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Core i9 7980XE + Dual Xeon Gold - 8-Way Linux Distribution Comparison

Q4-2017 Linux distribution comparison on two systems. Eight Linux distros each, tested out-of-the-box performance. Linux OS benchmarks for a future article on Phoronix, by Michael Larabel.

Automated Executive Summary

i9-7980XE: Clear Linux 19110 had the most wins, coming in first place for 54% of the tests.

Based on the geometric mean of all complete results, the fastest (i9-7980XE: Clear Linux 19110) was 2.957x the speed of the slowest (i9-7980XE: CentOS 7).

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

Go Benchmarks (Test: http) at 41.328x
Redis (Test: SADD) at 33.077x
Redis (Test: LPUSH) at 28.648x
Scikit-Learn at 16.111x
PostgreSQL pgbench (Scaling: Buffer Test - Test: Normal Load - Mode: Read Only) at 13.998x
R Benchmark at 6.169x
PHPBench (PHP Benchmark Suite) at 4.819x
Rodinia (Test: OpenMP LavaMD) at 4.672x
Caffe (Build: CPU AlexNet) at 4.51x

Perl Benchmarks (Test: Interpreter) at 4.317x.

Test Systems:

2 x Xeon Gold: CentOS 7

Processor: 2 x Intel Xeon Gold 6138 @ 3.70GHz (40 Cores / 80 Threads), Motherboard: TYAN S7106, Chipset: Intel Device 2020, Memory: 95232MB, Disk: 256GB Samsung SSD 850, Graphics: LLVMpipe, Monitor: VE228, Network: Intel I210 Gigabit Connection

OS: CentOS Linux 7, Kernel: 3.10.0-693.5.2.el7.x86_64 (x86_64), Desktop: GNOME Shell 3.22.3, Display Server: X Server 1.19.3, Display Driver: modesetting 1.19.3, OpenGL: 2.1 Mesa 17.0.1 Gallium 0.4 (LLVM 3.9 256 bits), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 1920x1080

Environment Notes: GJS_DEBUG_OUTPUT=stderr GJS_DEBUG_TOPICS=JS ERROR;JS LOG
Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: CFQ / attr2,inode64,noquota,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.5. SELinux: Enabled.

2 x Xeon Gold: Fedora 27

Processor: 2 x Intel Xeon Gold 6138 @ 3.70GHz (40 Cores / 80 Threads), Motherboard: TYAN S7106, Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 96256MB, Disk: 256GB Samsung SSD 850, Graphics: llvmpipe 95360MB, Monitor: VE228, Network: Intel I210 Gigabit Connection

OS: Fedora 27, Kernel: 4.13.9-300.fc27.x86_64 (x86_64), Desktop: GNOME Shell 3.26.1, Display Driver: modesetting 1.19.5, OpenGL: 2.1 Mesa 17.2.2 (LLVM 4.0 256 bits), Compiler: GCC 7.2.1 20170915, File-System: ext4, Screen Resolution: 1920x1080

Environment Notes: GJS_DEBUG_OUTPUT=stderr GJS_DEBUG_TOPICS=JS ERROR;JS LOG
Compiler Notes: --build=x86_64-redhat-linux --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,fortran,ada,go,lto --enable-libmpx --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: CFQ / data=ordered,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.13. SELinux: Enabled.

2 x Xeon Gold: Clear Linux 19110

Processor: 2 x Intel Xeon Gold 6138 @ 3.70GHz (40 Cores / 80 Threads), Motherboard: TYAN S7106, Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 12 x 8192 MB DDR4-2666MT/s Micron, Disk: 256GB Samsung SSD 850, Graphics: ASPEED ASPEED Family, Network: Intel I210 Gigabit Connection

OS: Clear Linux OS 19110, Kernel: 4.13.12-430.native (x86_64), Vulkan: 1.0.39, Compiler: GCC 7.2.1 20170910 + Clang 5.0.0 + LLVM 5.0.0, File-System: ext4, Screen Resolution: 800x600

Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --enable-__cxa_atexit --enable-bootstrap --enable-clocale=gnu --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere

--with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Disk Notes: NONE / data=ordered,relatime,rw,stripe=256
Processor Notes: Scaling Governor: intel_pstate performance
System Notes: Python 2.7.12.

2 x Xeon Gold: Debian 9.2

Processor: 2 x Intel Xeon Gold 6138 @ 3.70GHz (40 Cores / 80 Threads), Motherboard: TYAN S7106, Chipset: Intel Device 2020, Memory: 12 x 8192 MB DDR4-2666MHz Micron, Disk: 256GB Samsung SSD 850, Graphics: LLVMpipe, Network: Intel I210 Gigabit Connection

OS: Debian 9.2, Kernel: 4.9.0-4-amd64 (x86_64), Desktop: GNOME Shell 3.22.3, Display Server: X Server 1.19.2, OpenGL: 3.3 Mesa 13.0.6 Gallium 0.4 (LLVM 3.9 256 bits), Compiler: GCC 6.3.0 20170516, File-System: ext4, Screen Resolution: 1024x768

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --disable-vtable-verify --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-gtk-cairo --enable-java-awt=gtk --enable-java-home --enable-languages=c,ada,c++,java,go,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-arch-directory=amd64 --with-default-libstdcxx-abi=new --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic -v
Disk Notes: CFQ / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.13.

2 x Xeon Gold: openSUSE 42.3

Processor: 2 x Intel Xeon Gold 6138 @ 3.70GHz (40 Cores / 80 Threads), Motherboard: TYAN S7106, Chipset: Intel Device 2020, Memory: 96256MB, Disk: 256GB Samsung SSD 850 + 16GB Voyager 3.0, Graphics: LLVMpipe, Monitor: VE228, Network: Intel I210 Gigabit Connection

OS: openSUSE 42.3, Kernel: 4.4.76-1-default (x86_64), Desktop: KDE Frameworks 5, Display Server: X Server 1.18.3, Display Driver: modesetting 1.18.3, OpenGL: 3.3 Mesa 17.0.5 Gallium 0.4 (LLVM 3.8 256 bits), Compiler: GCC 4.8.5, File-System: xfs, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-suse-linux --disable-libgcj --disable-libmudflap --disable-libssp --disable-libstdcxx-pch --disable-plugin --enable-__cxa_atexit --enable-checking=release --enable-languages=c,c++,objc,fortran,obj-c++,java,ada --enable-libstdcxx-allocator=new --enable-linux-futex --enable-ssp --enable-version-specific-runtime-libs --host=x86_64-suse-linux --mandir=/usr/share/man --with-arch-32=i586 --with-slibdir=/lib64 --with-tune=generic --without-system-libunwind
Disk Notes: DEADLINE / attr2,inode64,noquota,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.13.

2 x Xeon Gold: Tumbleweed

Processor: 2 x Intel Xeon Gold 6138 @ 3.70GHz (40 Cores / 80 Threads), Motherboard: TYAN S7106, Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 96256MB, Disk: 256GB Samsung SSD 850 + 16GB Voyager 3.0, Graphics: ASPEED ASPEED Family, Monitor: VE228, Network: Intel I210 Gigabit Connection

OS: openSUSE Tumbleweed 20171115, Kernel: 4.13.12-1-default (x86_64), Desktop: KDE Frameworks 5, Display Server: X Server 1.19.5, Display Driver: modesetting 1.19.5, OpenGL: 3.3 Mesa 17.2.5 (LLVM 4.0 256 bits), Compiler: GCC 7.2.1 20171020 [gcc-7-branch revision 253932], File-System: xfs, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-suse-linux --disable-libcc1 --disable-libssp --disable-libstdcxx-pch --disable-libvtv --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-gnu-indirect-function --enable-languages=c,c++,objc,fortran,obj-c++,ada,go --enable-libstdcxx-allocator=new --enable-linux-futex --enable-multilib --enable-offload-targets=hsa,nvptx-none=/usr/nvptx-none, --enable-plugin --enable-ssp --enable-version-specific-runtime-libs --host=x86_64-suse-linux --mandir=/usr/share/man --with-arch-32=x86-64 --with-gcc-major-version-only --with-slibdir=/lib64 --with-tune=generic --without-cuda-driver --without-system-libunwind
Disk Notes: DEADLINE / attr2,inode64,noquota,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.13.

