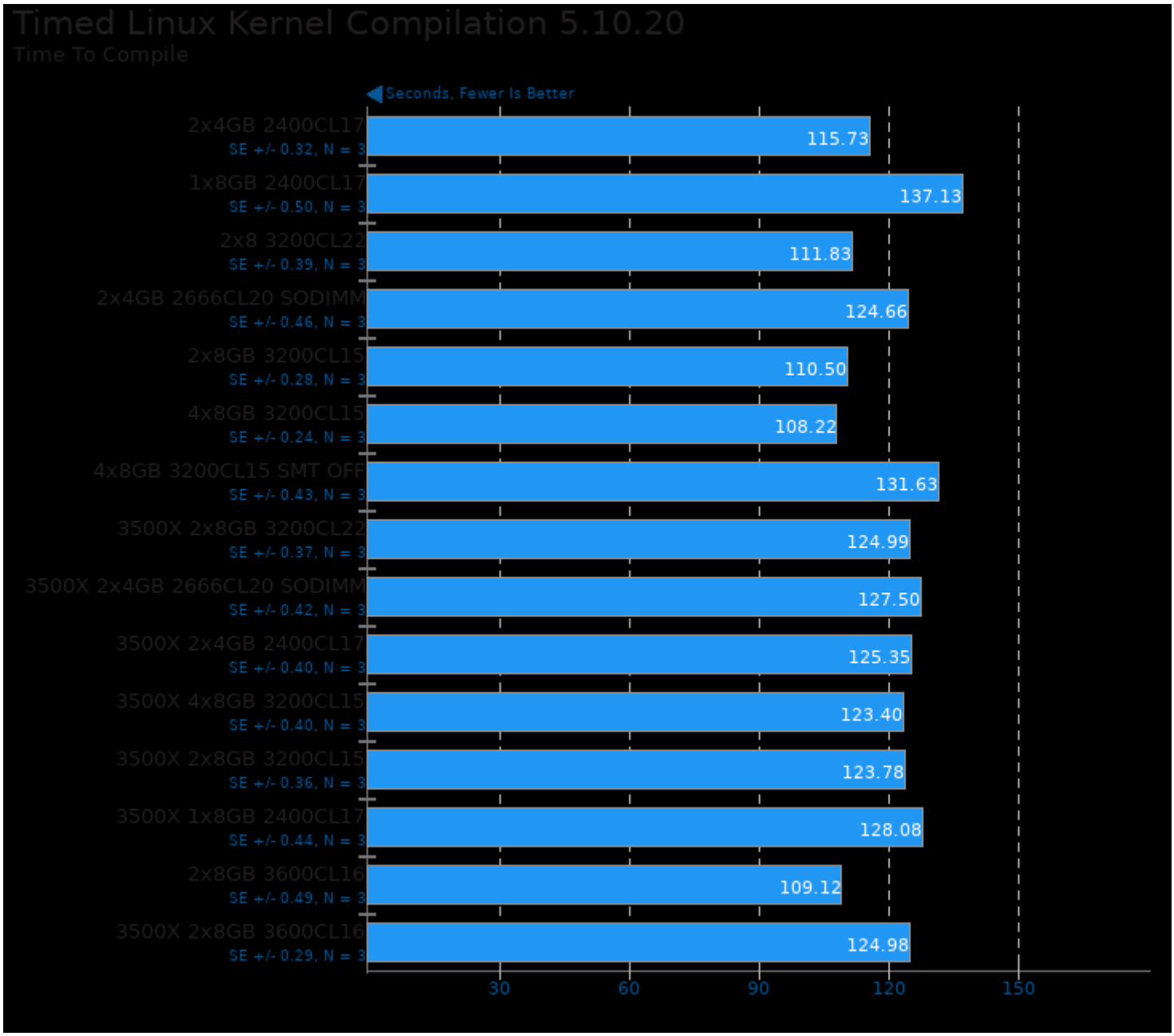

NAS Parallel Benchmarks 3.4
Test / Class: LU.C
Total Mop/s, More Is Better
2x4GB 2400CL17
SE +/- 17.56, N = 3
21383.17
1x8GB 2400CL17
SE +/- 3.50, N = 3
13366.51
2x8 3200CL22
SE +/- 12.85, N = 3
23118.22
2x4GB 2666CL20 SODIMM
SE +/- 14.28, N = 3
18425.04
2x8GB 3200CL15
SE +/- 7.72, N = 3
22554.47
4x8GB 3200CL15
SE +/- 16.48, N = 3
25461.48
4x8GB 3200CL15 SMT OFF
SE +/- 17.23, N = 3
25966.37
3500X 2x8GB 3200CL22
SE +/- 3.93, N = 3
22131.99
3500X 2x4GB 2666CL20 SODIMM
SE +/- 5.57, N = 3
17561.63
3500X 2x4GB 2400CL17
SE +/- 18.45, N = 3
21039.61
3500X 4x8GB 3200CL15
SE +/- 12.32, N = 3
24905.59
3500X 2x8GB 3200CL15
SE +/- 7.95, N = 3
21515.97
3500X 1x8GB 2400CL17
SE +/- 2.94, N = 3
14253.37
2x8GB 3600CL16
SE +/- 13.23, N = 3
24198.00
3500X 2x8GB 3600CL16
SE +/- 7.65, N = 3
22887.81
6K
12K
18K
24K
30K
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwloc -ldl -levent_core -levent_pthread
2. Open MPI 4.1.0

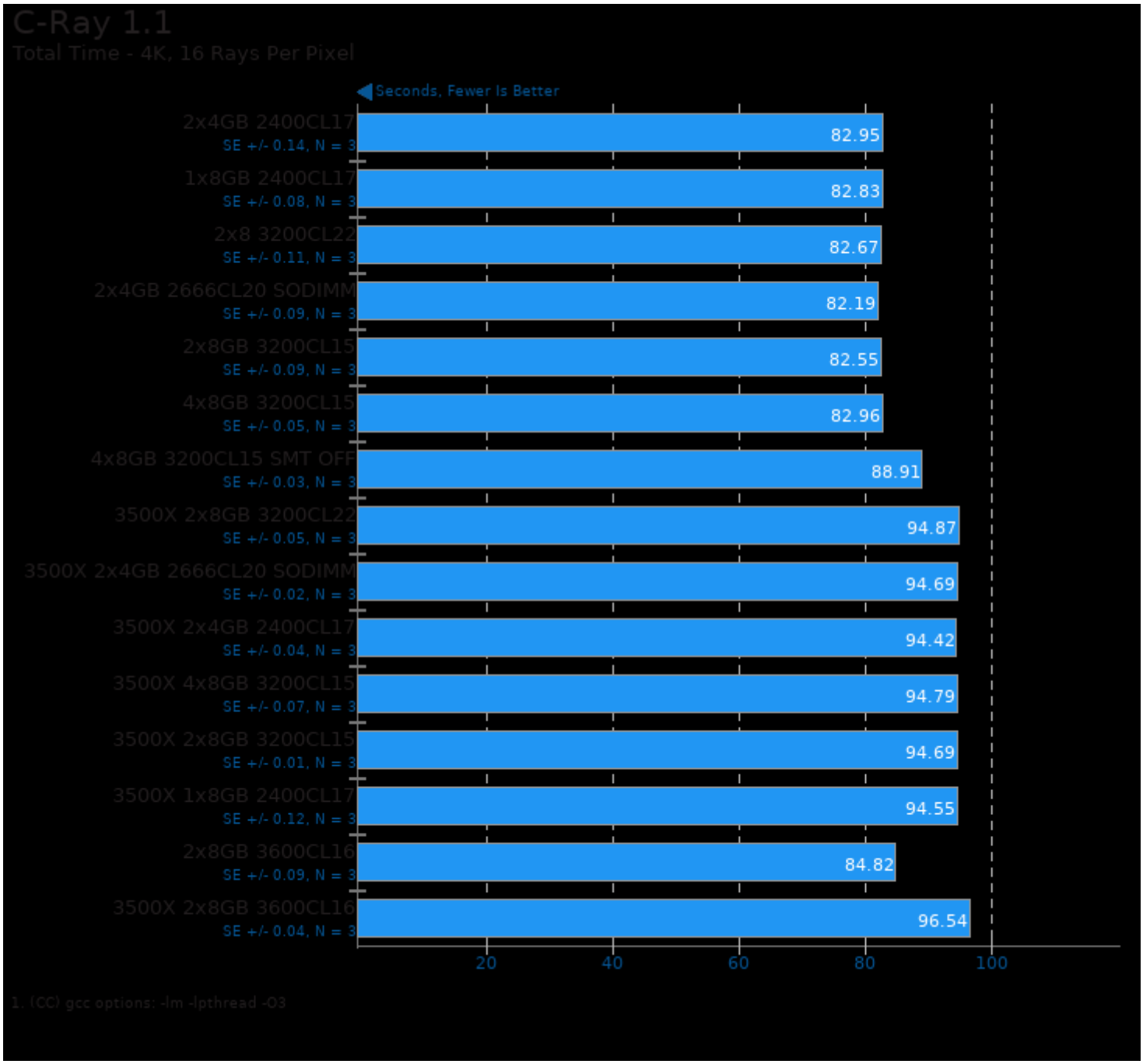

7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
2x4GB 2400CL17
SE +/- 47.09, N = 3
33245
1x8GB 2400CL17
SE +/- 80.41, N = 3
27892
2x8 3200CL22
SE +/- 162.85, N = 3
34326
2x4GB 2666CL20 SODIMM
SE +/- 22.82, N = 3
30663
2x8GB 3200CL15
SE +/- 34.04, N = 3
34878
4x8GB 3200CL15
SE +/- 43.97, N = 3
36487
4x8GB 3200CL15 SMT OFF
SE +/- 186.52, N = 3
30883
3500X 2x8GB 3200CL22
SE +/- 80.43, N = 3
31912
3500X 2x4GB 2666CL20 SODIMM
SE +/- 62.61, N = 3
29975
3500X 2x4GB 2400CL17
SE +/- 119.32, N = 3
31401
3500X 4x8GB 3200CL15
SE +/- 138.35, N = 3
32675
3500X 2x8GB 3200CL15
SE +/- 197.05, N = 3
32111
3500X 1x8GB 2400CL17
SE +/- 139.20, N = 3
29857
2x8GB 3600CL16
SE +/- 18.11, N = 3
38928
3500X 2x8GB 3600CL16
SE +/- 45.40, N = 3
32190
8K
16K
24K
32K
40K
1. (CXX) g++ options: -pipe -lpthread

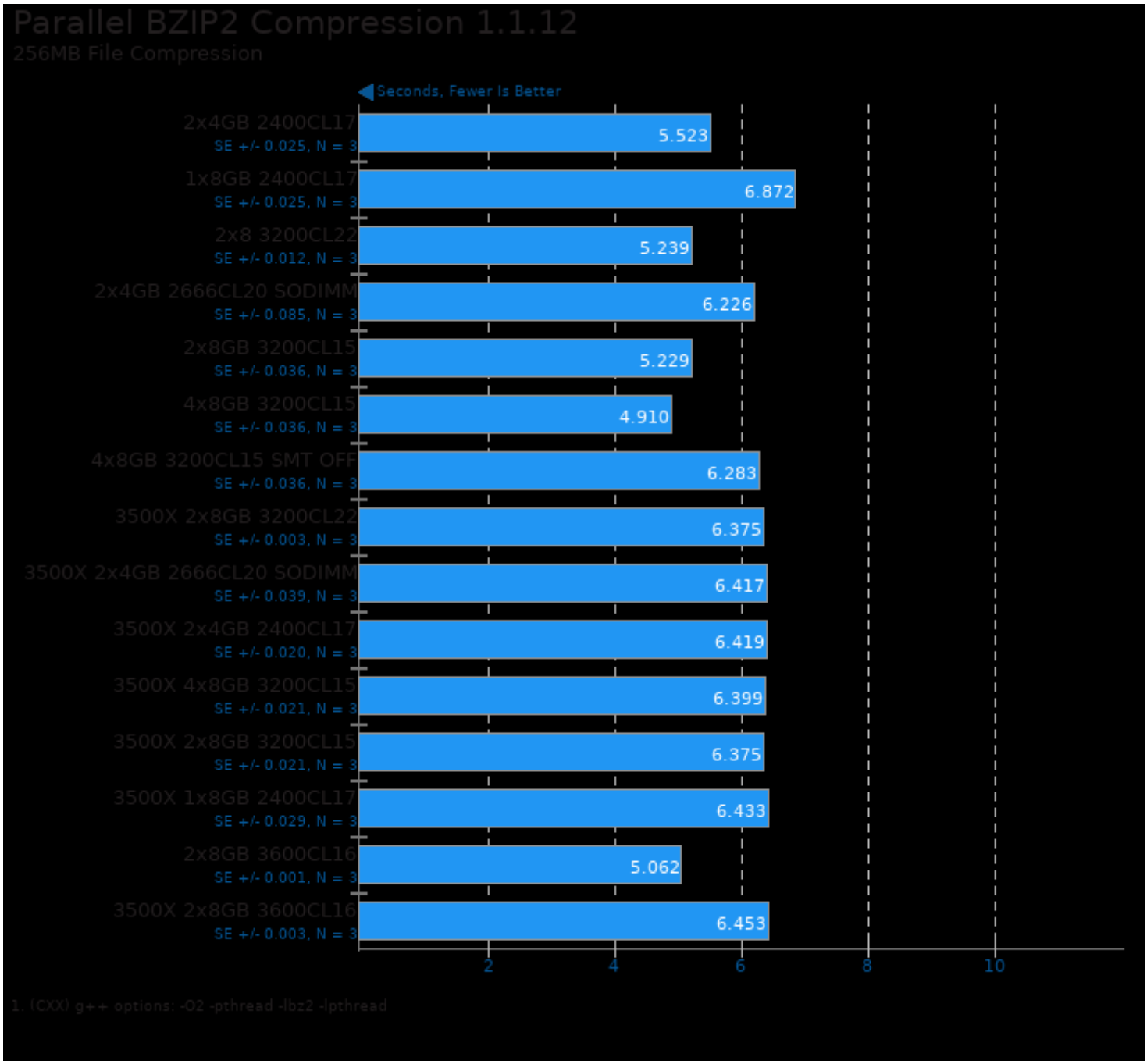
rams

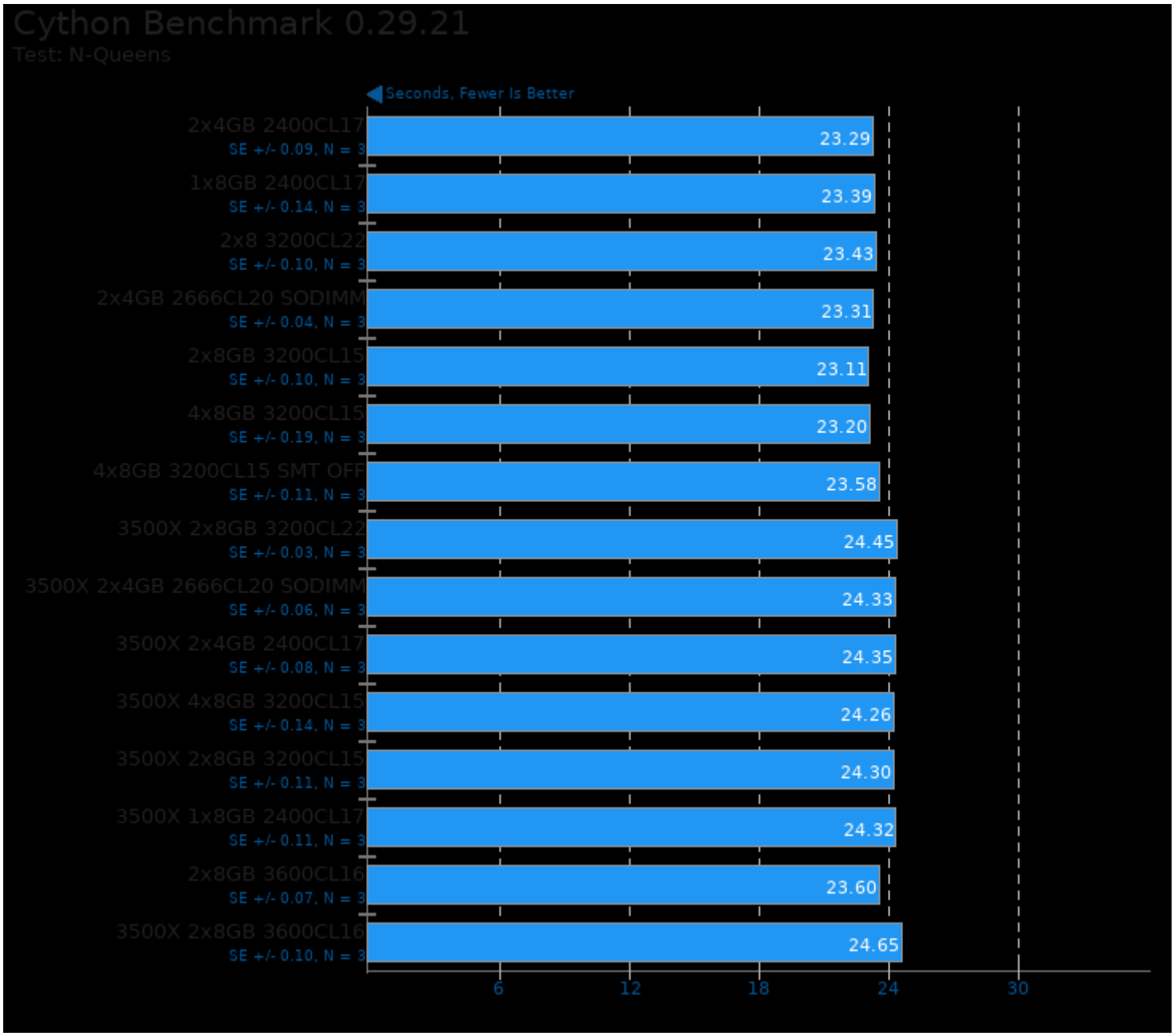

Swet 1.5.16
Average
Operations Per Second, More Is Better
2x4GB 2400CL17
SE +/- 2189598.70, N = 3
798039618
1x8GB 2400CL17
SE +/- 1949497.08, N = 3
791165264
2x8 3200CL22
SE +/- 5436362.88, N = 3
798854194
2x4GB 2666CL20 SODIMM
SE +/- 8354444.75, N = 4
792685544
2x8GB 3200CL15
SE +/- 6919174.82, N = 3
801740336
4x8GB 3200CL15
SE +/- 873419.82, N = 3
813013028
4x8GB 3200CL15 SMT OFF
SE +/- 3123255.60, N = 3
808622619
3500X 2x8GB 3200CL22
SE +/- 1320388.53, N = 3
812526281
3500X 2x4GB 2666CL20 SODIMM
SE +/- 563656.14, N = 3
793659968
3500X 2x4GB 2400CL17
SE +/- 2034927.25, N = 3
801257612
3500X 4x8GB 3200CL15
SE +/- 1600073.22, N = 3
822981493
3500X 2x8GB 3200CL15
SE +/- 2897782.61, N = 3
808663056
3500X 1x8GB 2400CL17
SE +/- 2223650.45, N = 3
779923849
2x8GB 3600CL16
SE +/- 2763115.77, N = 3
812251007
3500X 2x8GB 3600CL16
SE +/- 4690659.31, N = 3
825952919
200M
400M
600M
800M
1000M
1. (CC) gcc options: -lm -lpthread -lcurses -lrt