2 x Xeon Gold: Ubuntu 16.04.3

Processor: 2 x Intel Xeon Gold 6138 @ 3.70GHz (40 Cores / 80 Threads), Motherboard: TYAN S7106, Chipset: Intel Device 2020, Memory: 96256MB, Disk: 256GB Samsung SSD 850, Graphics: LLVMpipe, Monitor: VE228, Network: Intel I210 Gigabit Connection

OS: Ubuntu 16.04, Kernel: 4.10.0-38-generic (x86_64), Desktop: Unity 7.4.0, Display Driver: modesetting 1.19.3, OpenGL: 3.3 Mesa 17.0.7 Gallium 0.4 (LLVM 4.0 256 bits), Compiler: GCC 5.4.0 20160609, File-System: ext4, Screen Resolution: 1024x768

Environment Notes: LIBGL_ALWAYS_SOFTWARE=1
Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-gtk-cairo --enable-java-awt=gtk --enable-java-home --enable-languages=c,ada,c++,java,go,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-arch-directory=amd64 --with-default-libstdcxx-abi=new --with-multilib-list=m32,m64,mx32 --with-tune=generic -v
Disk Notes: CFQ / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.12.

2 x Xeon Gold: Ubuntu 18.04 11-17

Processor: 2 x Intel Xeon Gold 6138 @ 3.70GHz (40 Cores / 80 Threads), Motherboard: TYAN S7106, Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 96256MB, Disk: 256GB Samsung SSD 850, Graphics: ASPEED ASPEED Family, Monitor: VE228, Network: Intel I210 Gigabit Connection

OS: Ubuntu 18.04, Kernel: 4.13.0-16-generic (x86_64), Desktop: GNOME Shell 3.26.2, Display Driver: modesetting 1.19.5, OpenGL: 3.3 Mesa 17.2.2 (LLVM 5.0 256 bits), Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1920x1080

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: CFQ / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.14.

i9-7980XE: CentOS 7

Processor: Intel Core i9-7980XE @ 4.40GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A, Chipset: Intel Device 2020, Memory: 16384MB, Disk: 16GB Voyager 3.0 + 120GB Force MP500, Graphics: AMD Radeon RX 470/480/580 8192MB, Audio: Realtek Generic, Monitor: Acer B286HK, Network: Intel Connection

OS: CentOS Linux 7, Kernel: 3.10.0-693.5.2.el7.x86_64 (x86_64), Desktop: GNOME Shell 3.22.3, Display Server: X Server 1.19.3, Display Driver: radeon 7.7.99, OpenGL: 4.5 Mesa 17.0.1 Gallium 0.4 (LLVM 3.9.1), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_OUTPUT=stderr GJS_DEBUG_TOPICS=JS ERROR;JS LOG
Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: none / attr2,inode64,noquota,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.5. SELinux: Enabled.

i9-7980XE: Fedora 27

Processor: Intel Core i9-7980XE @ 4.40GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A, Chipset:

Intel Sky Lake-E DMI3 Registers, Memory: 16384MB, Disk: 16GB Voyager 3.0 + 120GB Force MP500, Graphics: AMD Radeon 8192MB, Audio: Realtek ALC1220, Monitor: Acer B286HK, Network: Intel Connection

OS: Fedora 27, Kernel: 4.13.9-300.fc27.x86_64 (x86_64), Desktop: GNOME Shell 3.26.1, Display Server: Wayland, OpenGL: 4.5 Mesa 17.2.2 (LLVM 4.0.1), Compiler: GCC 7.2.1 20170915, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_OUTPUT=stderr GJS_DEBUG_TOPICS=JS ERROR;JS LOG
Compiler Notes: --build=x86_64-redhat-linux --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,fortran,ada,go,lto --enable-libmpx --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: NONE / data=ordered,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.13. SELinux: Enabled.

i9-7980XE: Clear Linux 19110

Processor: Intel Core i9-7980XE @ 4.40GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A, Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 4 x 4096 MB DDR4-3200MT/s Corsair CMK16GX4M4C3200C16, Disk: 16GB Voyager 3.0 + 120GB Force MP500, Graphics: AMD Radeon RX 470/480/570/580, Audio: Realtek ALC1220, Network: Intel Connection

OS: Clear Linux OS 19110, Kernel: 4.13.12-430.native (x86_64), Vulkan: 1.0.39, Compiler: GCC 7.2.1 20170910 + Clang 5.0.0 + LLVM 5.0.0, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --enable-__cxa_atexit --enable-bootstrap --enable-clocale=gnu --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Disk Notes: NONE / data=ordered,relatime,rw,stripe=256
Processor Notes: Scaling Governor: intel_pstate performance
System Notes: Python 2.7.12.

i9-7980XE: Debian 9.2

Processor: Intel Core i9-7980XE @ 4.40GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A, Chipset: Intel Device 2020, Memory: 4 x 4096 MB DDR4-3200MHz Corsair CMK16GX4M4C3200C16, Disk: 16GB Voyager 3.0 + 120GB Force MP500, Graphics: LLVMpipe, Audio: Realtek Generic, Monitor: Acer B286HK, Network: Intel Connection

OS: Debian 9.2, Kernel: 4.9.0-4-amd64 (x86_64), Desktop: GNOME Shell 3.22.3, Display Server: X Server 1.19.2, Display Driver: modesetting 1.19.2, OpenGL: 3.3 Mesa 13.0.6 Gallium 0.4 (LLVM 3.9 256 bits), Compiler: GCC 6.3.0 20170516, File-System: ext4, Screen Resolution: 1280x1024

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --disable-vtable-verify --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-gtk-cairo --enable-java-awt=gtk --enable-java-home --enable-languages=c,ada,c++,java,go,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-arch-directory=amd64 --with-default-libstdcxx-abi=new --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic -v
Disk Notes: none / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.13.

i9-7980XE: openSUSE 42.3

Processor: Intel Core i9-7980XE @ 4.40GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A, Chipset: Intel Device 2020, Memory: 16384MB, Disk: 16GB Voyager 3.0 + 120GB Force MP500, Graphics: AMD Ellesmere [Polaris10] 8192MB, Audio: Realtek Generic, Monitor: Acer B286HK, Network: Intel Connection

OS: openSUSE 42.3, Kernel: 4.4.76-1-default (x86_64), Desktop: KDE Frameworks 5, Display Server: X Server 1.18.3, Display Driver: modesetting 1.18.3, OpenGL: 4.1 Mesa 17.0.5 Gallium 0.4 (LLVM 3.8.0), Compiler: GCC 4.8.5, File-System: xfs, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-suse-linux --disable-libgcj --disable-libmudflap --disable-libssp --disable-libstdcxx-pch --disable-plugin --enable-__cxa_atexit --enable-checking=release --enable-languages=c,c++,objc,fortran,obj-c++,java,ada --enable-libstdcxx-allocator=new --enable-linux-futex --enable-ssp --enable-version-specific-runtime-libs --host=x86_64-suse-linux --mandir=/usr/share/man --with-arch-32=i586 --with-slibdir=/lib64 --with-tune=generic --without-system-libunwind
Disk Notes: none / attr2,inode64,noquota,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.13.

i9-7980XE: Tumbleweed

Processor: Intel Core i9-7980XE @ 4.40GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A, Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 16384MB, Disk: 16GB Voyager 3.0 + 120GB Force MP500, Graphics: AMD Radeon RX 470/480/570/580 8192MB, Audio: Realtek ALC1220, Monitor: Acer B286HK, Network: Intel Connection

OS: openSUSE Tumbleweed 20171115, Kernel: 4.13.12-1-default (x86_64), Desktop: KDE Frameworks 5, Display Server: X Server 1.19.5, Display Driver: modesetting 1.19.5, OpenGL: 4.5 Mesa 17.2.5 (LLVM 4.0.1), Compiler: GCC 7.2.1 20171020 [gcc-7-branch revision 253932], File-System: xfs, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-suse-linux --disable-libcc1 --disable-libssp --disable-libstdcxx-pch --disable-libvtv --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-gnu-indirect-function --enable-languages=c,c++,objc,fortran,obj-c++,ada,go --enable-libstdcxx-allocator=new --enable-linux-futex --enable-multilib --enable-offload-targets=hsa,nvptx-none=/usr/nvptx-none, --enable-plugin --enable-ssp --enable-version-specific-runtime-libs --host=x86_64-suse-linux --mandir=/usr/share/man --with-arch-32=x86-64 --with-gcc-major-version-only --with-slibdir=/lib64 --with-tune=generic --without-cuda-driver --without-system-libunwind
Disk Notes: NONE / attr2,inode64,noquota,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.13.

i9-7980XE: Ubuntu 16.04.3

Processor: Intel Core i9-7980XE @ 4.40GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A, Chipset: Intel Device 2020, Memory: 16384MB, Disk: 120GB Force MP500, Graphics: amdgpudrmfb, Audio: Realtek Generic, Monitor: Acer B286HK, Network: Intel Connection

OS: Ubuntu 16.04, Kernel: 4.10.0-38-generic (x86_64), Desktop: Unity 7.4.0, Display Driver: modesetting 1.19.3, OpenGL: 4.5 Mesa 17.0.7 Gallium 0.4 (LLVM 4.0.0), Compiler: GCC 5.4.0 20160609, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-gtk-cairo --enable-java-awt=gtk --enable-java-home --enable-languages=c,ada,c++,java,go,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-arch-directory=amd64 --with-default-libstdcxx-abi=new --with-multilib-list=m32,m64,mx32 --with-tune=generic -v
Disk Notes: none / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.12.

i9-7980XE: Ubuntu 18.04 11-17

Processor: Intel Core i9-7980XE @ 4.40GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A, Chipset: Intel Device 2020, Memory: 16384MB, Disk: 120GB Force MP500, Graphics: AMD Radeon RX 470/480 8192MB, Audio: Realtek ALC1220, Monitor: Acer B286HK, Network: Intel Connection

OS: Ubuntu 18.04, Kernel: 4.13.0-16-generic (x86_64), Desktop: GNOME Shell 3.26.2, Display Server: Wayland, OpenGL: 4.5 Mesa 17.2.2 (LLVM 5.0.0), Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr

Core i9 7980XE + Dual Xeon Gold - 8-Way Linux Distribution Comparison

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: NONE / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
System Notes: Python 2.7.14.

	2 x Xeon Gold: CentOS 7	2 x Xeon Gold: Fedora 27	2 x Xeon Gold: Clear Linux 19110	2 x Xeon Gold: Debian 9.2	2 x Xeon Gold: openSUSE 42.3	2 x Xeon Gold: Tumbleweed	2 x Xeon Gold: Ubuntu 16.04.3	2 x Xeon Gold: Ubuntu 18.04 11-17	i9-7980XE: CentOS 7	i9-7980XE: Fedora 27	i9-7980XE: Clear Linux 19110	i9-7980XE: Debian 9.2	i9-7980XE: openSUSE 42.3	i9-7980XE: Tumbleweed	i9-7980XE: Ubuntu 16.04.3	i9-7980XE: Ubuntu 18.04 11-17
PHPBench - P.B.S	149782		609113	474474			420472	494546	184168		721859	370800			535269	608245
Normalized	20.75%		84.38%	65.73%			58.25%	68.51%	25.51%		100%	51.37%			74.15%	84.26%
Standard Deviation	0.3%		0.7%	1.9%			4.3%	8.3%	0.5%		3.4%	0%			6.9%	3.7%
Perl Benchmarks - Pod2html (seconds)	0.133 14010		0.117 98569	0.127 68341	0.126 57259	0.119 45799	0.143 60606	0.130 13227	0.122 46423		0.102 38272	0.111 66438	0.114 38051	0.097 83656	0.125 81576	0.108 87619
Normalized	73.48%		82.92%	76.62%	77.3%	81.9%	68.13%	75.18%	79.89%		95.56%	87.62%	85.54%	100%	77.76%	89.86%
Standard Deviation	1.3%		3.3%	4.7%	0.9%	0.7%	2.4%	1.8%	0.4%		0.5%	7%	0.6%	0.3%	1.6%	1.3%
Perl Benchmarks - Interpreter (seconds)	0.001 71675		0.000 70586	0.002 19998	0.002 02319	0.002 68488	0.001 93758	0.002 61938	0.001 31081		0.000 62195	0.001 48945	0.001 55796	0.001 94090	0.001 44761	0.001 95614
Normalized	36.23%		88.11%	28.27%	30.74%	23.16%	32.1%	23.74%	47.45%		100%	41.76%	39.92%	32.04%	42.96%	31.79%
Standard Deviation	4.2%		0.3%	1.2%	0.3%	1.9%	0%	0.2%	4%		1.2%	9.5%	0.2%	0.6%	1.9%	1.3%
PyBench - T.F.A.T.T (Millisecond	1652	1475	1220	1430	1465	1472	1415	1308	1511	1258	981	1262	1308	1199	1167	1058
Normalized	59.38%	66.51%	80.41%	68.6%	66.96%	66.64%	69.33%	75%	64.92%	77.98%	100%	77.73%	75%	81.82%	84.06%	92.72%
Standard Deviation		0.3%	0.6%	0.1%			0.1%	0.1%	0.3%	2.5%	0.3%	0.2%	2.4%	0.1%	0.2%	0.3%
Numpy Benchmark (Nanoseconds)	12680199	5948620	5180662	5736618	1097724	5789886	6179604	5751058	1144382	5060637	4567593	5035916	9886283	4706389	5229962	4567163
Normalized	36.02%	76.78%	88.16%	79.61%	41.61%	78.88%	73.91%	79.41%	39.91%	90.25%	99.99%	90.69%	46.2%	97.04%	87.33%	100%
R Benchmark	0.3490	0.3454	0.3024	0.4674	0.8970	0.8116	0.6898	0.8337	0.3167	0.2956	0.1454	0.3961	0.7949	0.6514	0.5426	0.3936
Normalized	41.66%	42.1%	48.08%	31.11%	16.21%	17.92%	21.08%	17.44%	45.91%	49.19%	100%	36.71%	18.29%	22.32%	26.8%	36.94%

Standard Deviation	1.4%	0.7%	6.9%	2.1%	0.4%	0.3%	5.1%	7.3%	0.5%	1.4%	0.9%	1.6%	0.7%	0.6%	3.6%	4.3%
Go Benchmarks - http (Nanoseconds)	23464	18825	19116	8002	8042	18728	8074	19138	139027	8141	7979	8684	67981	7863	3364	8068
Normalized	14.34%	17.87%	17.6%	42.04%	41.83%	17.96%	41.66%	17.58%	2.42%	41.32%	42.16%	38.74%	4.95%	42.78%	100%	41.7%
Standard Deviation	2%	1.1%	1.3%	1.5%	3.9%	3%	2.2%	0.9%	0.3%	0.4%	1.7%	0.1%	0%	0.8%	1.1%	0.9%
Go Benchmarks - json (Nanoseconds)	3121893	2780798	2690438	2628126	2693248	2706257	9261120	2977758	3822804	3319009	3168639	3428190	3560301	3166903	6050565	3366223
Normalized	84.18%	94.51%	97.68%	100%	97.58%	97.11%	28.38%	88.26%	68.75%	79.18%	82.94%	76.66%	73.82%	82.99%	43.44%	78.07%
Standard Deviation	1.1%	2.4%	1.3%	0.9%	1.9%	1.8%	3.1%	0.7%	0.2%	0.1%	0.1%	0.1%	0.3%	0.1%	0.1%	0.1%
Go Benchmarks - garbage (Nanoseconds)	1109249	1003671	1000439	1149428	1126269	1007127	1065948	1045946	1253764	776592	741258	964720	1269604	746369	861065	733990
Normalized	66.17%	73.13%	73.37%	63.86%	65.17%	72.88%	68.86%	70.17%	58.54%	94.51%	99.02%	76.08%	57.81%	98.34%	85.24%	100%
Standard Deviation	3.1%	1.1%	1%	0.7%	1.6%	0.6%	1.3%	2.9%	0.3%	0.1%	0.2%	0.3%	0.3%	0.2%	0.7%	0.3%
Tensorflow - Cifar10 (sec)			29.63	37.27			37.37				25.49	34.73			34.72	
Normalized			86.03%	68.39%			68.21%				100%	73.39%			73.42%	
Standard Deviation			1%	0.9%			0.4%				3.5%	0.2%			0.1%	
Caffe - CPU AlexNet (ms)			148288	363558			430896				95543	310078			349330	
Normalized			64.43%	26.28%			22.17%				100%	30.81%			27.35%	
Standard Deviation			0.7%	1.9%			0.7%				0.4%	0.1%			0.7%	
Caffe - CPU Googlenet (ms)			395104	810952			850323				218330	703141			687321	
Normalized			55.26%	26.92%			25.68%				100%	31.05%			31.77%	
Standard Deviation			0.5%	0.5%			0.4%				0.5%	0.2%			0.3%	
Scikit-Learn (sec)			16.17	39.71			41.56	188.82			11.72	35.20			33.24	29.48
Normalized			72.48%	29.51%			28.2%	6.21%			100%	33.3%			35.26%	39.76%
Standard Deviation			2.5%	0.1%			0.9%	0.8%			5.9%	0.7%			0.4%	0.2%
x264 - H.2.V.E (FPS)	393.08	311.07	405.04	365.05	377.98	315.53	368.83	312.18	359.83	319.26	474.84	340.18	353.10	330.82	369.57	308.69
Normalized	82.78%	65.51%	85.3%	76.88%	79.6%	66.45%	77.67%	65.74%	75.78%	67.24%	100%	71.64%	74.36%	69.67%	77.83%	65.01%