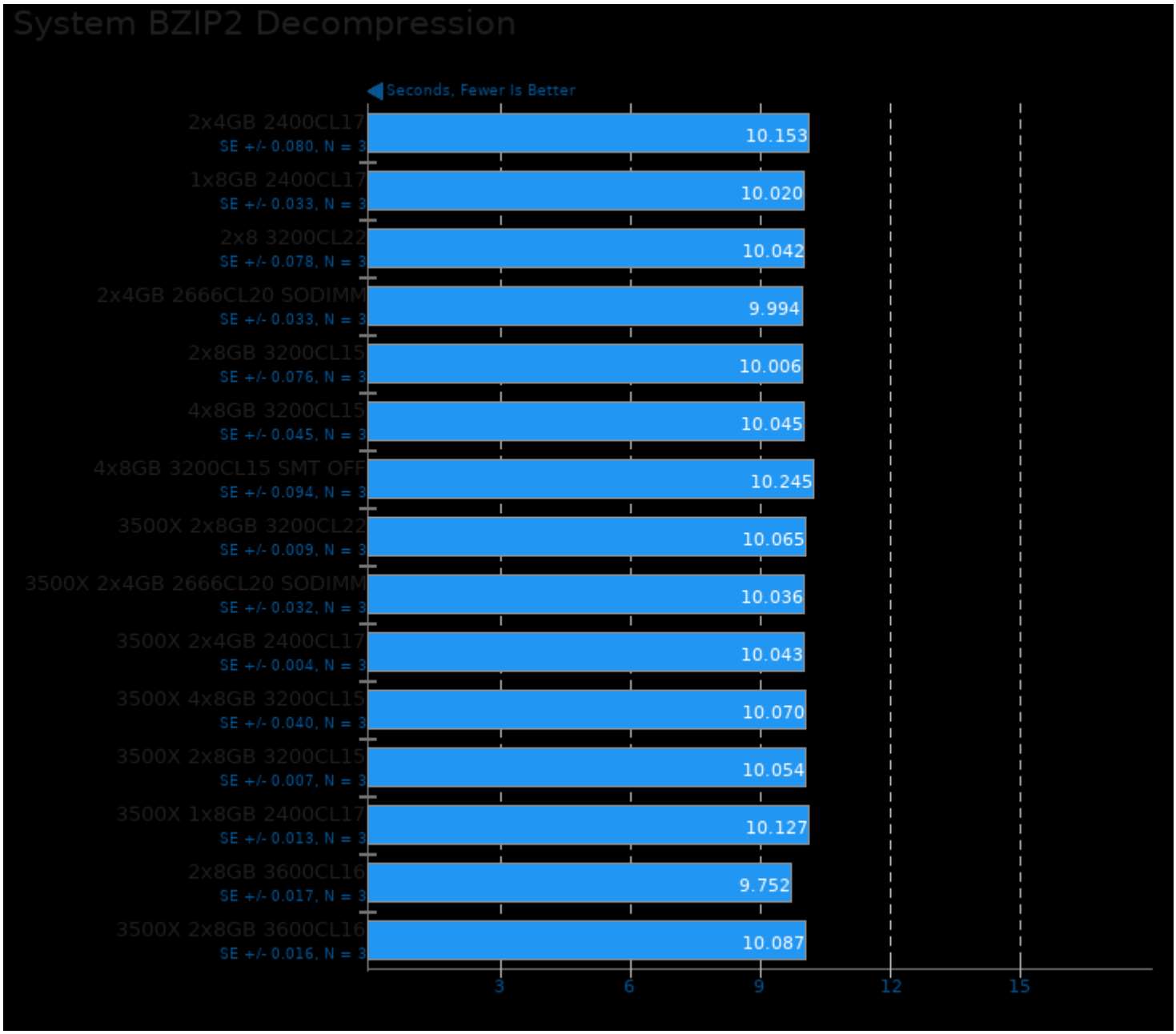

Timed Apache Compilation 2.4.41
Time To Compile
Seconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.03, N = 3
22.85
1x8GB 2400CL17
SE +/- 0.01, N = 3
25.48
2x8 3200CL22
SE +/- 0.05, N = 3
21.94
2x4GB 2666CL20 SODIMM
SE +/- 0.05, N = 3
23.95
2x8GB 3200CL15
SE +/- 0.02, N = 3
21.58
4x8GB 3200CL15
SE +/- 0.06, N = 3
21.43
4x8GB 3200CL15 SMT OFF
SE +/- 0.01, N = 3
22.44
3500X 2x8GB 3200CL22
SE +/- 0.04, N = 3
21.31
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.03, N = 3
21.51
3500X 2x4GB 2400CL17
SE +/- 0.00, N = 3
21.38
3500X 4x8GB 3200CL15
SE +/- 0.03, N = 3
21.27
3500X 2x8GB 3200CL15
SE +/- 0.01, N = 3
21.27
3500X 1x8GB 2400CL17
SE +/- 0.02, N = 3
21.60
2x8GB 3600CL16
SE +/- 0.03, N = 3
20.91
3500X 2x8GB 3600CL16
SE +/- 0.02, N = 3
21.34
6
12
18
24
30

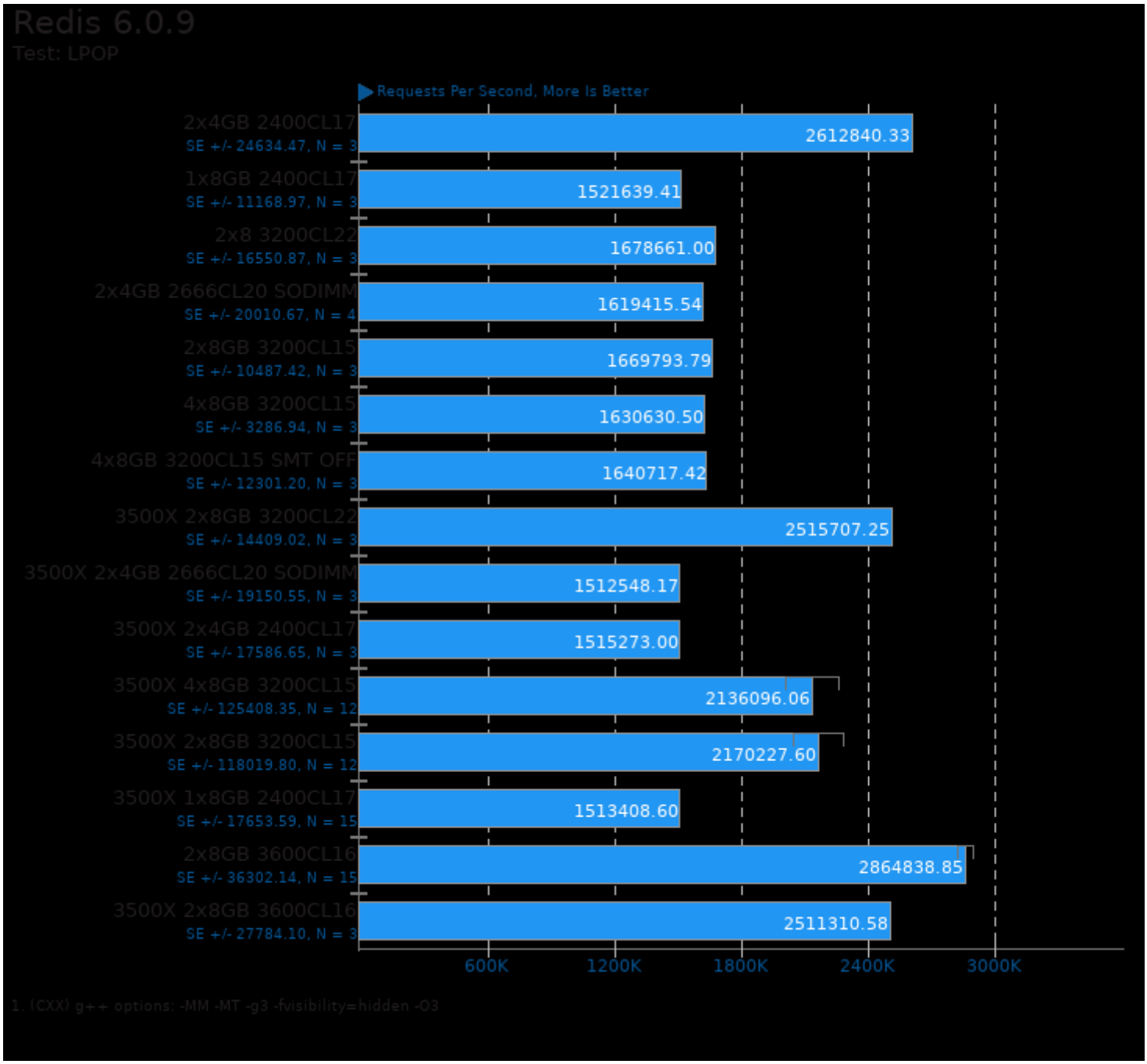

Timed Linux Kernel Compilation 5.10.20
Time To Compile
Seconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.32, N = 3
115.73
1x8GB 2400CL17
SE +/- 0.50, N = 3
137.13
2x8 3200CL22
SE +/- 0.39, N = 3
111.83
2x4GB 2666CL20 SODIMM
SE +/- 0.46, N = 3
124.66
2x8GB 3200CL15
SE +/- 0.28, N = 3
110.50
4x8GB 3200CL15
SE +/- 0.24, N = 3
108.22
4x8GB 3200CL15 SMT OFF
SE +/- 0.43, N = 3
131.63
3500X 2x8GB 3200CL22
SE +/- 0.37, N = 3
124.99
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.42, N = 3
127.50
3500X 2x4GB 2400CL17
SE +/- 0.40, N = 3
125.35
3500X 4x8GB 3200CL15
SE +/- 0.40, N = 3
123.40
3500X 2x8GB 3200CL15
SE +/- 0.36, N = 3
123.78
3500X 1x8GB 2400CL17
SE +/- 0.44, N = 3
128.08
2x8GB 3600CL16
SE +/- 0.49, N = 3
109.12
3500X 2x8GB 3600CL16
SE +/- 0.29, N = 3
124.98
30
60
90
120
150

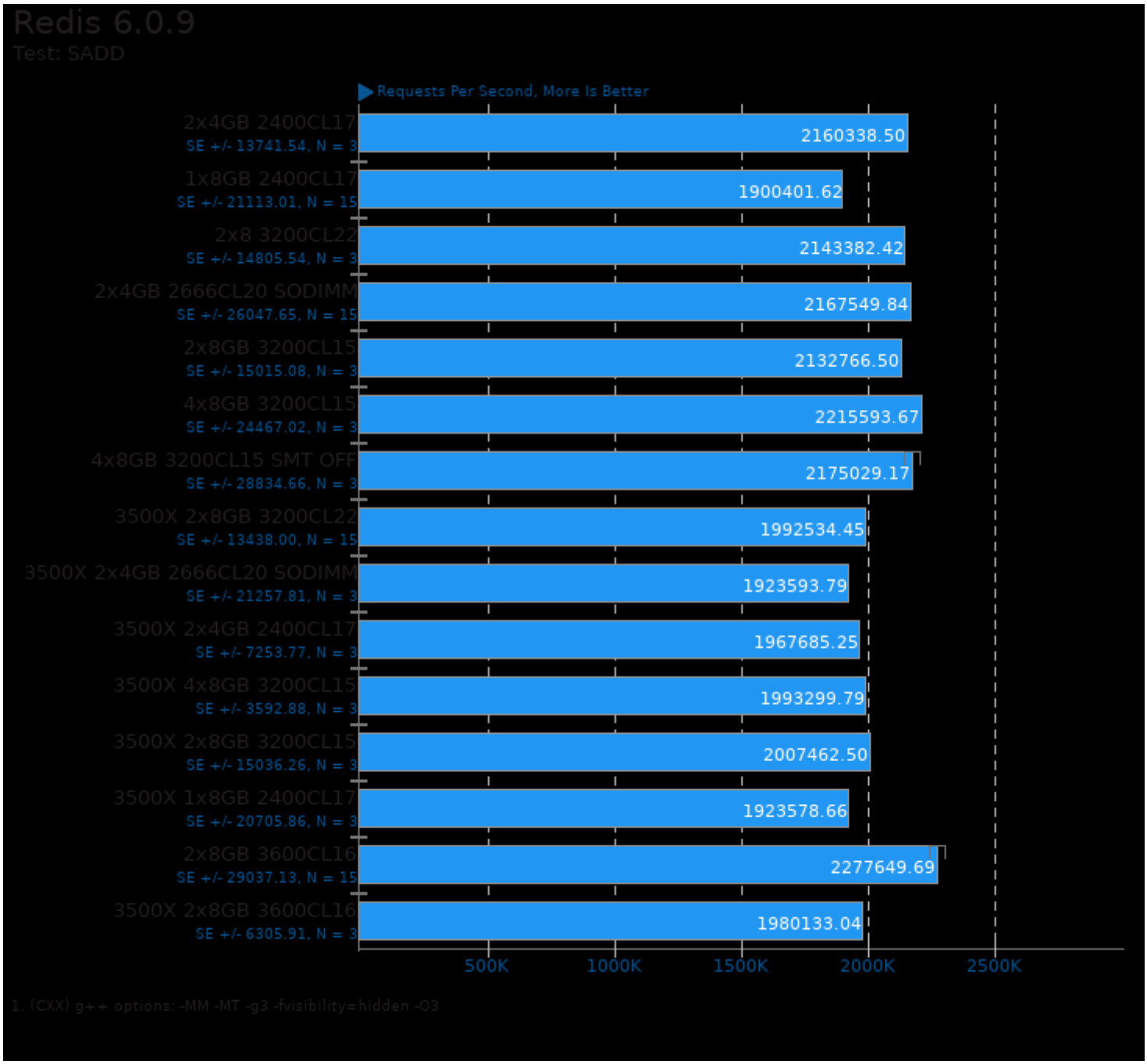

C-Ray 1.1
Total Time - 4K, 16 Rays Per Pixel
Seconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.14, N = 3
82.95
1x8GB 2400CL17
SE +/- 0.08, N = 3
82.83
2x8 3200CL22
SE +/- 0.11, N = 3
82.67
2x4GB 2666CL20 SODIMM
SE +/- 0.09, N = 3
82.19
2x8GB 3200CL15
SE +/- 0.09, N = 3
82.55
4x8GB 3200CL15
SE +/- 0.05, N = 3
82.96
4x8GB 3200CL15 SMT OFF
SE +/- 0.03, N = 3
88.91
3500X 2x8GB 3200CL22
SE +/- 0.05, N = 3
94.87
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.02, N = 3
94.69
3500X 2x4GB 2400CL17
SE +/- 0.04, N = 3
94.42
3500X 4x8GB 3200CL15
SE +/- 0.07, N = 3
94.79
3500X 2x8GB 3200CL15
SE +/- 0.01, N = 3
94.69
3500X 1x8GB 2400CL17
SE +/- 0.12, N = 3
94.55
2x8GB 3600CL16
SE +/- 0.09, N = 3
84.82
3500X 2x8GB 3600CL16
SE +/- 0.04, N = 3
96.54
20
40
60
80
100
1. (CC) gcc options: -lm -lpthread -O3


Parallel BZIP2 Compression 1.1.12
256MB File Compression
Seconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.025, N = 3
5.523
1x8GB 2400CL17
SE +/- 0.025, N = 3
6.872
2x8 3200CL22
SE +/- 0.012, N = 3
5.239
2x4GB 2666CL20 SODIMM
SE +/- 0.085, N = 3
6.226
2x8GB 3200CL15
SE +/- 0.036, N = 3
5.229
4x8GB 3200CL15
SE +/- 0.036, N = 3
4.910
4x8GB 3200CL15 SMT OFF
SE +/- 0.036, N = 3
6.283
3500X 2x8GB 3200CL22
SE +/- 0.003, N = 3
6.375
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.039, N = 3
6.417
3500X 2x4GB 2400CL17
SE +/- 0.020, N = 3
6.419
3500X 4x8GB 3200CL15
SE +/- 0.021, N = 3
6.399
3500X 2x8GB 3200CL15
SE +/- 0.021, N = 3
6.375
3500X 1x8GB 2400CL17
SE +/- 0.029, N = 3
6.433
2x8GB 3600CL16
SE +/- 0.001, N = 3
5.062
3500X 2x8GB 3600CL16
SE +/- 0.003, N = 3
6.453
2
4
6
8
10
1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread