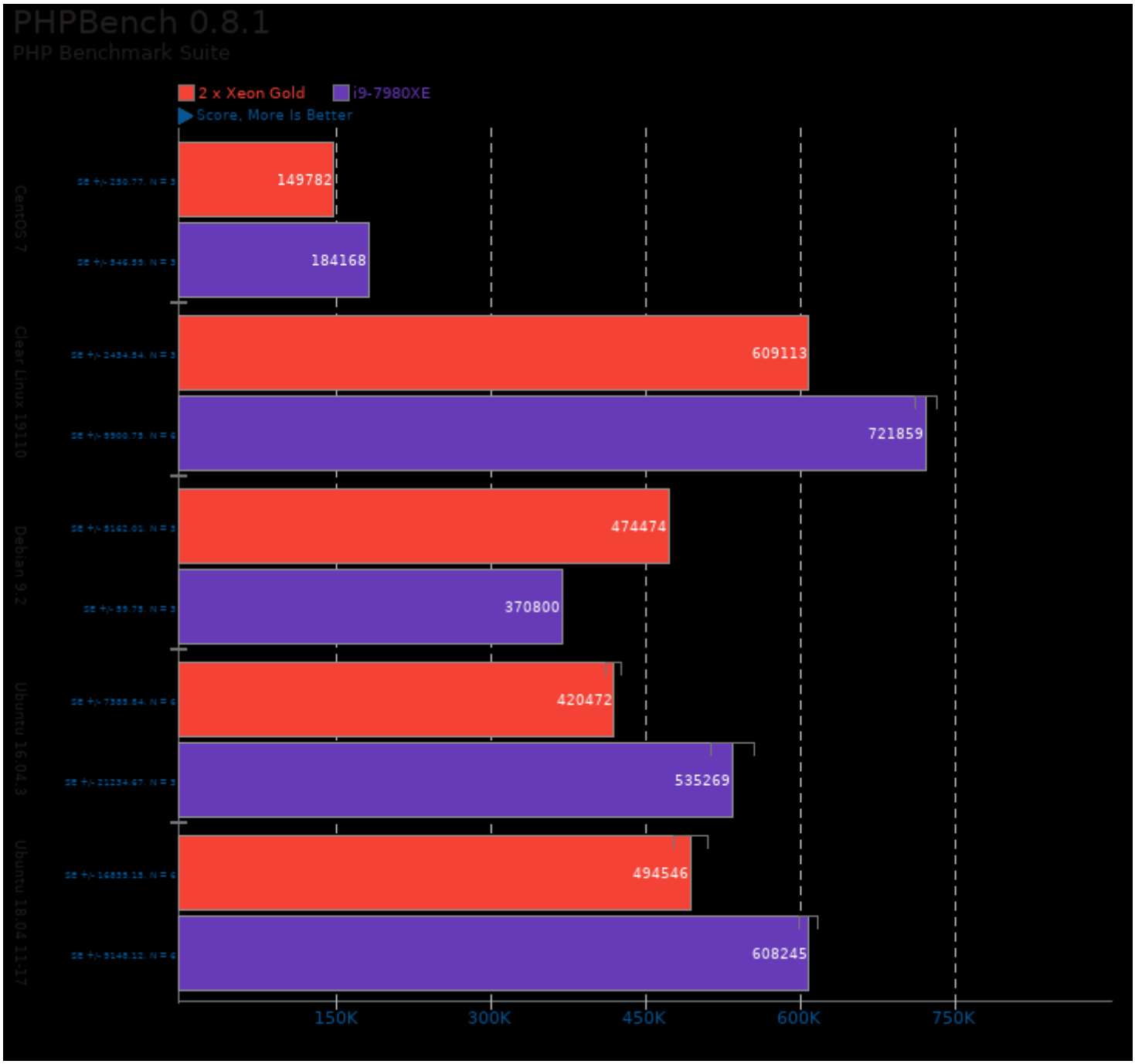
Standard Deviation	2.9%	1.3%	0.5%	2.5%	1.9%	0.6%	0.7%	1.5%	0.6%	1.2%	24.1%	1.4%	0.6%	2.4%	1.6%	18.9%
FFmpeg - H.2.H.T.N.D (sec)									11.02	12.97		10.73	10.75	12.37	10.32	13.52
Normalized									93.65%	79.57%		96.18%	96%	83.43%	100%	76.33%
Standard Deviation									0.7%	0.6%		0.2%	0.7%	0.6%	7.5%	5.3%
Redis - SET (Reqs/sec)	1350743	1592536	2183621	1566858	1575671	1631505	1352216	1599128	9106180	2120404	2681004	1087483	9847036	2151636	1309581	2214605
Normalized	50.38%	59.4%	81.45%	58.44%	58.77%	60.85%	50.44%	59.65%	3.4%	79.09%	100%	4.06%	3.67%	80.25%	48.85%	82.6%
Standard Deviation	0.1%	6.4%	1.2%	8%	7.5%	1.3%	18.2%	11.3%	1%	3.2%	0.5%	0.1%	1.2%	5.4%	53.3%	7.9%
Redis - GET (Reqs/sec)	1570801	1962178	2810699	2259230	1949837	2184128	1691197	1809365	9067910	2633010	3554512	1087667	9920111	2800011	2241532	2720580
Normalized	44.19%	55.2%	79.07%	63.56%	54.86%	61.45%	47.58%	50.9%	2.55%	74.08%	100%	3.06%	2.79%	78.77%	63.06%	76.54%
Standard Deviation	1.1%	11.7%	3%	1.1%	11.3%	13.2%	16.1%	2.9%	0.7%	4%	0.2%	0.1%	0.8%	2.8%	5.4%	8.1%
Redis - LPUSH (Reqs/sec)	1324839	1611053	2056286	1663324	1555581	1677708	1308825	1486652	9107641	2107627	2609127	1087319	9830563	2256263	1730814	2156958
Normalized	50.78%	61.75%	78.81%	63.75%	59.62%	64.3%	50.16%	56.98%	3.49%	80.78%	100%	4.17%	3.77%	86.48%	66.34%	82.67%
Standard Deviation	1.9%	7.1%	0.8%	3.5%	7.2%	6%	16.5%	5.4%	0.5%	2.5%	1.6%	0.1%	1.4%	2%	4.9%	5.5%
Redis - LPOP	1415820	1757550	2433128	1926524	1737309	1872752	1428244	1573762	9051367	2261367	3003021	1087116	9755054	2703754	1915347	2451389
Normalized	47.15%	58.53%	81.02%	64.15%	57.85%	62.36%	47.56%	52.41%	3.01%	75.3%	100%	3.62%	3.25%	90.03%	63.78%	81.63%
Standard Deviation	0.8%	12.8%	0.5%	2.8%	7.4%	12.9%	15.8%	4.1%	0.9%	2%	0.3%	0.2%	1.5%	13.1%	5.9%	4.5%
Redis - SADD	1404116	1659680	2435126	1734888	1580414	1936657	1325364	1651606	9087903	2379103	3006018	1088304	9896447	2473647	1844707	2487581
Normalized	46.71%	55.21%	81.01%	57.71%	52.57%	64.43%	44.09%	54.94%	3.02%	79.14%	100%	3.62%	3.29%	82.29%	61.37%	82.75%
Standard Deviation	1.7%	5%	0.6%	8.1%	5.7%	12.7%	13.2%	6.5%	0.7%	0.5%	0.2%	0.2%	0.6%	4.6%	2.6%	4.5%
Gzip Compression - 2.F.C	11.15	11.03	4.95	10.79	8.77	8.12	12.25	11.62	10.08	9.08		9.56	8.20	6.57	10.69	9.50
Normalized	44.39%	44.88%	100%	45.88%	56.44%	60.96%	40.41%	42.6%	49.11%	54.52%		51.78%	60.37%	75.34%	46.3%	52.11%
Standard Deviation	0.5%	3.3%	1.9%	4.9%	0.7%	1.4%	10.5%	8.4%	2%	0.5%		2.6%	6.1%	1.2%	7.7%	10.6%
Compile Bench - Initial Create	256.56	413.77	628.60	536.16	394.91	433.21	465.61	548.98	283.66	520.81	830.57	672.85	451.36	519.71	652.02	740.03
Normalized	30.89%	49.82%	75.68%	64.55%	47.55%	52.16%	56.06%	66.1%	34.15%	62.71%	100%	81.01%	54.34%	62.57%	78.5%	89.1%
Standard Deviation	0.6%	4.1%	2.1%	1.7%	1%	0.5%	9.9%	2.4%	1.6%	2.3%	2.6%	0.6%	1.4%	1.9%	2.5%	6.2%
Compile Bench - Compile (MB/s)	1537	1717	1939	1795	1931	2070	1819	1739	1413	1569	2537	1676	1689	1545	1598	1735
Normalized	60.59%	67.69%	76.44%	70.74%	76.1%	81.59%	71.72%	68.57%	55.71%	61.85%	100%	66.07%	66.58%	60.9%	62.99%	68.39%
Standard Deviation	0.9%	0.9%	1.6%	2.1%	1.3%	1.7%	0.2%	10.3%	1.9%	2.4%	3.9%	3%	1.7%	7.1%	8.5%	2.5%

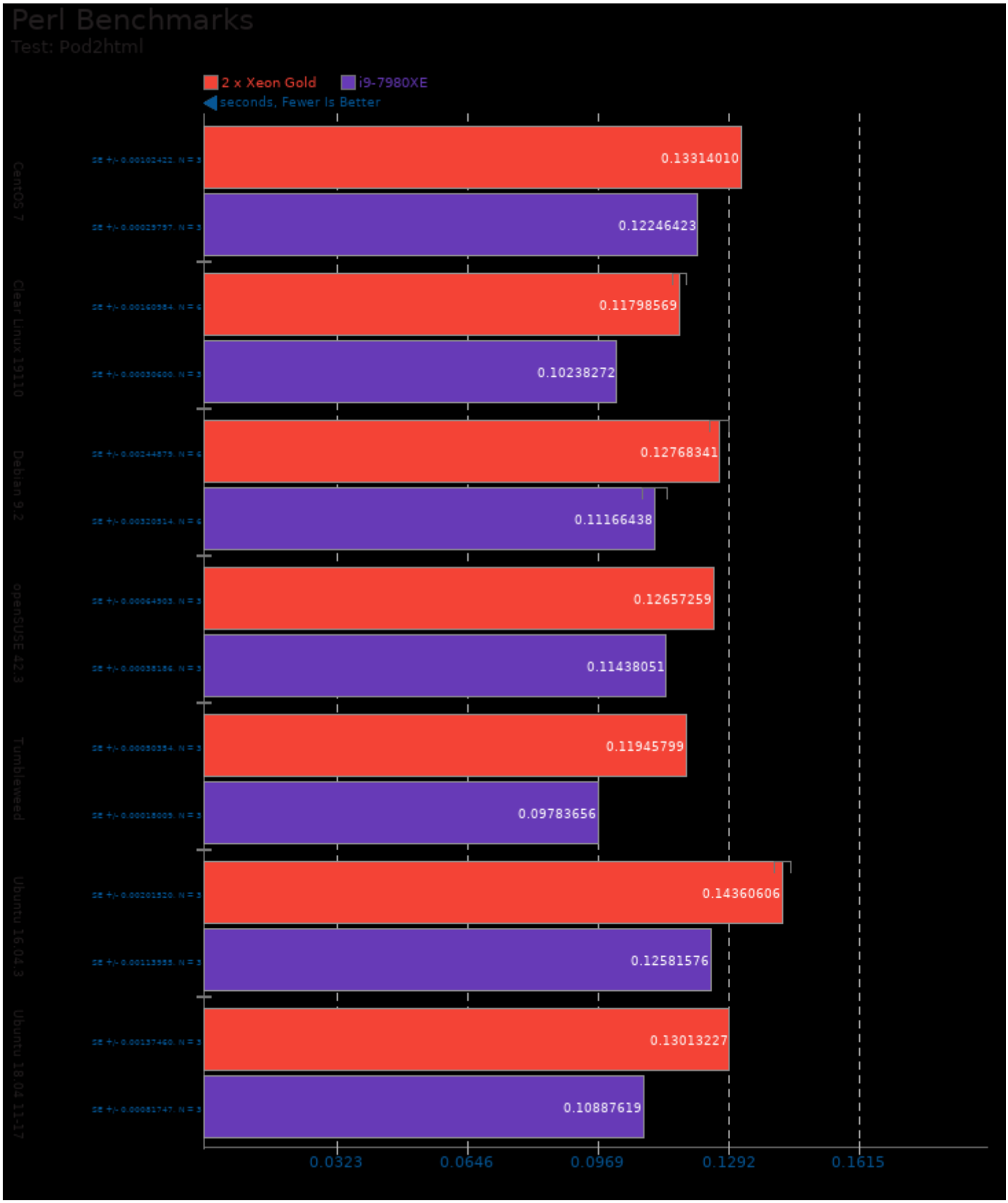
PostgreSQL pgbench - Buffer Test - Normal Load - Read Write (TPS)	8985	8634	8326	9051	9609		9100	8775	7425	9058	16446	9196	7984		9172	9064
Normalized	54.63%	52.5%	50.63%	55.04%	58.43%		55.33%	53.35%	45.15%	55.07%	100%	55.92%	48.55%		55.77%	55.11%
Standard Deviation	3.5%	2%	1.7%	1.3%	0.1%		0.3%	0.6%	2.4%	49.6%	51.2%	40.7%	0.8%		35.9%	36.6%
PostgreSQL pgbench - Buffer Test - Normal Load - Read Only (TPS)	623594	593910	506752	675907	668386		596084	598296	48286	541950	563094	491682	524132		512363	565965
Normalized	92.26%	87.87%	74.97%	100%	98.89%		88.19%	88.52%	7.14%	80.18%	83.31%	72.74%	7.75%		75.8%	83.73%
Standard Deviation	1.4%	0.8%	0.4%	1.8%	0.9%		0.7%	0.3%	0.2%	0.9%	0.8%	0.4%	0.2%		0.3%	0.7%
Rodinia - OpenMP CFD Solver	12.56	10.09	8.63	9.16	12.94	13.48	24.06	13.13	16.52	11.83	12.38	12.42	17.26	11.79	26.71	12.09
Normalized	68.71%	85.53%	100%	94.21%	66.69%	64.02%	35.87%	65.73%	52.24%	72.95%	69.71%	69.48%	50%	73.2%	32.31%	71.38%
Standard Deviation	3.6%	3.1%	3.3%	1.4%	11.1%	31.6%	9.8%	17.8%	3.3%	0.3%	5.3%	1.7%	1.9%	3.5%	2.4%	6%
Rodinia - OpenMP LavaMD	34.48	28.79	12.28	26.44	26.73	27.32	27.18	28.90	57.37	47.09	19.73	44.34	43.87	43.74	44.67	46.17
Normalized	35.61%	42.65%	100%	46.44%	45.94%	44.95%	45.18%	42.49%	21.4%	26.08%	62.24%	27.7%	27.99%	28.07%	27.49%	26.6%
Standard Deviation	0.3%	0.9%	0.4%	0.7%	1%	0.5%	0.2%	0.5%	0.1%	0.4%	3.5%	0.4%	0.2%	0.4%	1.8%	2%
Rodinia - O.S (sec)	15.74	14.21	15.56	16.27	15.39	16.66	19.81	16.26	14.20	14.48	14.24	16.15	14.55	13.80	15.17	14.37
Normalized	87.67%	97.11%	88.69%	84.82%	89.67%	82.83%	69.66%	84.87%	97.18%	95.3%	96.91%	85.45%	94.85%	100%	90.97%	96.03%
Standard Deviation	2.5%	5.9%	0.4%	0.9%	4.3%	7.7%	9.2%	10.2%	0.9%	3.4%	3.7%	1.8%	8.9%	3.3%	1.6%	4.7%
Parboil - OpenMP CUTCP (sec)	2.49	2.36	1.89	2.40	2.51	2.32	4.24	2.41	3.68	3.28	2.48	3.32	3.63	3.14	5.93	3.16
Normalized	75.9%	80.08%	100%	78.75%	75.3%	81.47%	44.58%	78.42%	51.36%	57.62%	76.21%	56.93%	52.07%	60.19%	31.87%	59.81%
Standard Deviation	0.7%	1.2%	0.7%	2%	1%	1.2%	0.5%	1.4%	1.4%	0.4%	0.8%	0.1%	0.7%	0.4%	0.1%	0.4%
Parboil - O.M.G (sec)	488.53	501.42	463.42	396.28	472.70	391.96	486.22	444.22	161.77	148.33	143.78	142.87	155.22	131.13	160.30	141.54
Normalized	26.84%	26.15%	28.3%	33.09%	27.74%	33.45%	26.97%	29.52%	81.06%	88.4%	91.2%	91.78%	84.48%	100%	81.8%	92.65%
Standard Deviation	5.7%	3.3%	4.5%	4.6%	1.1%	4%	2.7%	5.2%	1.4%	0.7%	1.3%	0.4%	3.1%	1.1%	1.9%	0.8%
Parboil - OpenMP Stencil (sec)	6.37	7.13	3.85	6.47	6.90	8.32	6.32	7.69	11.15	7.76	7.42	8.75	9.59	8.47	9.55	7.30
Normalized	60.44%	54%	100%	59.51%	55.8%	46.27%	60.92%	50.07%	34.53%	49.61%	51.89%	44%	40.15%	45.45%	40.31%	52.74%
Standard Deviation	7.4%	6.3%	1.7%	6.8%	1.2%	4.6%	0.9%	3.4%	3.4%	0.2%	0.2%	1.2%	6%	0.8%	7.2%	1.4%