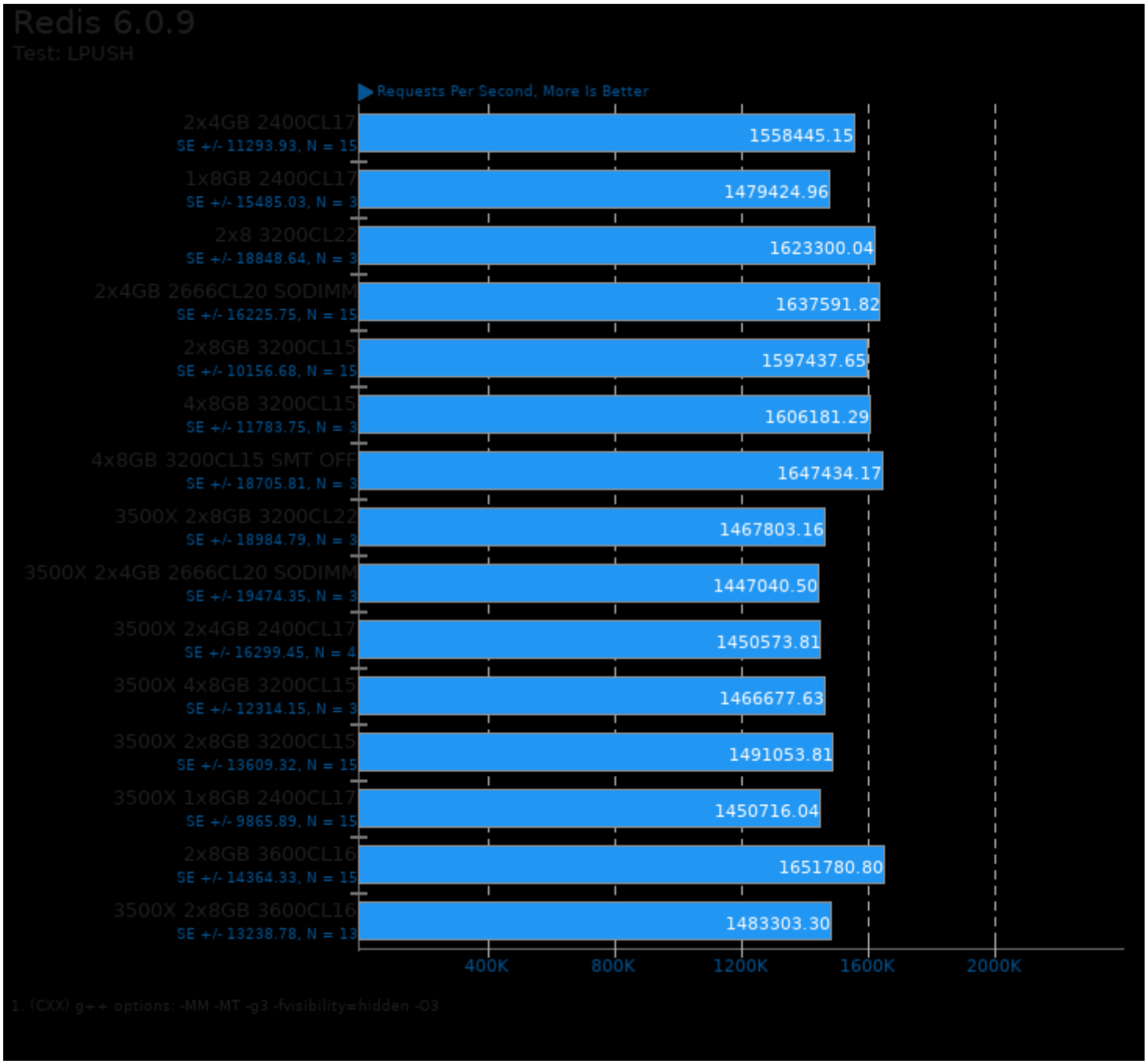

Cython Benchmark 0.29.21
Test: N-Queens
Seconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.09, N = 3
23.29
1x8GB 2400CL17
SE +/- 0.14, N = 3
23.39
2x8 3200CL22
SE +/- 0.10, N = 3
23.43
2x4GB 2666CL20 SODIMM
SE +/- 0.04, N = 3
23.31
2x8GB 3200CL15
SE +/- 0.10, N = 3
23.11
4x8GB 3200CL15
SE +/- 0.19, N = 3
23.20
4x8GB 3200CL15 SMT OFF
SE +/- 0.11, N = 3
23.58
3500X 2x8GB 3200CL22
SE +/- 0.03, N = 3
24.45
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.06, N = 3
24.33
3500X 2x4GB 2400CL17
SE +/- 0.08, N = 3
24.35
3500X 4x8GB 3200CL15
SE +/- 0.14, N = 3
24.26
3500X 2x8GB 3200CL15
SE +/- 0.11, N = 3
24.30
3500X 1x8GB 2400CL17
SE +/- 0.11, N = 3
24.32
2x8GB 3600CL16
SE +/- 0.07, N = 3
23.60
3500X 2x8GB 3600CL16
SE +/- 0.10, N = 3
24.65
6
12
18
24
30


System BZIP2 Decompression
Seconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.080, N = 3
10.153
1x8GB 2400CL17
SE +/- 0.033, N = 3
10.020
2x8 3200CL22
SE +/- 0.078, N = 3
10.042
2x4GB 2666CL20 SODIMM
SE +/- 0.033, N = 3
9.994
2x8GB 3200CL15
SE +/- 0.076, N = 3
10.006
4x8GB 3200CL15
SE +/- 0.045, N = 3
10.045
4x8GB 3200CL15 SMT OFF
SE +/- 0.094, N = 3
10.245
3500X 2x8GB 3200CL22
SE +/- 0.009, N = 3
10.065
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.032, N = 3
10.036
3500X 2x4GB 2400CL17
SE +/- 0.004, N = 3
10.043
3500X 4x8GB 3200CL15
SE +/- 0.040, N = 3
10.070
3500X 2x8GB 3200CL15
SE +/- 0.007, N = 3
10.054
3500X 1x8GB 2400CL17
SE +/- 0.013, N = 3
10.127
2x8GB 3600CL16
SE +/- 0.017, N = 3
9.752
3500X 2x8GB 3600CL16
SE +/- 0.016, N = 3
10.087
3
6
9
12
15

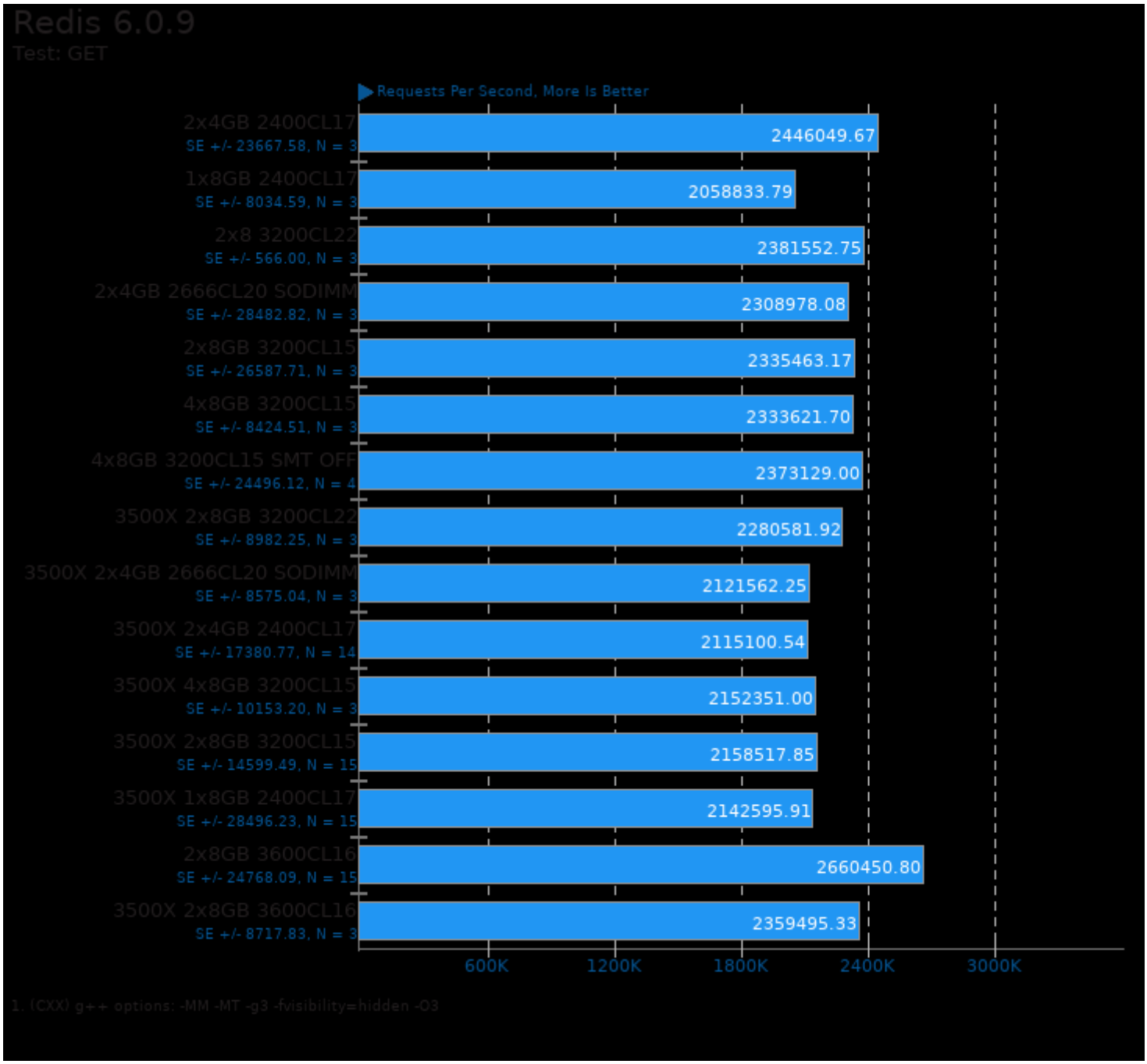

Redis 6.0.9
Test: LPOP
Requests Per Second, More Is Better
2x4GB 2400CL17
SE +/- 24634.47, N = 3
2612840.33
1x8GB 2400CL17
SE +/- 11168.97, N = 3
1521639.41
2x8 3200CL22
SE +/- 16550.87, N = 3
1678661.00
2x4GB 2666CL20 SODIMM
SE +/- 20010.67, N = 4
1619415.54
2x8GB 3200CL15
SE +/- 10487.42, N = 3
1669793.79
4x8GB 3200CL15
SE +/- 3286.94, N = 3
1630630.50
4x8GB 3200CL15 SMT OFF
SE +/- 12301.20, N = 3
1640717.42
3500X 2x8GB 3200CL22
SE +/- 14409.02, N = 3
2515707.25
3500X 2x4GB 2666CL20 SODIMM
SE +/- 19150.55, N = 3
1512548.17
3500X 2x4GB 2400CL17
SE +/- 17586.65, N = 3
1515273.00
3500X 4x8GB 3200CL15
SE +/- 125408.35, N = 12
2136096.06
3500X 2x8GB 3200CL15
SE +/- 118019.80, N = 12
2170227.60
3500X 1x8GB 2400CL17
SE +/- 17653.59, N = 15
1513408.60
2x8GB 3600CL16
SE +/- 36302.14, N = 15
2864838.85
3500X 2x8GB 3600CL16
SE +/- 27784.10, N = 3
2511310.58
600K
1200K
1800K
2400K
3000K
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3


Redis 6.0.9
Test: SADD
Requests Per Second, More Is Better
2x4GB 2400CL17
SE +/- 13741.54, N = 3
2160338.50
1x8GB 2400CL17
SE +/- 21113.01, N = 15
1900401.62
2x8 3200CL22
SE +/- 14805.54, N = 3
2143382.42
2x4GB 2666CL20 SODIMM
SE +/- 26047.65, N = 15
2167549.84
2x8GB 3200CL15
SE +/- 15015.08, N = 3
2132766.50
4x8GB 3200CL15
SE +/- 24467.02, N = 3
2215593.67
4x8GB 3200CL15 SMT OFF
SE +/- 28834.66, N = 3
2175029.17
3500X 2x8GB 3200CL22
SE +/- 13438.00, N = 15
1992534.45
3500X 2x4GB 2666CL20 SODIMM
SE +/- 21257.81, N = 3
1923593.79
3500X 2x4GB 2400CL17
SE +/- 7253.77, N = 3
1967685.25
3500X 4x8GB 3200CL15
SE +/- 3592.88, N = 3
1993299.79
3500X 2x8GB 3200CL15
SE +/- 15036.26, N = 3
2007462.50
3500X 1x8GB 2400CL17
SE +/- 20705.86, N = 3
1923578.66
2x8GB 3600CL16
SE +/- 29037.13, N = 15
2277649.69
3500X 2x8GB 3600CL16
SE +/- 6305.91, N = 3
1980133.04
500K
1000K
1500K
2000K
2500K
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

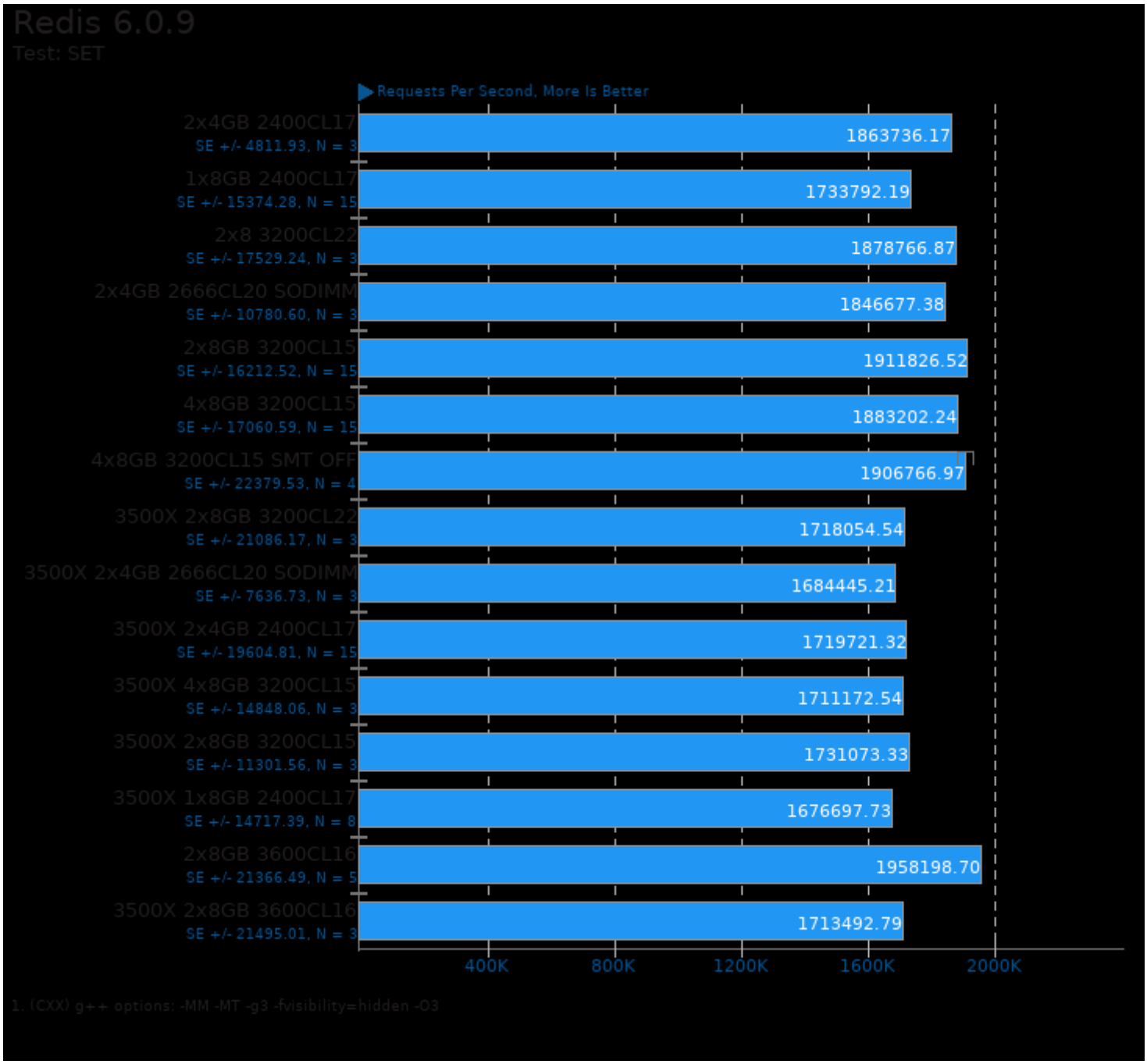
rams

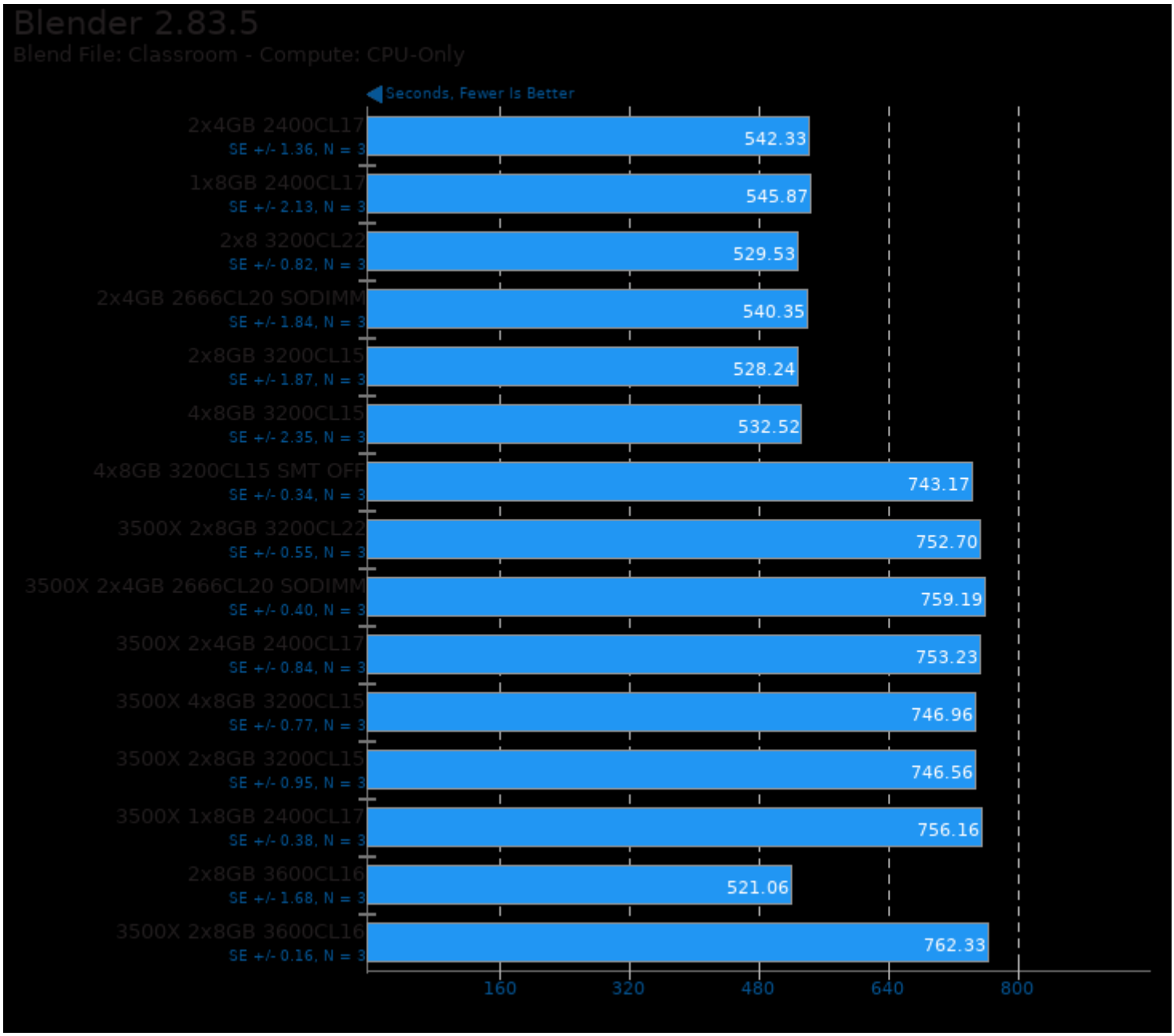

Redis 6.0.9
Test: LPUSH
Requests Per Second, More Is Better
2x4GB 2400CL17
SE +/- 11293.93, N = 15
1558445.15
1x8GB 2400CL17
SE +/- 15485.03, N = 3
1479424.96
2x8 3200CL22
SE +/- 18848.64, N = 3
1623300.04
2x4GB 2666CL20 SODIMM
SE +/- 16225.75, N = 15
1637591.82
2x8GB 3200CL15
SE +/- 10156.68, N = 15
1597437.65
4x8GB 3200CL15
SE +/- 11783.75, N = 3
1606181.29
4x8GB 3200CL15 SMT OFF
SE +/- 18705.81, N = 3
1647434.17
3500X 2x8GB 3200CL22
SE +/- 18984.79, N = 3
1467803.16
3500X 2x4GB 2666CL20 SODIMM
SE +/- 19474.35, N = 3
1447040.50
3500X 2x4GB 2400CL17
SE +/- 16299.45, N = 4
1450573.81
3500X 4x8GB 3200CL15
SE +/- 12314.15, N = 3
1466677.63
3500X 2x8GB 3200CL15
SE +/- 13609.32, N = 15
1491053.81
3500X 1x8GB 2400CL17
SE +/- 9865.89, N = 15
1450716.04
2x8GB 3600CL16
SE +/- 14364.33, N = 15
1651780.80
3500X 2x8GB 3600CL16
SE +/- 13238.78, N = 13
1483303.30
400K
800K
1200K
1600K
2000K
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

rams

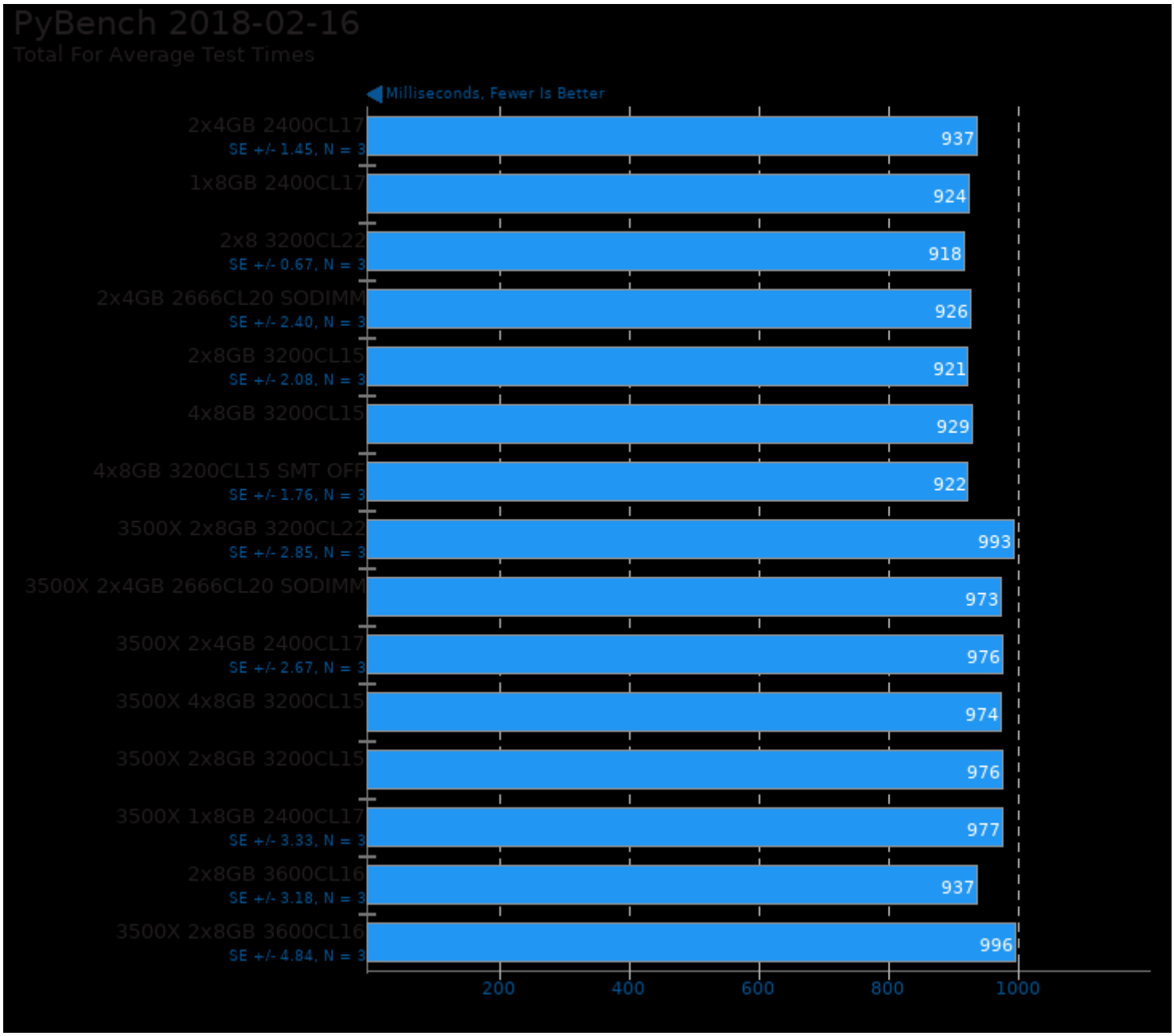

Redis 6.0.9
Test: GET
Requests Per Second, More Is Better
2x4GB 2400CL17
SE +/- 23667.58, N = 3
2446049.67
1x8GB 2400CL17
SE +/- 8034.59, N = 3
2058833.79
2x8 3200CL22
SE +/- 566.00, N = 3
2381552.75
2x4GB 2666CL20 SODIMM
SE +/- 28482.82, N = 3
2308978.08
2x8GB 3200CL15
SE +/- 26587.71, N = 3
2335463.17
4x8GB 3200CL15
SE +/- 8424.51, N = 3
2333621.70
4x8GB 3200CL15 SMT OFF
SE +/- 24496.12, N = 4
2373129.00
3500X 2x8GB 3200CL22
SE +/- 8982.25, N = 3
2280581.92
3500X 2x4GB 2666CL20 SODIMM
SE +/- 8575.04, N = 3
2121562.25
3500X 2x4GB 2400CL17
SE +/- 17380.77, N = 14
2115100.54
3500X 4x8GB 3200CL15
SE +/- 10153.20, N = 3
2152351.00
3500X 2x8GB 3200CL15
SE +/- 14599.49, N = 15
2158517.85
3500X 1x8GB 2400CL17
SE +/- 28496.23, N = 15
2142595.91
2x8GB 3600CL16
SE +/- 24768.09, N = 15
2660450.80
3500X 2x8GB 3600CL16
SE +/- 8717.83, N = 3
2359495.33
600K
1200K
1800K
2400K
3000K
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

rams

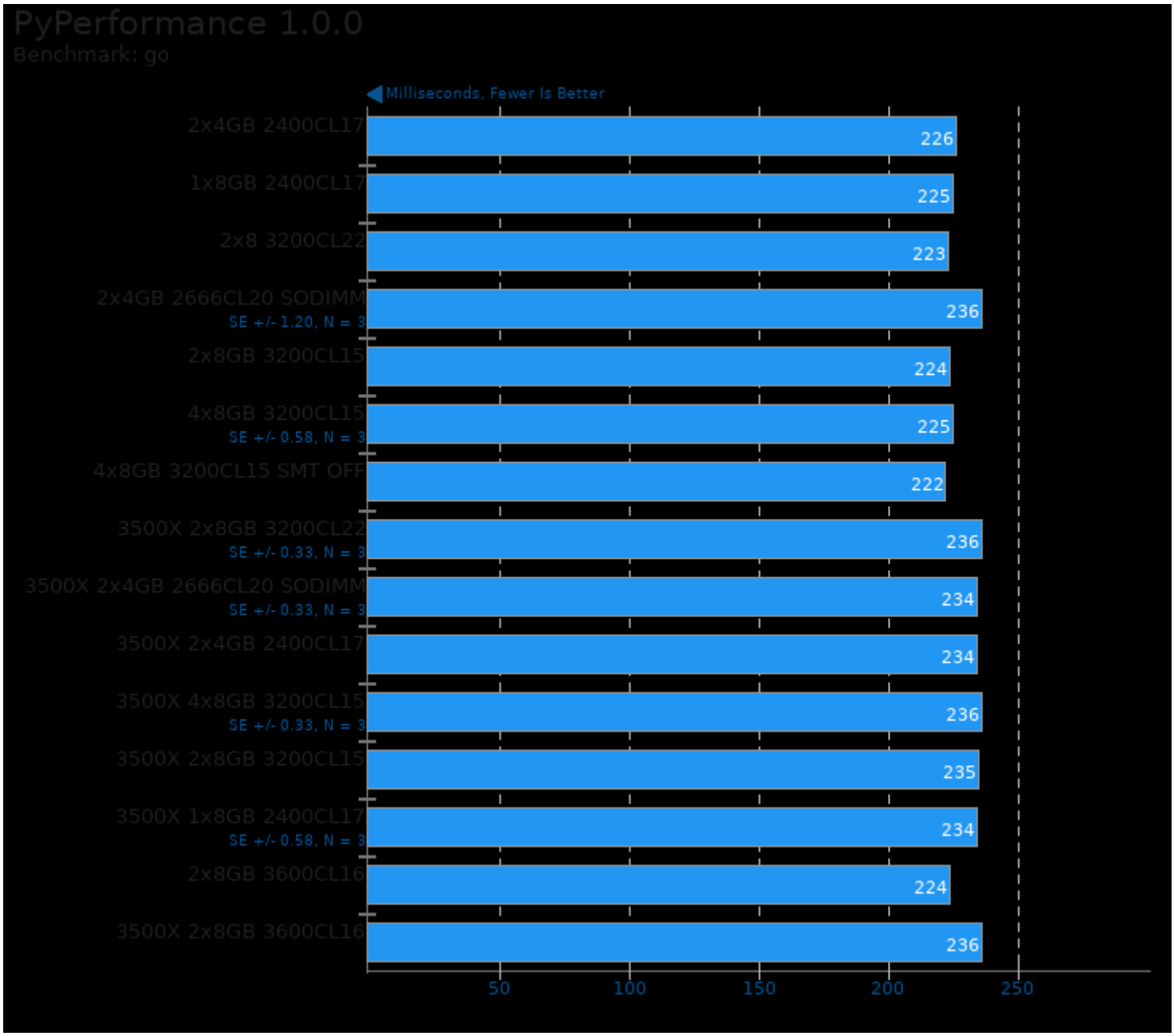

Redis 6.0.9
Test: SET
Requests Per Second, More Is Better
2x4GB 2400CL17
SE +/- 4811.93, N = 3
1863736.17
1x8GB 2400CL17
SE +/- 15374.28, N = 15
1733792.19
2x8 3200CL22
SE +/- 17529.24, N = 3
1878766.87
2x4GB 2666CL20 SODIMM
SE +/- 10780.60, N = 3
1846677.38
2x8GB 3200CL15
SE +/- 16212.52, N = 15
1911826.52
4x8GB 3200CL15
SE +/- 17060.59, N = 15
1883202.24
4x8GB 3200CL15 SMT OFF
SE +/- 22379.53, N = 4
1906766.97
3500X 2x8GB 3200CL22
SE +/- 21086.17, N = 3
1718054.54
3500X 2x4GB 2666CL20 SODIMM
SE +/- 7636.73, N = 3
1684445.21
3500X 2x4GB 2400CL17
SE +/- 19604.81, N = 15
1719721.32
3500X 4x8GB 3200CL15
SE +/- 14848.06, N = 3
1711172.54
3500X 2x8GB 3200CL15
SE +/- 11301.56, N = 3
1731073.33
3500X 1x8GB 2400CL17
SE +/- 14717.39, N = 8
1676697.73
2x8GB 3600CL16
SE +/- 21366.49, N = 5
1958198.70
3500X 2x8GB 3600CL16
SE +/- 21495.01, N = 3
1713492.79
400K
800K
1200K
1600K
2000K
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3


Blender 2.83.5
Blend File: Classroom - Compute: CPU-Only
Seconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 1.36, N = 3
542.33
1x8GB 2400CL17
SE +/- 2.13, N = 3
545.87
2x8 3200CL22
SE +/- 0.82, N = 3
529.53
2x4GB 2666CL20 SODIMM
SE +/- 1.84, N = 3
540.35
2x8GB 3200CL15
SE +/- 1.87, N = 3
528.24
4x8GB 3200CL15
SE +/- 2.35, N = 3
532.52
4x8GB 3200CL15 SMT OFF
SE +/- 0.34, N = 3
743.17
3500X 2x8GB 3200CL22
SE +/- 0.55, N = 3
752.70
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.40, N = 3
759.19
3500X 2x4GB 2400CL17
SE +/- 0.84, N = 3
753.23
3500X 4x8GB 3200CL15
SE +/- 0.77, N = 3
746.96
3500X 2x8GB 3200CL15
SE +/- 0.95, N = 3
746.56
3500X 1x8GB 2400CL17
SE +/- 0.38, N = 3
756.16
2x8GB 3600CL16
SE +/- 1.68, N = 3
521.06
3500X 2x8GB 3600CL16
SE +/- 0.16, N = 3
762.33
160
320
480
640
800