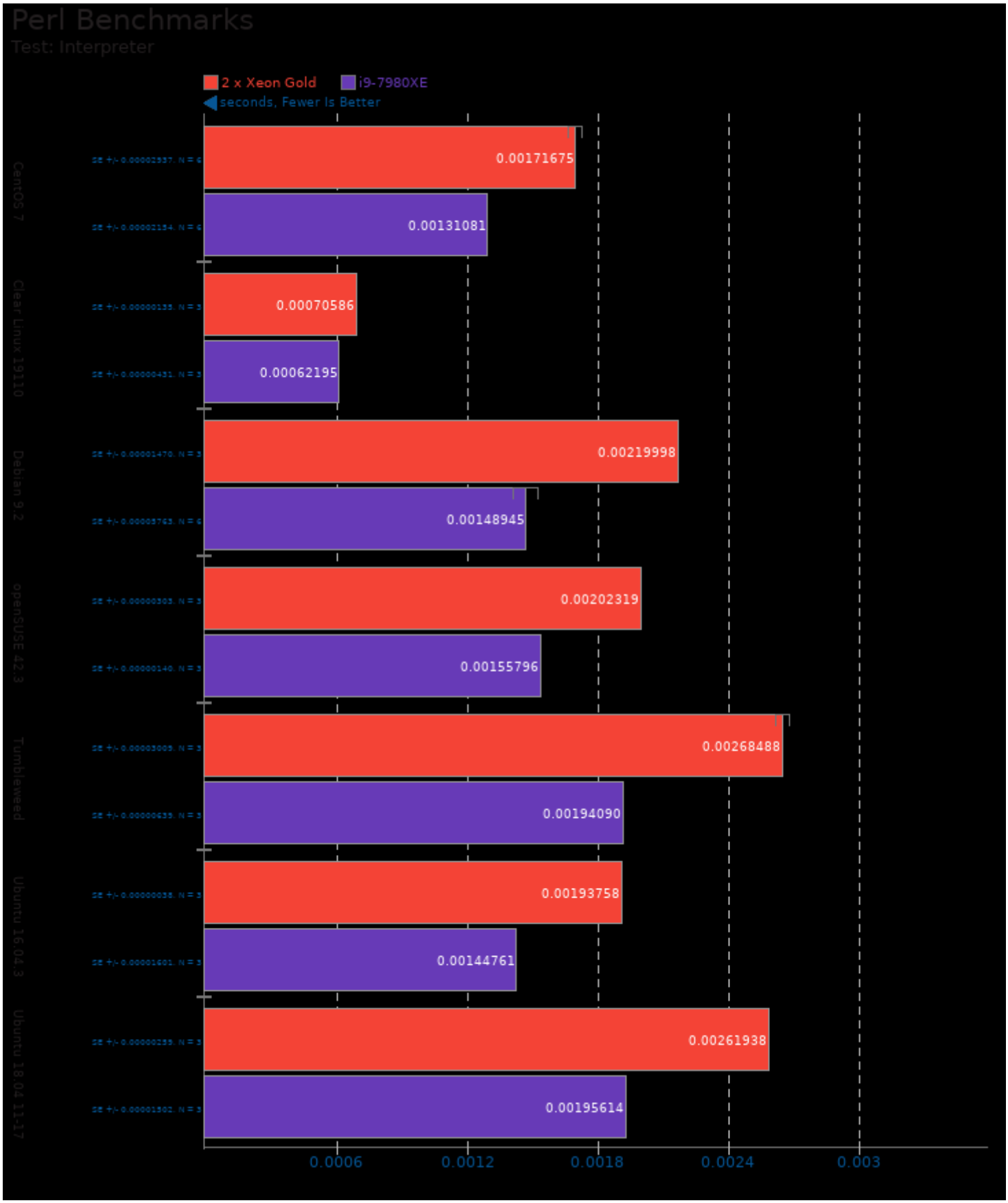
Parboil - OpenMP LBM (sec)	42.43	31.89	32.19	**31.70**	45.87	37.42	53.86	35.09	**79.61**	73.05	70.97	74.53	73.39	71.59	74.64	73.12
Normalized	74.71%	99.4%	98.48%	100%	69.11%	84.71%	58.86%	90.34%	39.82%	43.39%	44.67%	42.53%	43.19%	44.28%	42.47%	43.35%
Standard Deviation	14.2%	2.7%	9.5%	8.9%	25.7%	6.1%	14.7%	9.3%	2.6%	0.1%	0.3%	0.5%	1.3%	0.5%	0.3%	1.2%
John The Ripper - Blowfish (Real C/S)	50740	50450	48427	**52509**	50420	51515	51537	51613	29557	30127	29811	**28311**	28832	31305	31623	31335
Normalized	96.63%	96.08%	92.23%	100%	96.02%	98.11%	98.15%	98.29%	56.29%	57.37%	56.77%	53.92%	54.91%	59.62%	60.22%	59.68%
Standard Deviation	2.2%	2.1%	2.3%	2.2%	2.6%	0.5%	2.4%	0.4%	0.1%	0.1%	0.1%	2.9%	3.3%	0.1%	0.1%	0.2%
LAME MP3 Encoding - WAV To MP3 (sec)	13.19	10.62	9.73	11.25	12.91	10.07	**13.91**	11.79	13.49	9.81	**9.06**	10.94	12.68	9.45	12.61	10.26
Normalized	68.69%	85.31%	93.11%	80.53%	70.18%	89.97%	65.13%	76.84%	67.16%	92.35%	100%	82.82%	71.45%	95.87%	71.85%	88.3%
Standard Deviation	1.6%	2.9%	0.1%	7.4%	0.1%	0.1%	14.6%	12.1%	45.2%	0.2%	0.1%	3.4%	0.3%	0.1%	9.9%	10.7%
FLAC Audio Encoding - WAV To FLAC (sec)	**6.89**	6.02	5.50	5.86	6.62	5.87	6.78	6.57	6.02	5.69	**5.41**	5.69	5.95	5.50	5.68	5.90
Normalized	78.52%	89.87%	98.36%	92.32%	81.72%	92.16%	79.79%	82.34%	89.87%	95.08%	100%	95.08%	90.92%	98.36%	95.25%	91.69%
Standard Deviation	1.2%	5%	1.2%	7%	0.8%	0.4%	11.5%	12.9%	0.3%	0.4%	10.7%	2.7%	1%	0.2%	12.3%	11.8%
SQLite - D.T.D (sec)	**46.10**	39.09	34.86	39.21	36.07	37.20	38.87	38.78	41.32	15.71	**12.99**	15.92	17.68	14.24	29.42	15.00
Normalized	28.18%	33.23%	37.26%	33.13%	36.01%	34.92%	33.42%	33.5%	31.44%	82.69%	100%	81.6%	73.47%	91.22%	44.15%	86.6%
Standard Deviation	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.5%	0.3%	0.9%	1.4%	33.7%	0.9%	0.1%	0.1%	0.7%	4.9%
FS-Mark - 1.F.1.S (Files/s)			169.20	152.80			151.10	**139.80**	207.05		284.32	256.10			167.40	**344.17**
Normalized			49.16%	44.4%			43.9%	40.62%	60.16%		82.61%	74.41%			48.64%	100%
Standard Deviation			1%	1.1%			1.1%	0.2%	30.3%		25.9%	0.8%			24.1%	16.4%
FS-Mark - 5.F.1.S.4.T (Files/s)			320.27	289.33			288.87	**280.00**	457.33		**1049**	764.58			634.00	670.22
Normalized			30.54%	27.59%			27.54%	26.7%	43.61%		100%	72.9%			60.45%	63.9%
Standard Deviation			0.9%	1.6%			4.9%	0.1%	17.7%		17.2%	14.7%			13.1%	33.1%
FS-Mark - 4.F.3.S.D.1.S (Files/s)			166.53	145.73			150.13	**139.57**	223.52		**562.18**	308.75			409.90	285.68
Normalized			29.62%	25.92%			26.7%	24.83%	39.76%		100%	54.92%			72.91%	50.82%
Standard Deviation			0.3%	0.5%			0.3%	0.6%	21.1%		10.6%	4.9%			8.1%	5.4%