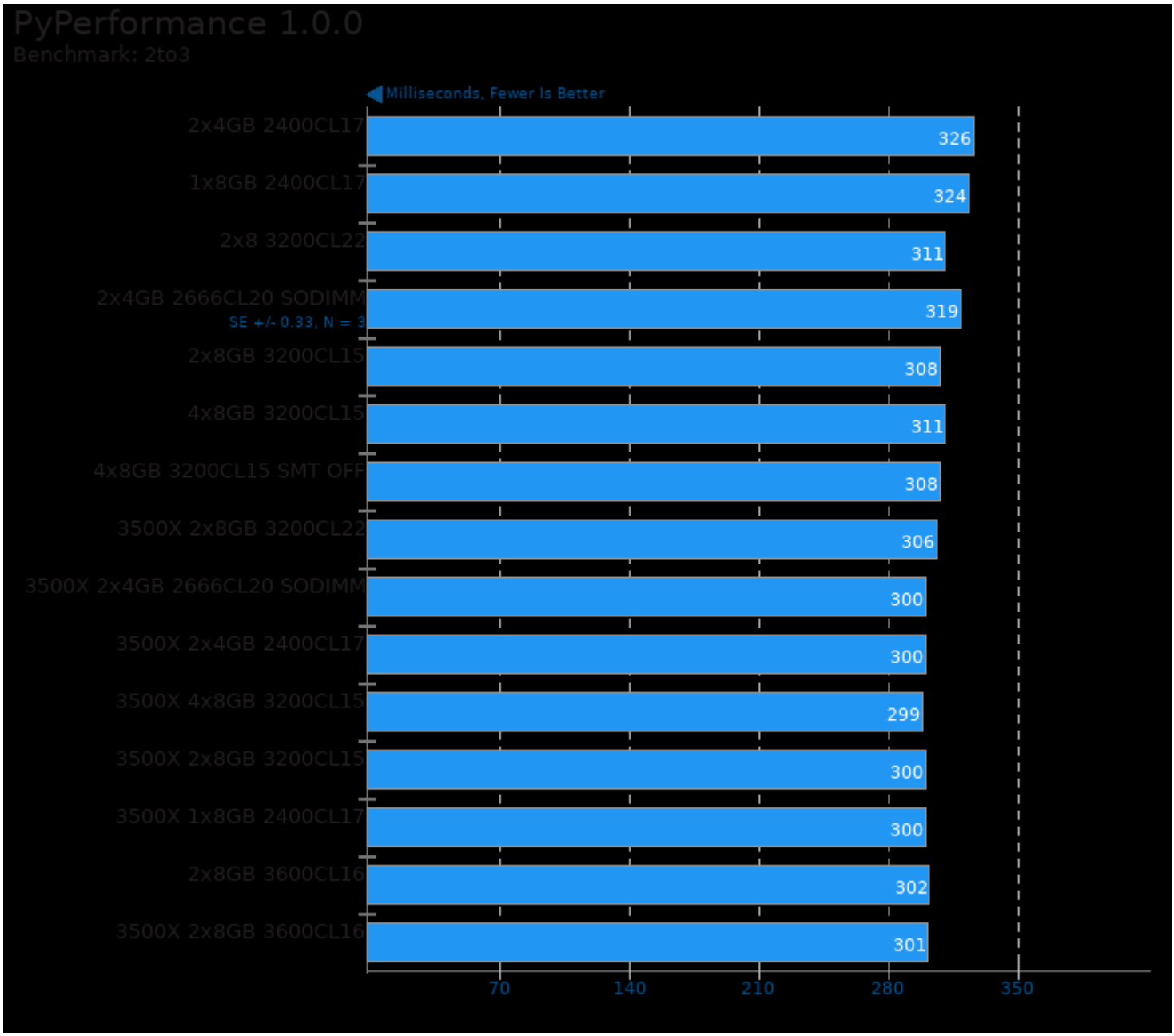
rams


PyBench 2018-02-16
Total For Average Test Times
Milliseconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 1.45, N = 3
937
1x8GB 2400CL17
924
2x8 3200CL22
SE +/- 0.67, N = 3
918
2x4GB 2666CL20 SODIMM
SE +/- 2.40, N = 3
926
2x8GB 3200CL15
SE +/- 2.08, N = 3
921
4x8GB 3200CL15
929
4x8GB 3200CL15 SMT OFF
SE +/- 1.76, N = 3
922
3500X 2x8GB 3200CL22
SE +/- 2.85, N = 3
993
3500X 2x4GB 2666CL20 SODIMM
973
3500X 2x4GB 2400CL17
SE +/- 2.67, N = 3
976
3500X 4x8GB 3200CL15
974
3500X 2x8GB 3200CL15
976
3500X 1x8GB 2400CL17
SE +/- 3.33, N = 3
977
2x8GB 3600CL16
SE +/- 3.18, N = 3
937
3500X 2x8GB 3600CL16
SE +/- 4.84, N = 3
996
200
400
600
800
1000

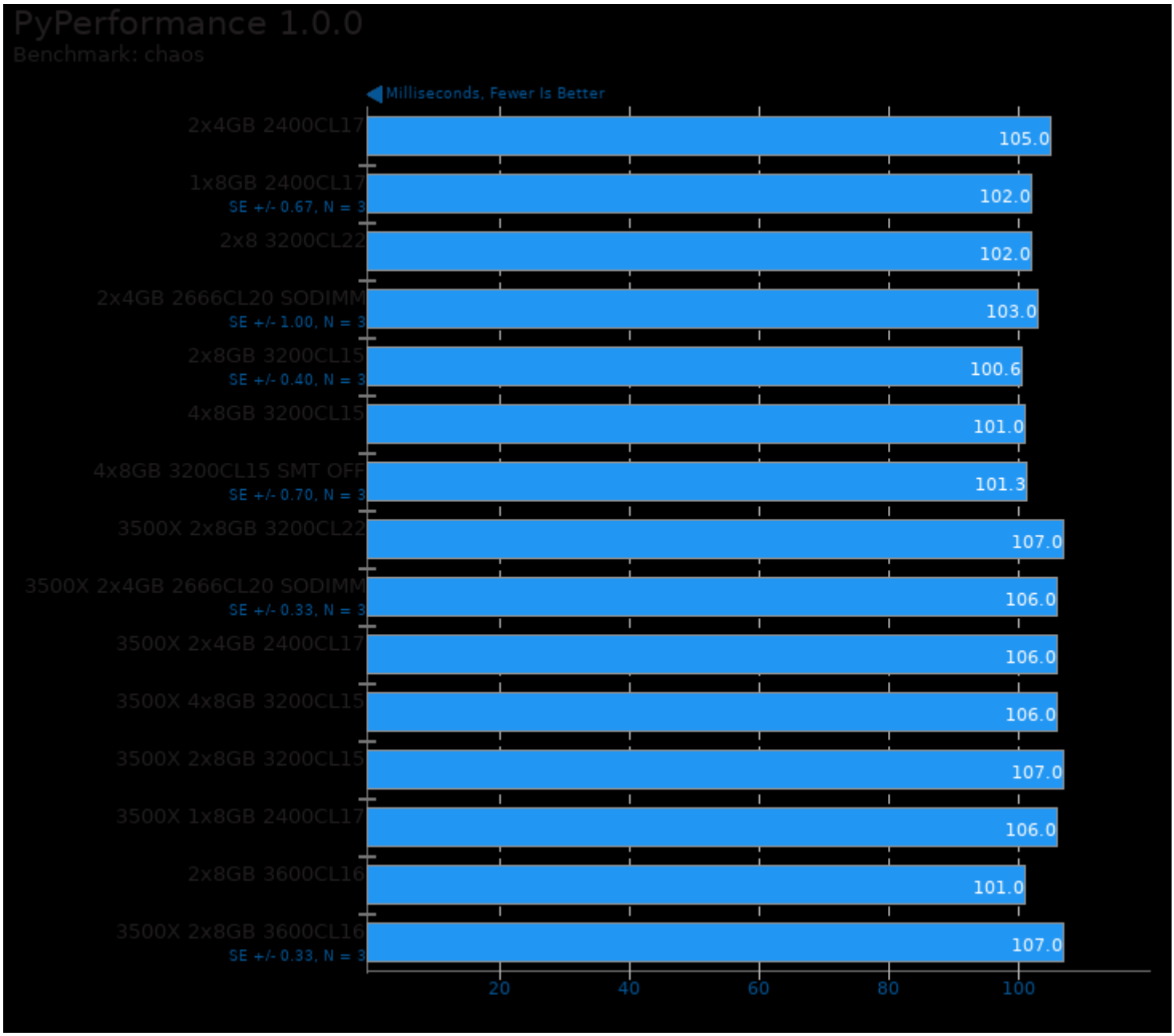
rams


PyPerformance 1.0.0
Benchmark: go
Milliseconds, Fewer Is Better
2x4GB 2400CL17
226
1x8GB 2400CL17
225
2x8 3200CL22
223
2x4GB 2666CL20 SODIMM
SE +/- 1.20, N = 3
236
2x8GB 3200CL15
224
4x8GB 3200CL15
SE +/- 0.58, N = 3
225
4x8GB 3200CL15 SMT OFF
222
3500X 2x8GB 3200CL22
SE +/- 0.33, N = 3
236
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.33, N = 3
234
3500X 2x4GB 2400CL17
234
3500X 4x8GB 3200CL15
SE +/- 0.33, N = 3
236
3500X 2x8GB 3200CL15
235
3500X 1x8GB 2400CL17
SE +/- 0.58, N = 3
234
2x8GB 3600CL16
224
3500X 2x8GB 3600CL16
236
50
100
150
200
250

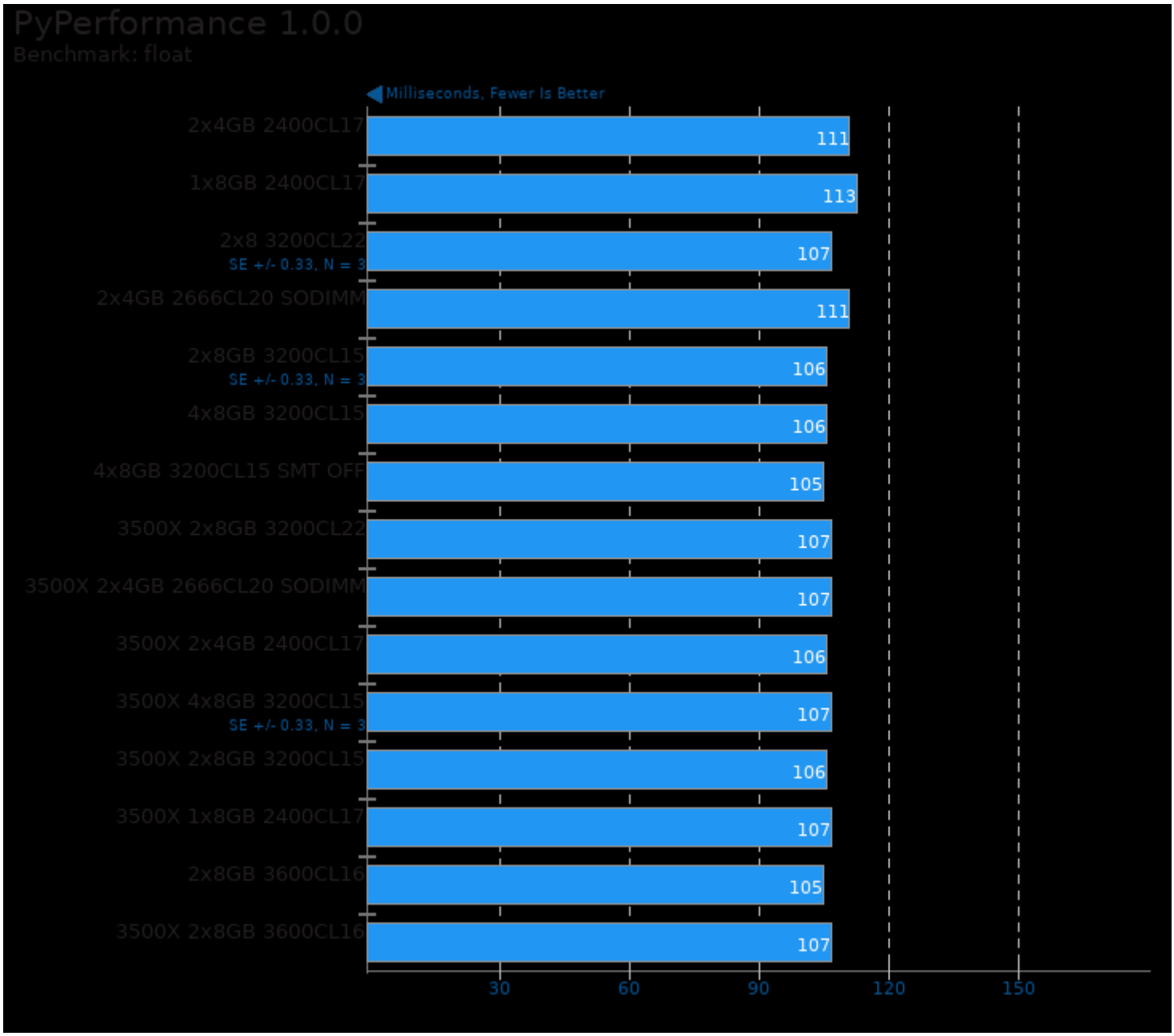
rams

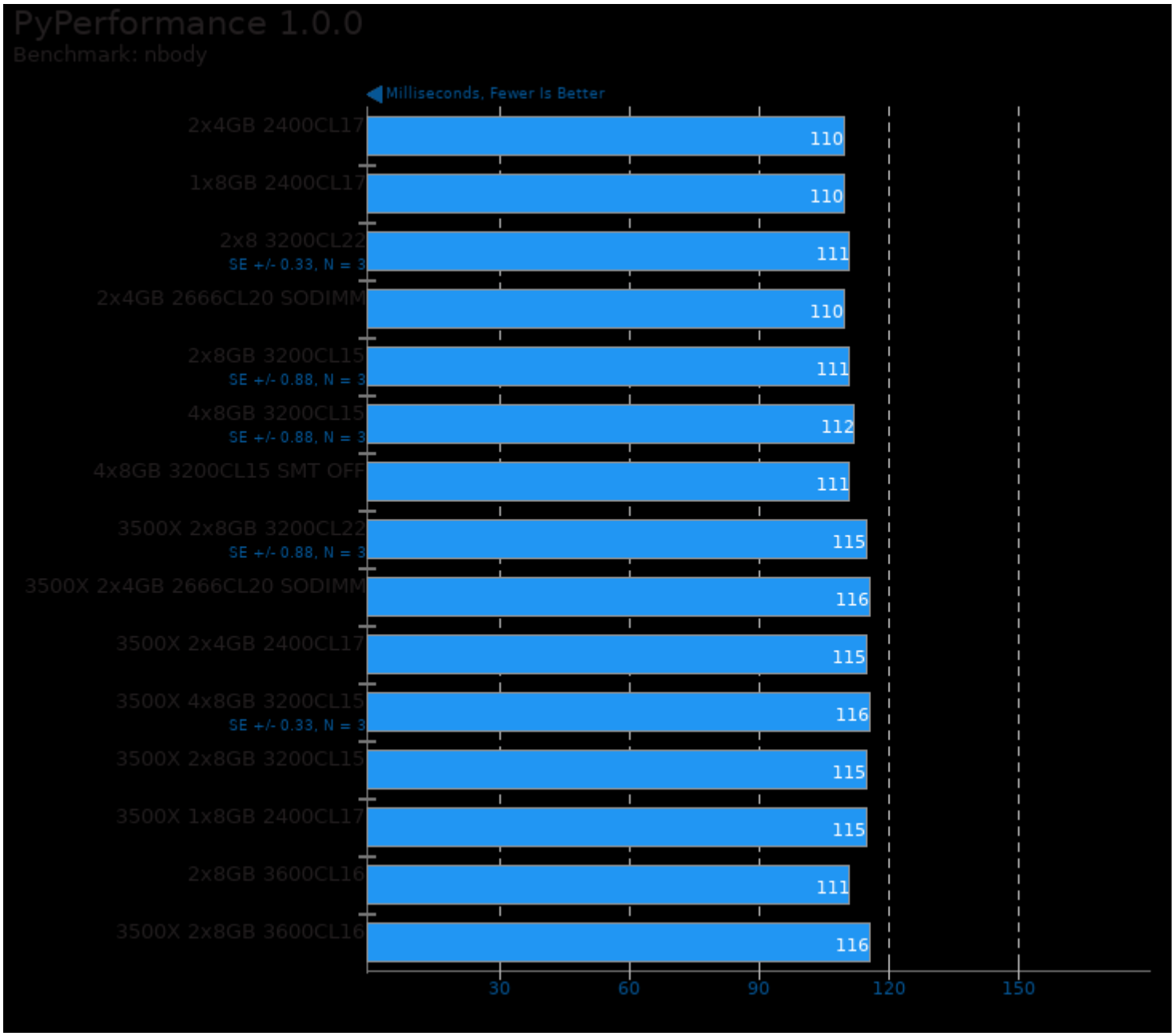

PyPerformance 1.0.0
Benchmark: 2to3
Milliseconds, Fewer Is Better
2x4GB 2400CL17
326
1x8GB 2400CL17
324
2x8 3200CL22
311
2x4GB 2666CL20 SODIMM
319
SE +/- 0.33, N = 3
2x8GB 3200CL15
308
4x8GB 3200CL15
311
4x8GB 3200CL15 SMT OFF
308
3500X 2x8GB 3200CL22
306
3500X 2x4GB 2666CL20 SODIMM
300
3500X 2x4GB 2400CL17
300
3500X 4x8GB 3200CL15
299
3500X 2x8GB 3200CL15
300
3500X 1x8GB 2400CL17
300
2x8GB 3600CL16
302
3500X 2x8GB 3600CL16
301
70
140
210
280
350