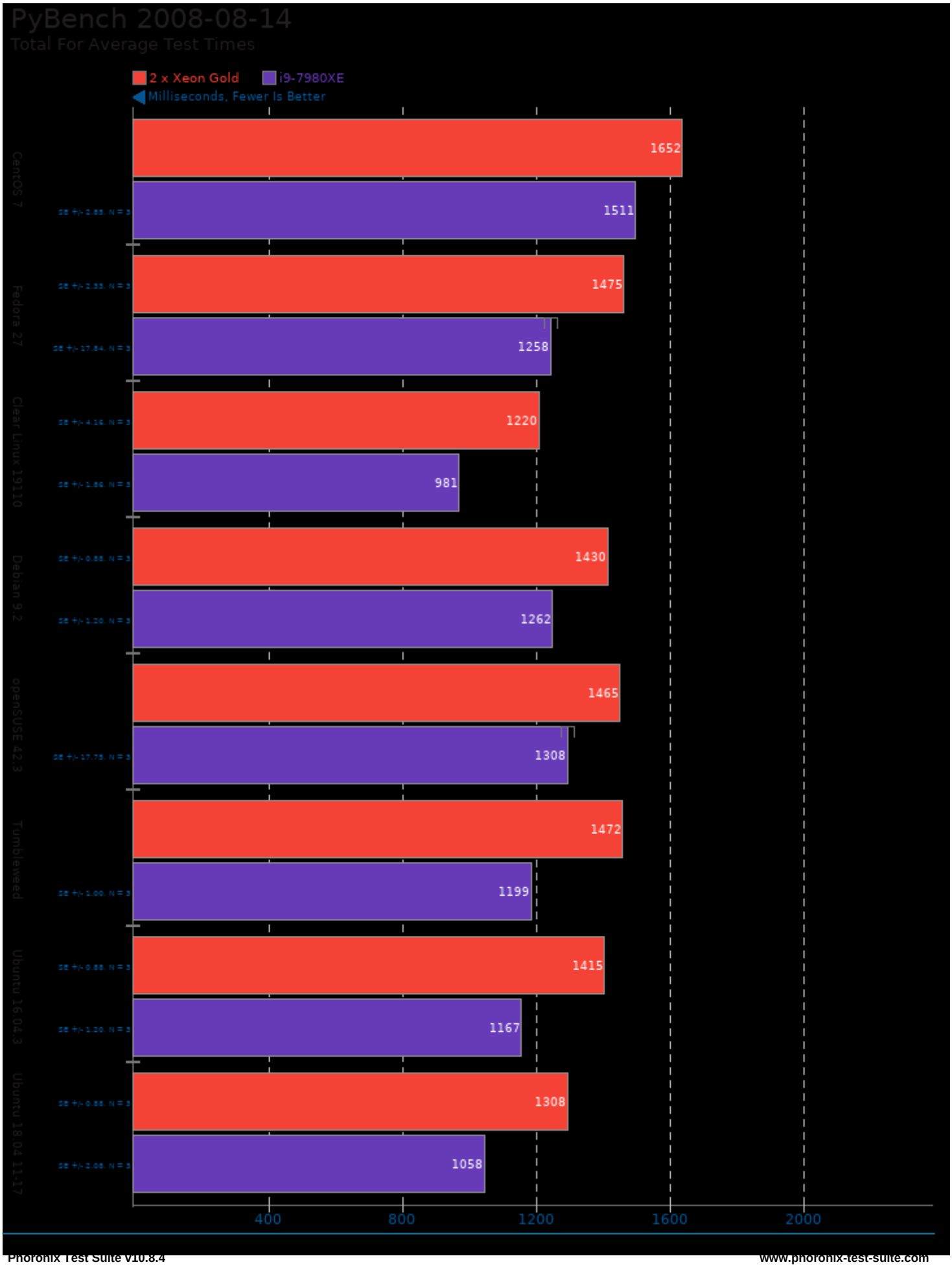
Core i9 7980XE + Dual Xeon Gold - 8-Way Linux Distribution Comparison