rams

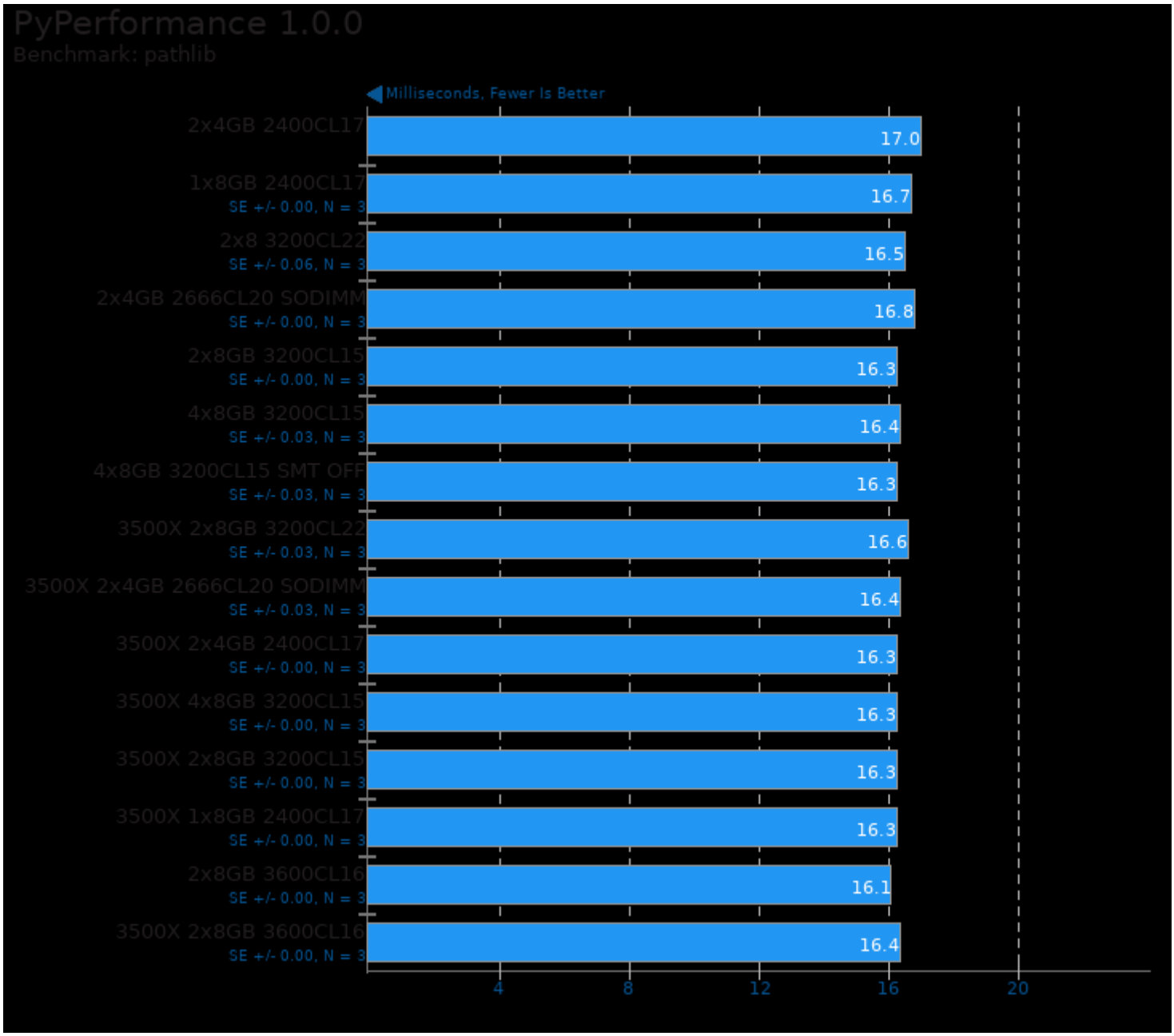

PyPerformance 1.0.0
Benchmark: chaos
Milliseconds, Fewer Is Better
2x4GB 2400CL17
105.0
1x8GB 2400CL17
SE +/- 0.67, N = 3
102.0
2x8 3200CL22
102.0
2x4GB 2666CL20 SODIMM
SE +/- 1.00, N = 3
103.0
2x8GB 3200CL15
SE +/- 0.40, N = 3
100.6
4x8GB 3200CL15
101.0
4x8GB 3200CL15 SMT OFF
SE +/- 0.70, N = 3
101.3
3500X 2x8GB 3200CL22
107.0
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.33, N = 3
106.0
3500X 2x4GB 2400CL17
106.0
3500X 4x8GB 3200CL15
106.0
3500X 2x8GB 3200CL15
107.0
3500X 1x8GB 2400CL17
106.0
2x8GB 3600CL16
101.0
3500X 2x8GB 3600CL16
SE +/- 0.33, N = 3
107.0
20
40
60
80
100

rams

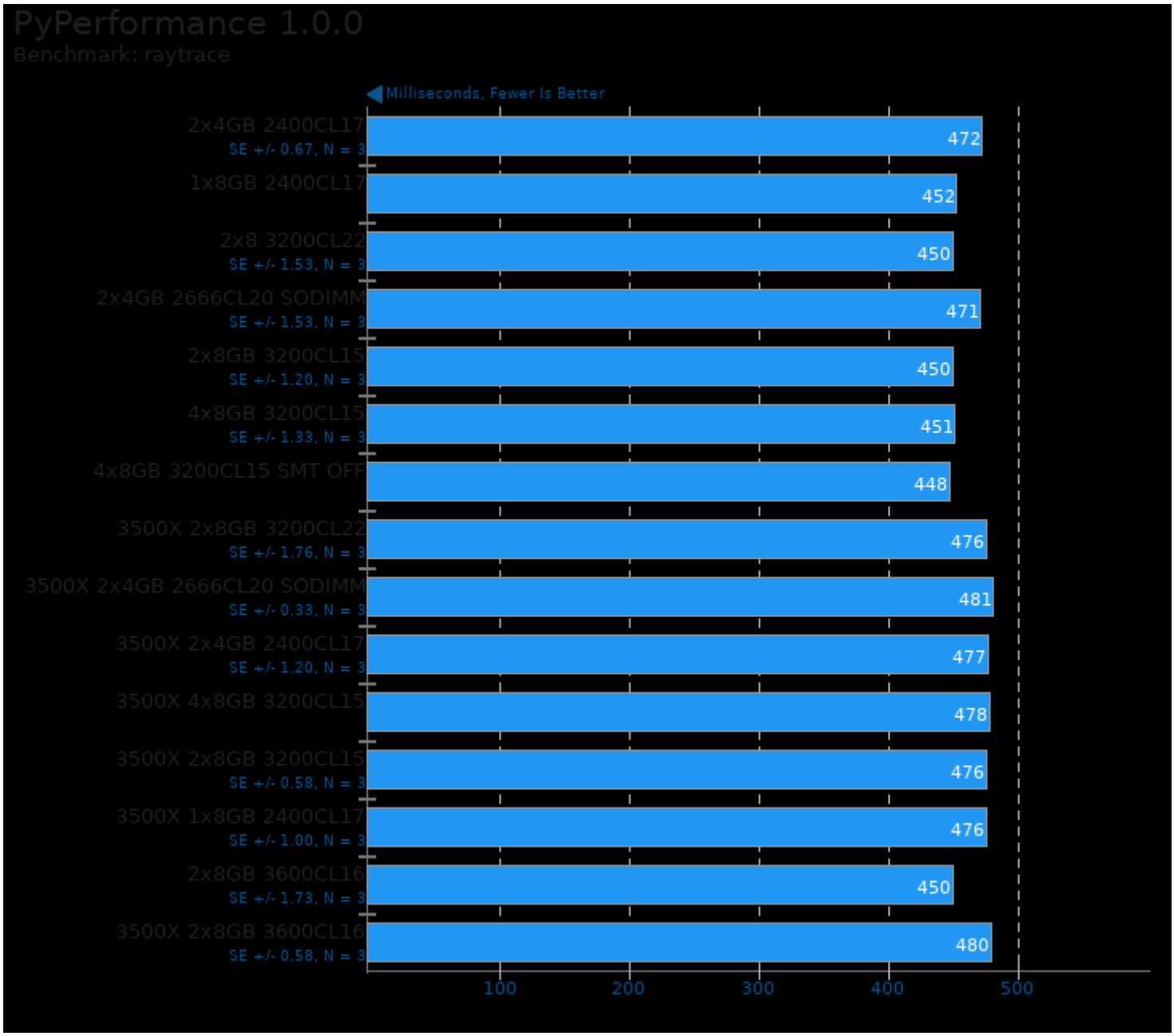

PyPerformance 1.0.0
Benchmark: float
Milliseconds, Fewer Is Better
2x4GB 2400CL17
111
1x8GB 2400CL17
113
2x8 3200CL22
SE +/- 0.33, N = 3
107
2x4GB 2666CL20 SODIMM
111
2x8GB 3200CL15
SE +/- 0.33, N = 3
106
4x8GB 3200CL15
106
4x8GB 3200CL15 SMT OFF
105
3500X 2x8GB 3200CL22
107
3500X 2x4GB 2666CL20 SODIMM
107
3500X 2x4GB 2400CL17
106
3500X 4x8GB 3200CL15
SE +/- 0.33, N = 3
107
3500X 2x8GB 3200CL15
106
3500X 1x8GB 2400CL17
107
2x8GB 3600CL16
105
3500X 2x8GB 3600CL16
107
30
60
90
120
150


PyPerformance 1.0.0
Benchmark: nbody
Milliseconds, Fewer Is Better
2x4GB 2400CL17
110
1x8GB 2400CL17
110
2x8 3200CL22
SE +/- 0.33, N = 3
111
2x4GB 2666CL20 SODIMM
110
2x8GB 3200CL15
SE +/- 0.88, N = 3
111
4x8GB 3200CL15
SE +/- 0.88, N = 3
112
4x8GB 3200CL15 SMT OFF
111
3500X 2x8GB 3200CL22
SE +/- 0.88, N = 3
115
3500X 2x4GB 2666CL20 SODIMM
116
3500X 2x4GB 2400CL17
115
3500X 4x8GB 3200CL15
SE +/- 0.33, N = 3
116
3500X 2x8GB 3200CL15
115
3500X 1x8GB 2400CL17
115
2x8GB 3600CL16
111
3500X 2x8GB 3600CL16
116
30
60
90
120
150

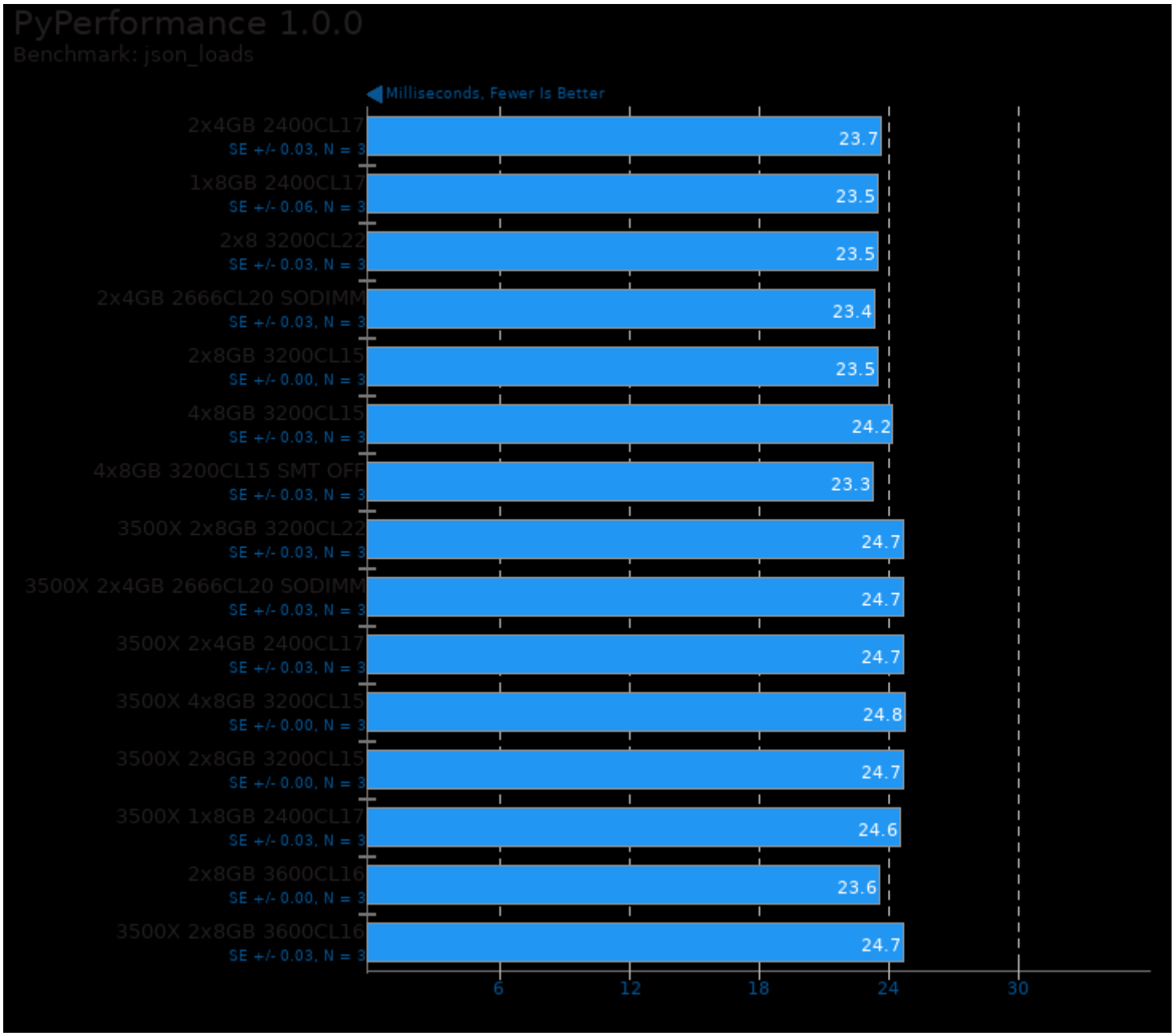
rams


PyPerformance 1.0.0
Benchmark: pathlib
Milliseconds, Fewer Is Better
2x4GB 2400CL17
17.0
1x8GB 2400CL17
SE +/- 0.00, N = 3
16.7
2x8 3200CL22
SE +/- 0.06, N = 3
16.5
2x4GB 2666CL20 SODIMM
SE +/- 0.00, N = 3
16.8
2x8GB 3200CL15
SE +/- 0.00, N = 3
16.3
4x8GB 3200CL15
SE +/- 0.03, N = 3
16.4
4x8GB 3200CL15 SMT OFF
SE +/- 0.03, N = 3
16.3
3500X 2x8GB 3200CL22
SE +/- 0.03, N = 3
16.6
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.03, N = 3
16.4
3500X 2x4GB 2400CL17
SE +/- 0.00, N = 3
16.3
3500X 4x8GB 3200CL15
SE +/- 0.00, N = 3
16.3
3500X 2x8GB 3200CL15
SE +/- 0.00, N = 3
16.3
3500X 1x8GB 2400CL17
SE +/- 0.00, N = 3
16.3
2x8GB 3600CL16
SE +/- 0.00, N = 3
16.1
3500X 2x8GB 3600CL16
SE +/- 0.00, N = 3
16.4
4
8
12
16
20

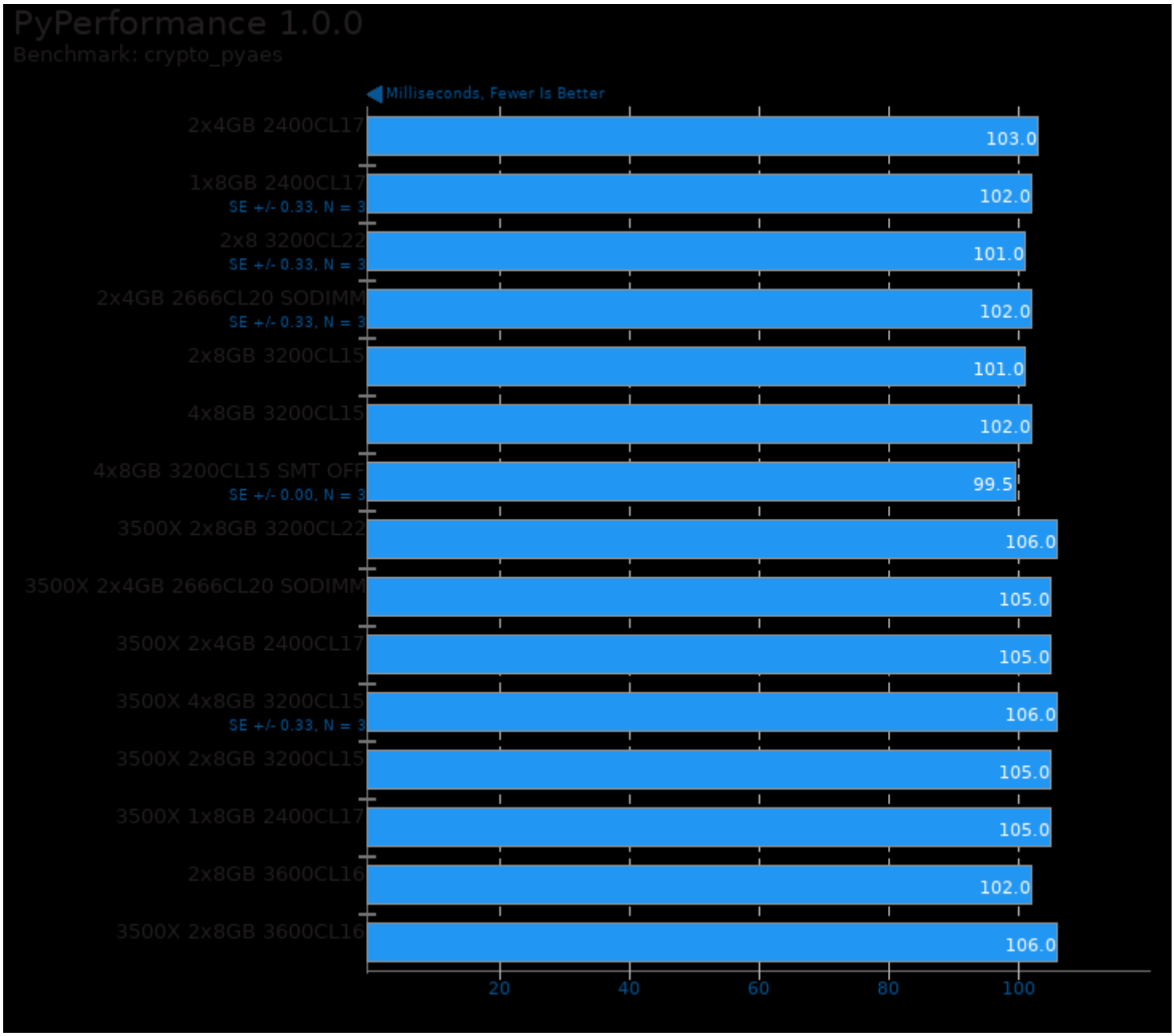
rams

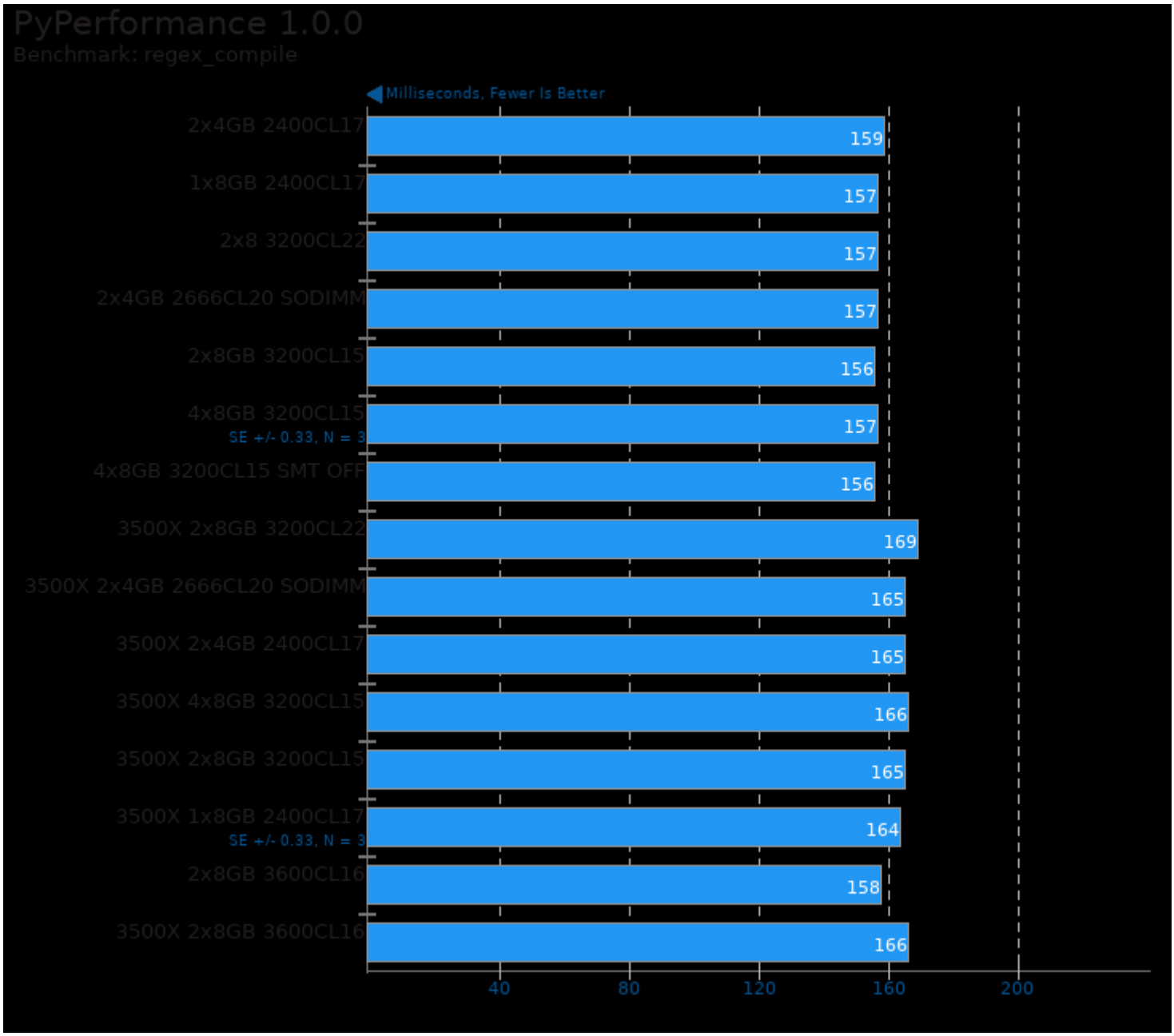

PyPerformance 1.0.0
Benchmark: raytrace
Milliseconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.67, N = 3
472
1x8GB 2400CL17
452
2x8 3200CL22
SE +/- 1.53, N = 3
450
2x4GB 2666CL20 SODIMM
SE +/- 1.53, N = 3
471
2x8GB 3200CL15
SE +/- 1.20, N = 3
450
4x8GB 3200CL15
SE +/- 1.33, N = 3
451
4x8GB 3200CL15 SMT OFF
448
3500X 2x8GB 3200CL22
SE +/- 1.76, N = 3
476
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.33, N = 3
481
3500X 2x4GB 2400CL17
SE +/- 1.20, N = 3
477
3500X 4x8GB 3200CL15
478
3500X 2x8GB 3200CL15
SE +/- 0.58, N = 3
476
3500X 1x8GB 2400CL17
SE +/- 1.00, N = 3
476
2x8GB 3600CL16
SE +/- 1.73, N = 3
450
3500X 2x8GB 3600CL16
SE +/- 0.58, N = 3
480
100
200
300
400
500

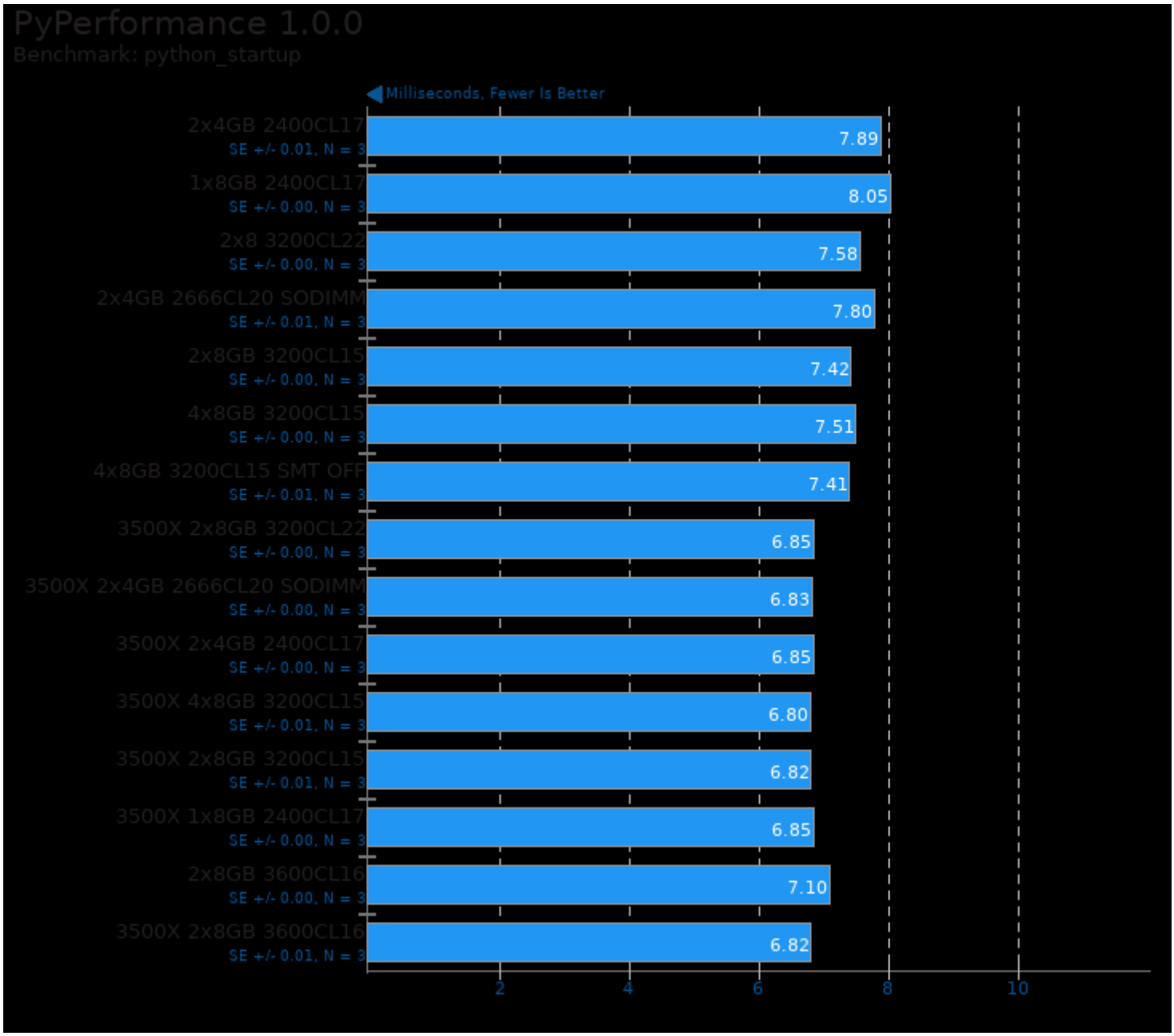
rams


PyPerformance 1.0.0
Benchmark: json_loads
Milliseconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.03, N = 3
23.7
1x8GB 2400CL17
SE +/- 0.06, N = 3
23.5
2x8 3200CL22
SE +/- 0.03, N = 3
23.5
2x4GB 2666CL20 SODIMM
SE +/- 0.03, N = 3
23.4
2x8GB 3200CL15
SE +/- 0.00, N = 3
23.5
4x8GB 3200CL15
SE +/- 0.03, N = 3
24.2
4x8GB 3200CL15 SMT OFF
SE +/- 0.03, N = 3
23.3
3500X 2x8GB 3200CL22
SE +/- 0.03, N = 3
24.7
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.03, N = 3
24.7
3500X 2x4GB 2400CL17
SE +/- 0.03, N = 3
24.7
3500X 4x8GB 3200CL15
SE +/- 0.00, N = 3
24.8
3500X 2x8GB 3200CL15
SE +/- 0.00, N = 3
24.7
3500X 1x8GB 2400CL17
SE +/- 0.03, N = 3
24.6
2x8GB 3600CL16
SE +/- 0.00, N = 3
23.6
3500X 2x8GB 3600CL16
SE +/- 0.03, N = 3
24.7
6
12
18
24
30

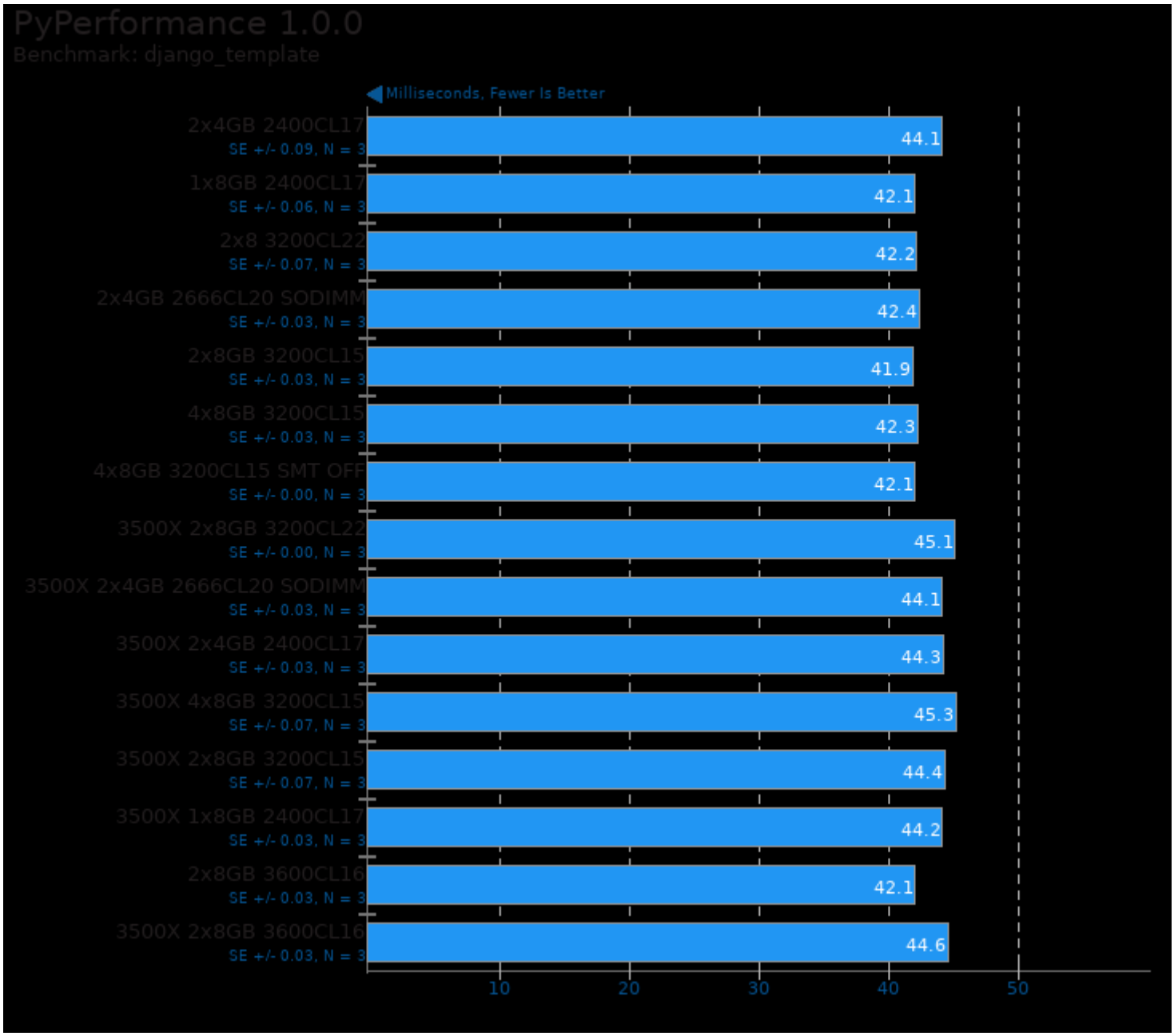
rams


PyPerformance 1.0.0
Benchmark: crypto_pyaes
Milliseconds, Fewer Is Better
2x4GB 2400CL17
103.0
1x8GB 2400CL17
SE +/- 0.33, N = 3
102.0
2x8 3200CL22
SE +/- 0.33, N = 3
101.0
2x4GB 2666CL20 SODIMM
SE +/- 0.33, N = 3
102.0
2x8GB 3200CL15
101.0
4x8GB 3200CL15
102.0
4x8GB 3200CL15 SMT OFF
SE +/- 0.00, N = 3
99.5
3500X 2x8GB 3200CL22
106.0
3500X 2x4GB 2666CL20 SODIMM
105.0
3500X 2x4GB 2400CL17
105.0
3500X 4x8GB 3200CL15
SE +/- 0.33, N = 3
106.0
3500X 2x8GB 3200CL15
105.0
3500X 1x8GB 2400CL17
105.0
2x8GB 3600CL16
102.0
3500X 2x8GB 3600CL16
106.0
20
40
60
80
100

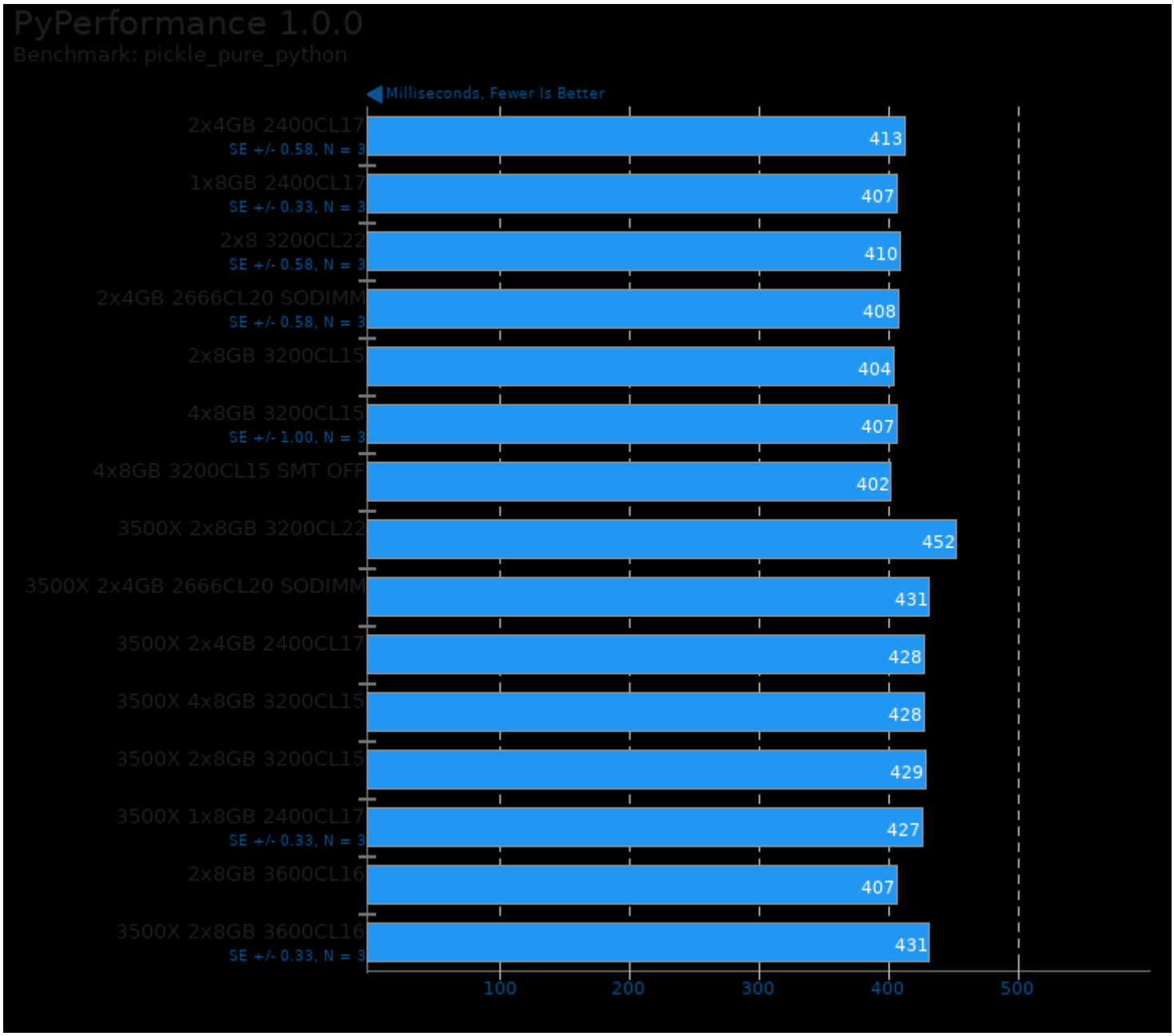

PyPerformance 1.0.0
Benchmark: regex_compile
Milliseconds, Fewer Is Better
2x4GB 2400CL17
159
1x8GB 2400CL17
157
2x8 3200CL22
157
2x4GB 2666CL20 SODIMM
157
2x8GB 3200CL15
156
4x8GB 3200CL15
157
SE +/- 0.33, N = 3
4x8GB 3200CL15 SMT OFF
156
3500X 2x8GB 3200CL22
169
3500X 2x4GB 2666CL20 SODIMM
165
3500X 2x4GB 2400CL17
165
3500X 4x8GB 3200CL15
166
3500X 2x8GB 3200CL15
165
3500X 1x8GB 2400CL17
164
SE +/- 0.33, N = 3
2x8GB 3600CL16
158
3500X 2x8GB 3600CL16
166
40
80
120
160
200

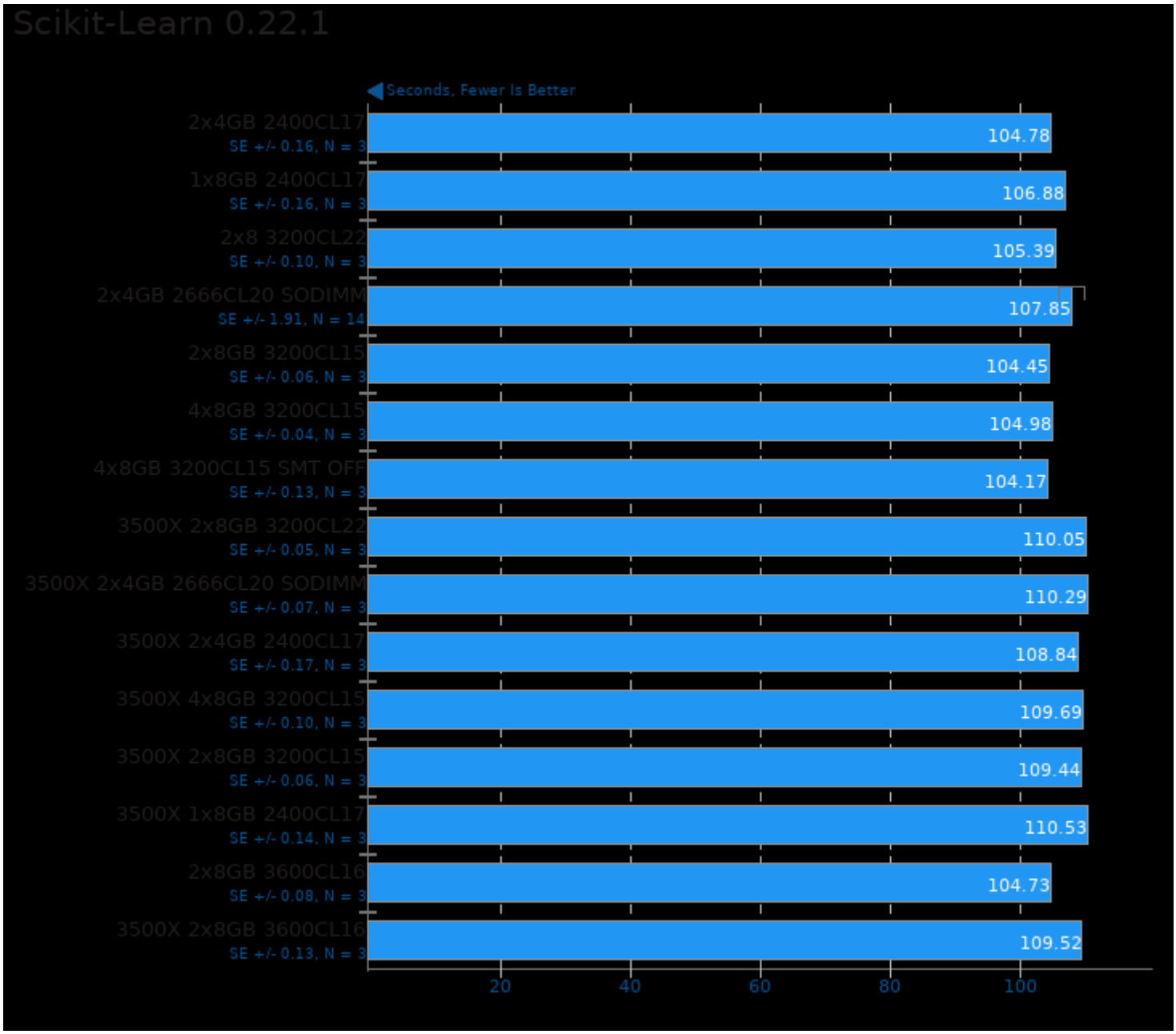

PyPerformance 1.0.0
Benchmark: python_startup
Milliseconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.01, N = 3
7.89
1x8GB 2400CL17
SE +/- 0.00, N = 3
8.05
2x8 3200CL22
SE +/- 0.00, N = 3
7.58
2x4GB 2666CL20 SODIMM
SE +/- 0.01, N = 3
7.80
2x8GB 3200CL15
SE +/- 0.00, N = 3
7.42
4x8GB 3200CL15
SE +/- 0.00, N = 3
7.51
4x8GB 3200CL15 SMT OFF
SE +/- 0.01, N = 3
7.41
3500X 2x8GB 3200CL22
SE +/- 0.00, N = 3
6.85
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.00, N = 3
6.83
3500X 2x4GB 2400CL17
SE +/- 0.00, N = 3
6.85
3500X 4x8GB 3200CL15
SE +/- 0.01, N = 3
6.80
3500X 2x8GB 3200CL15
SE +/- 0.01, N = 3
6.82
3500X 1x8GB 2400CL17
SE +/- 0.00, N = 3
6.85
2x8GB 3600CL16
SE +/- 0.00, N = 3
7.10
3500X 2x8GB 3600CL16
SE +/- 0.01, N = 3
6.82
2
4
6
8
10

rams


PyPerformance 1.0.0
Benchmark: django_template
Milliseconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.09, N = 3
44.1
1x8GB 2400CL17
SE +/- 0.06, N = 3
42.1
2x8 3200CL22
SE +/- 0.07, N = 3
42.2
2x4GB 2666CL20 SODIMM
SE +/- 0.03, N = 3
42.4
2x8GB 3200CL15
SE +/- 0.03, N = 3
41.9
4x8GB 3200CL15
SE +/- 0.03, N = 3
42.3
4x8GB 3200CL15 SMT OFF
SE +/- 0.00, N = 3
42.1
3500X 2x8GB 3200CL22
SE +/- 0.00, N = 3
45.1
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.03, N = 3
44.1
3500X 2x4GB 2400CL17
SE +/- 0.03, N = 3
44.3
3500X 4x8GB 3200CL15
SE +/- 0.07, N = 3
45.3
3500X 2x8GB 3200CL15
SE +/- 0.07, N = 3
44.4
3500X 1x8GB 2400CL17
SE +/- 0.03, N = 3
44.2
2x8GB 3600CL16
SE +/- 0.03, N = 3
42.1
3500X 2x8GB 3600CL16
SE +/- 0.03, N = 3
44.6
10
20
30
40
50

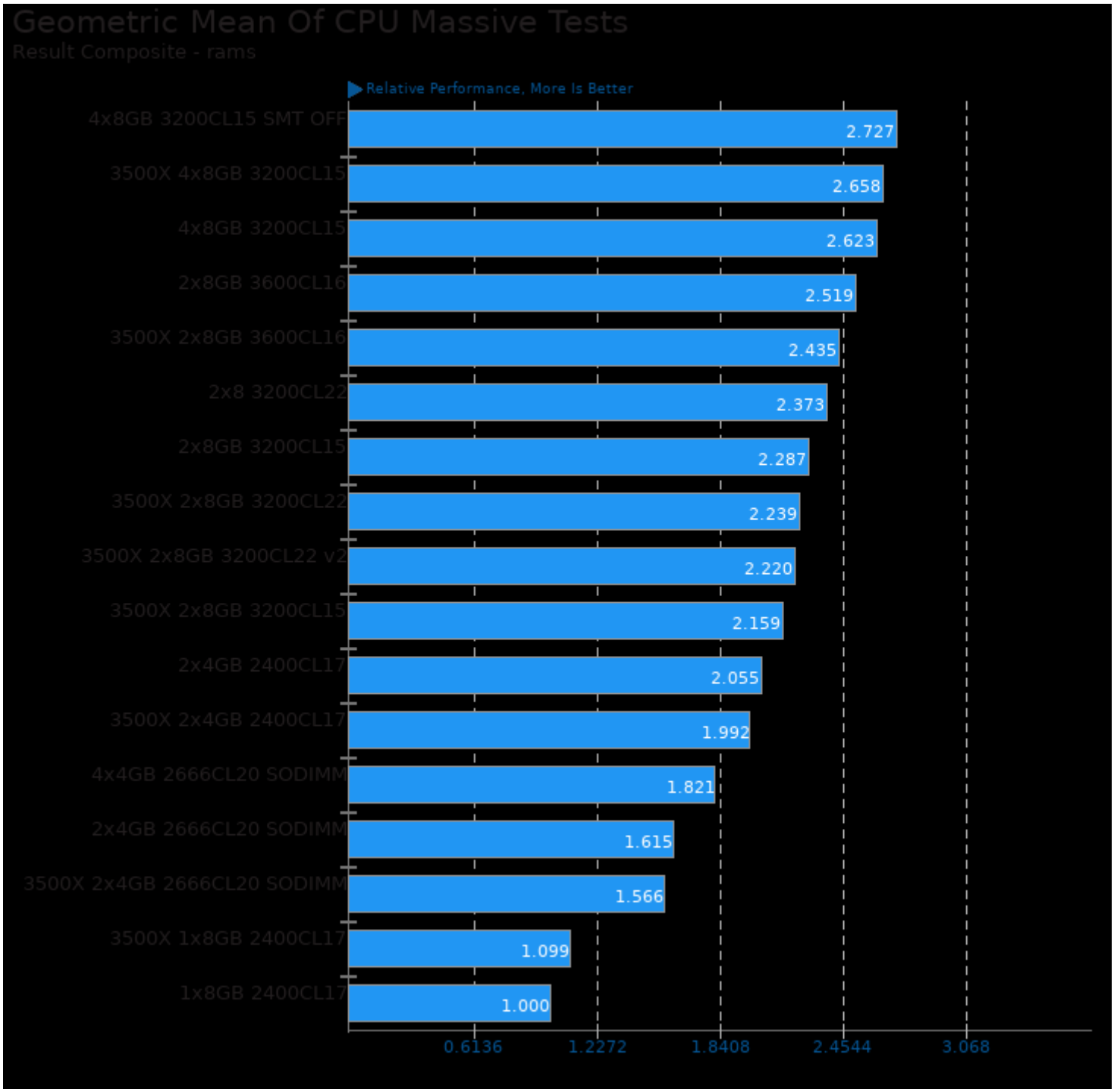
rams


PyPerformance 1.0.0
Benchmark: pickle_pure_python
Milliseconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.58, N = 3
413
1x8GB 2400CL17
SE +/- 0.33, N = 3
407
2x8 3200CL22
SE +/- 0.58, N = 3
410
2x4GB 2666CL20 SODIMM
SE +/- 0.58, N = 3
408
2x8GB 3200CL15
404
4x8GB 3200CL15
SE +/- 1.00, N = 3
407
4x8GB 3200CL15 SMT OFF
402
3500X 2x8GB 3200CL22
452
3500X 2x4GB 2666CL20 SODIMM
431
3500X 2x4GB 2400CL17
428
3500X 4x8GB 3200CL15
428
3500X 2x8GB 3200CL15
429
3500X 1x8GB 2400CL17
SE +/- 0.33, N = 3
427
2x8GB 3600CL16
407
3500X 2x8GB 3600CL16
SE +/- 0.33, N = 3
431
100
200
300
400
500

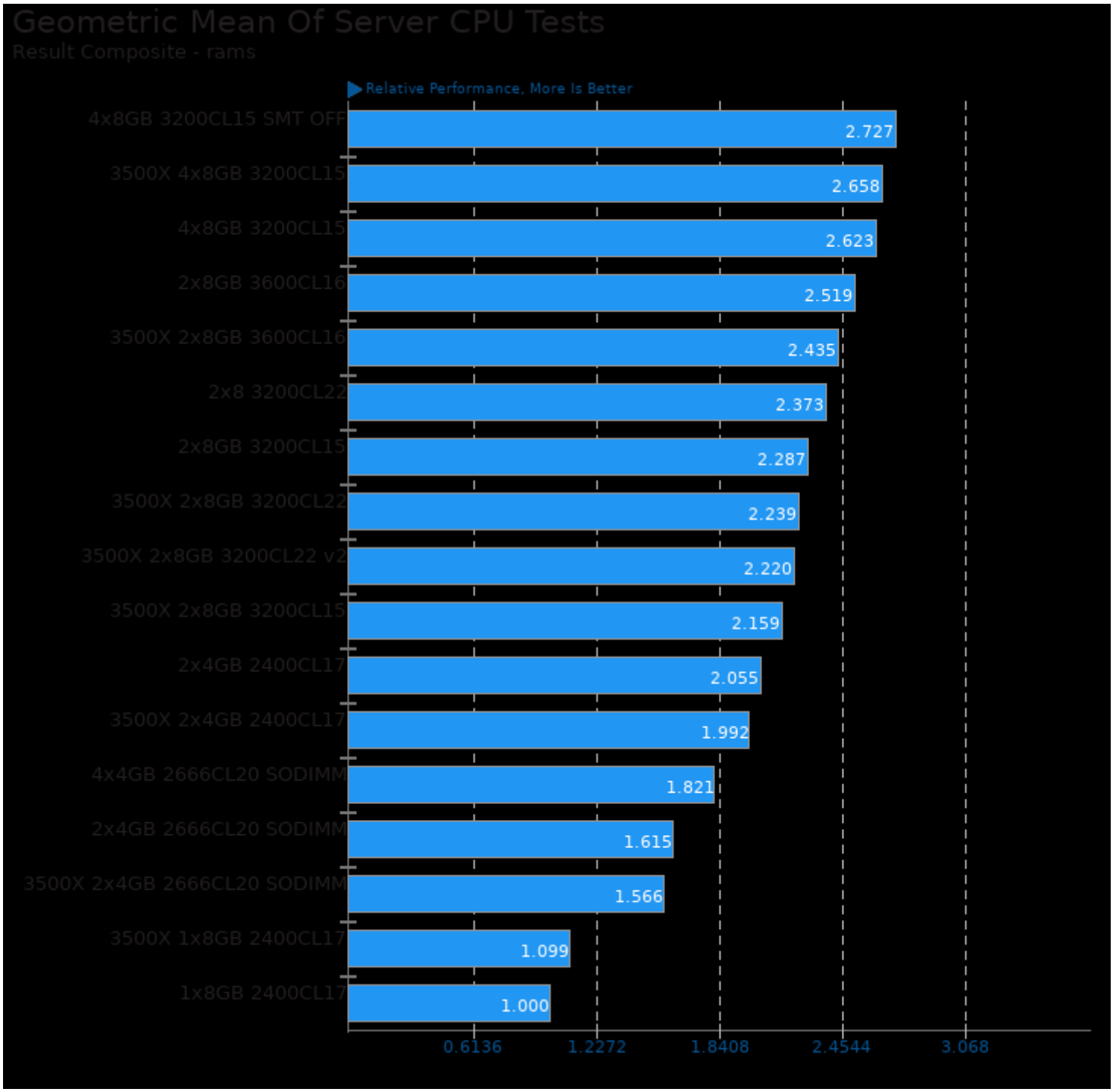

Scikit-Learn 0.22.1
Seconds, Fewer Is Better
2x4GB 2400CL17
SE +/- 0.16, N = 3
104.78
1x8GB 2400CL17
SE +/- 0.16, N = 3
106.88
2x8 3200CL22
SE +/- 0.10, N = 3
105.39
2x4GB 2666CL20 SODIMM
SE +/- 1.91, N = 14
107.85
2x8GB 3200CL15
SE +/- 0.06, N = 3
104.45
4x8GB 3200CL15
SE +/- 0.04, N = 3
104.98
4x8GB 3200CL15 SMT OFF
SE +/- 0.13, N = 3
104.17
3500X 2x8GB 3200CL22
SE +/- 0.05, N = 3
110.05
3500X 2x4GB 2666CL20 SODIMM
SE +/- 0.07, N = 3
110.29
3500X 2x4GB 2400CL17
SE +/- 0.17, N = 3
108.84
3500X 4x8GB 3200CL15
SE +/- 0.10, N = 3
109.69
3500X 2x8GB 3200CL15
SE +/- 0.06, N = 3
109.44
3500X 1x8GB 2400CL17
SE +/- 0.14, N = 3
110.53
2x8GB 3600CL16
SE +/- 0.08, N = 3
104.73
3500X 2x8GB 3600CL16
SE +/- 0.13, N = 3
109.52
20
40
60
80
100

rams

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



Geometric mean based upon tests: pts/build-apache, pts/build-linux-kernel, pts/c-ray, pts/compress-7zip, pts/compress-pbzip2, pts/cython-bench, pts/npb, pts/redis, pts/scikit-learn, pts/stream and pts/swet



Geometric mean based upon tests: pts/npb, pts/compress-7zip, pts/build-linux-kernel, pts/c-ray, pts/redis, pts/pybench, pts/cython-bench, pts/scikit-learn and pts/stream

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 04:33.