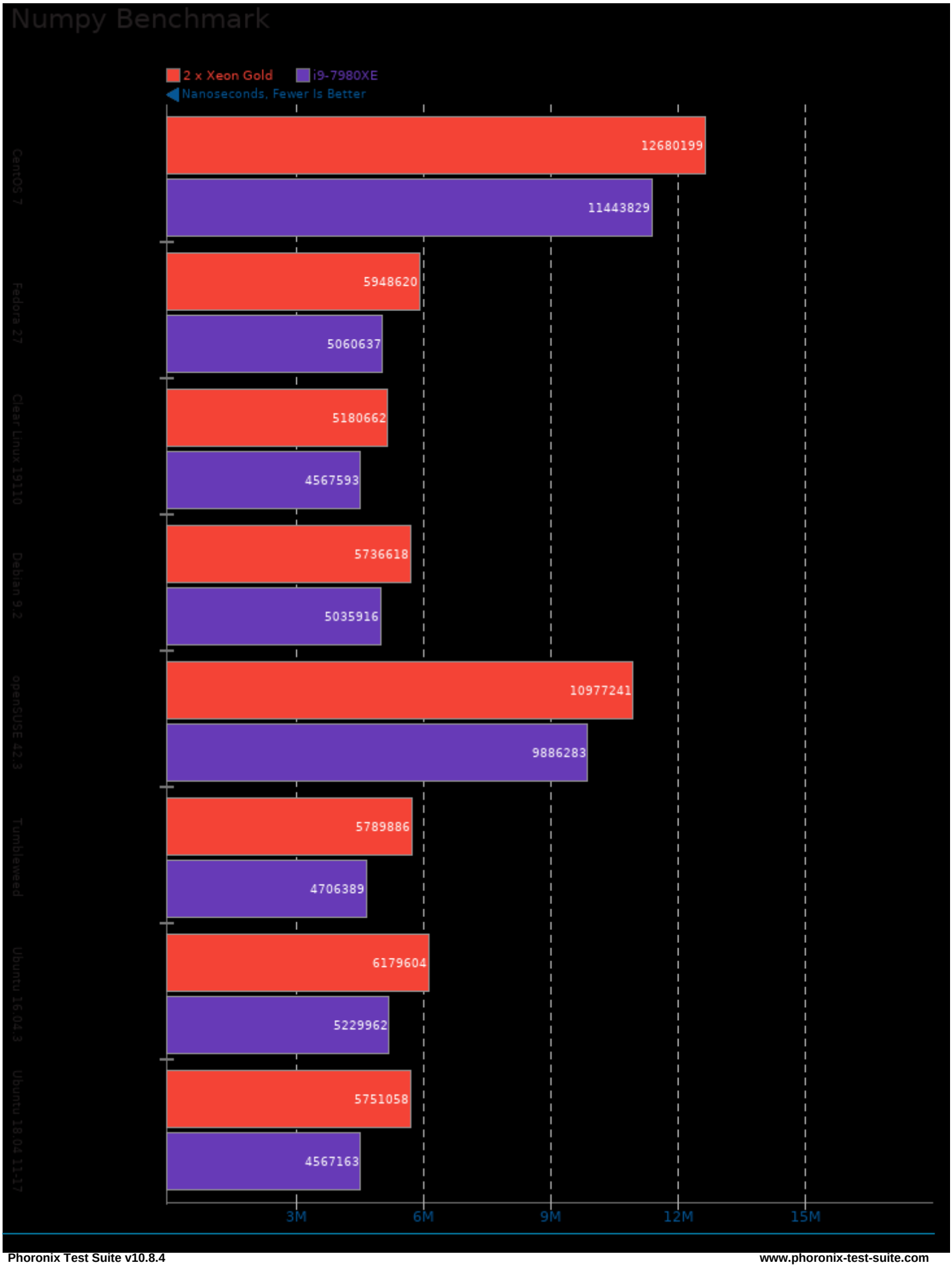
Stockfish - Total Time (ms)	3296	3347	3178	3572	3186	3244	3752	**3874**	2983	2798	**2610**	3259	2909	2632	3121	2792
Normalized	79.19%	77.98%	82.13%	73.07%	81.92%	80.46%	69.56%	67.37%	87.5%	93.28%	100%	80.09%	89.72%	99.16%	83.63%	93.48%
Standard Deviation	2.3%	3.6%	0.2%	3.4%	0.9%	3.3%	9.7%	9.9%	0.9%	1.6%	2.2%	0.6%	2.2%	0.3%	8%	2.6%
asmFish - 1.H.M.2.D (Nodes/s)	84461353	79447669	81749221	82017810	81724688	82695290	**84670158**	82661684	53682320	53750894	55871631	**53269673**	55521874	58411426	57650419	56422424
Normalized	99.75%	93.83%	96.55%	96.87%	96.52%	97.67%	100%	97.63%	63.4%	63.48%	65.99%	62.91%	65.57%	68.99%	68.09%	66.64%
Standard Deviation	3.2%	2.6%	2.5%	1.7%	3.3%	1.1%	1.1%	1.4%	0.9%	2.5%	1.7%	1.1%	1%	1.6%	1%	1.2%
Primesieve - 1.P.N.G (sec)		10.34	10.42	10.33	10.12	10.18	**10.06**	**10.46**								
Normalized		97.29%	96.55%	97.39%	99.41%	98.82%	100%	96.18%								
Standard Deviation		0.5%	1.3%	1.9%	0.4%	1.1%	0.4%	0.7%								

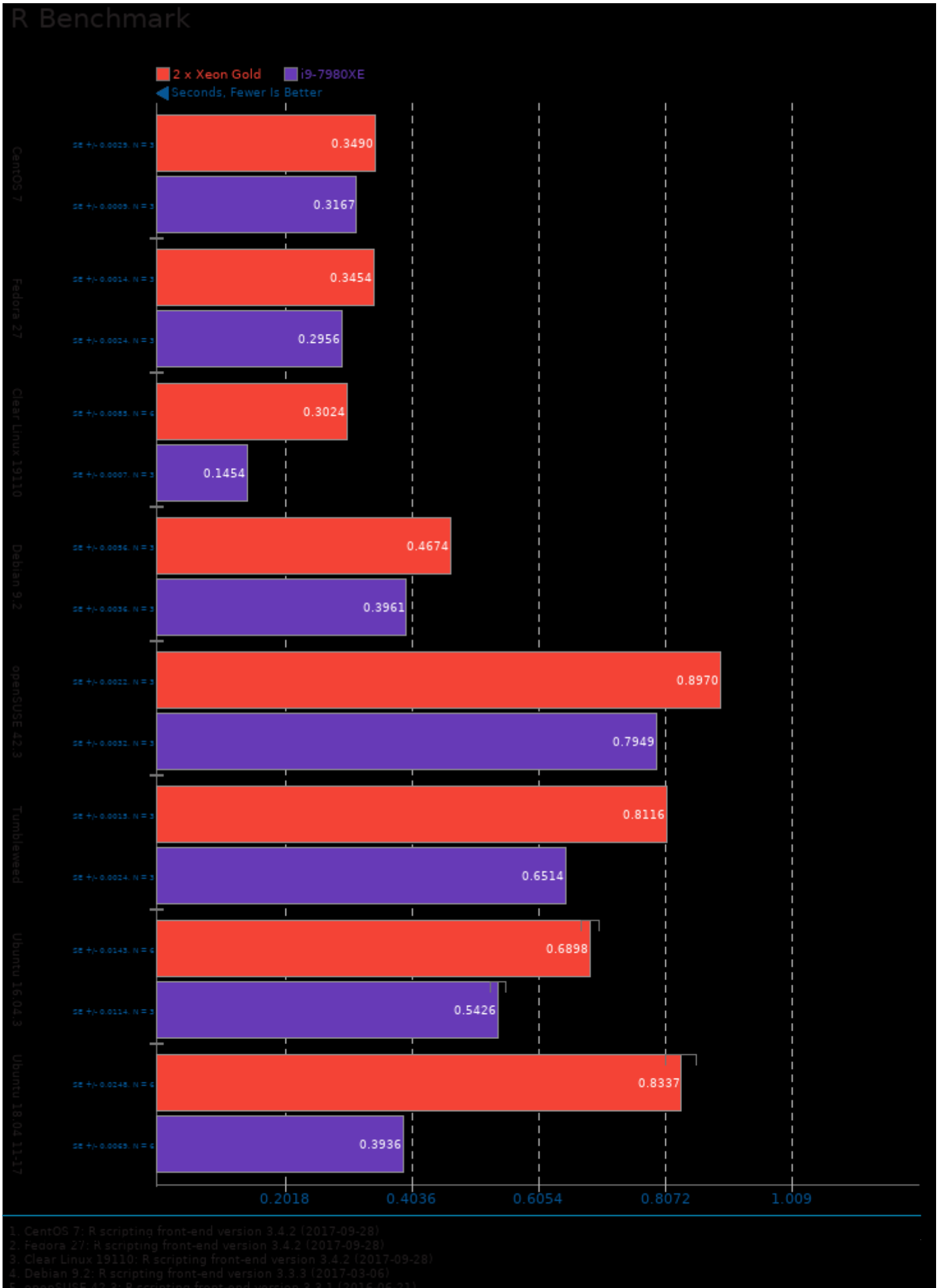

PHPBench 0.8.1
PHP Benchmark Suite
2 x Xeon Gold
i9-7980XE
Score, More Is Better
CentOS 7
Clear Linux 19110
Debian 9.2
Ubuntu 16.04.3
Ubuntu 18.04.1.1-17
149782
184168
609113
721859
474474
370800
420472
535269
494546
608245
150K
300K
450K
600K
750K

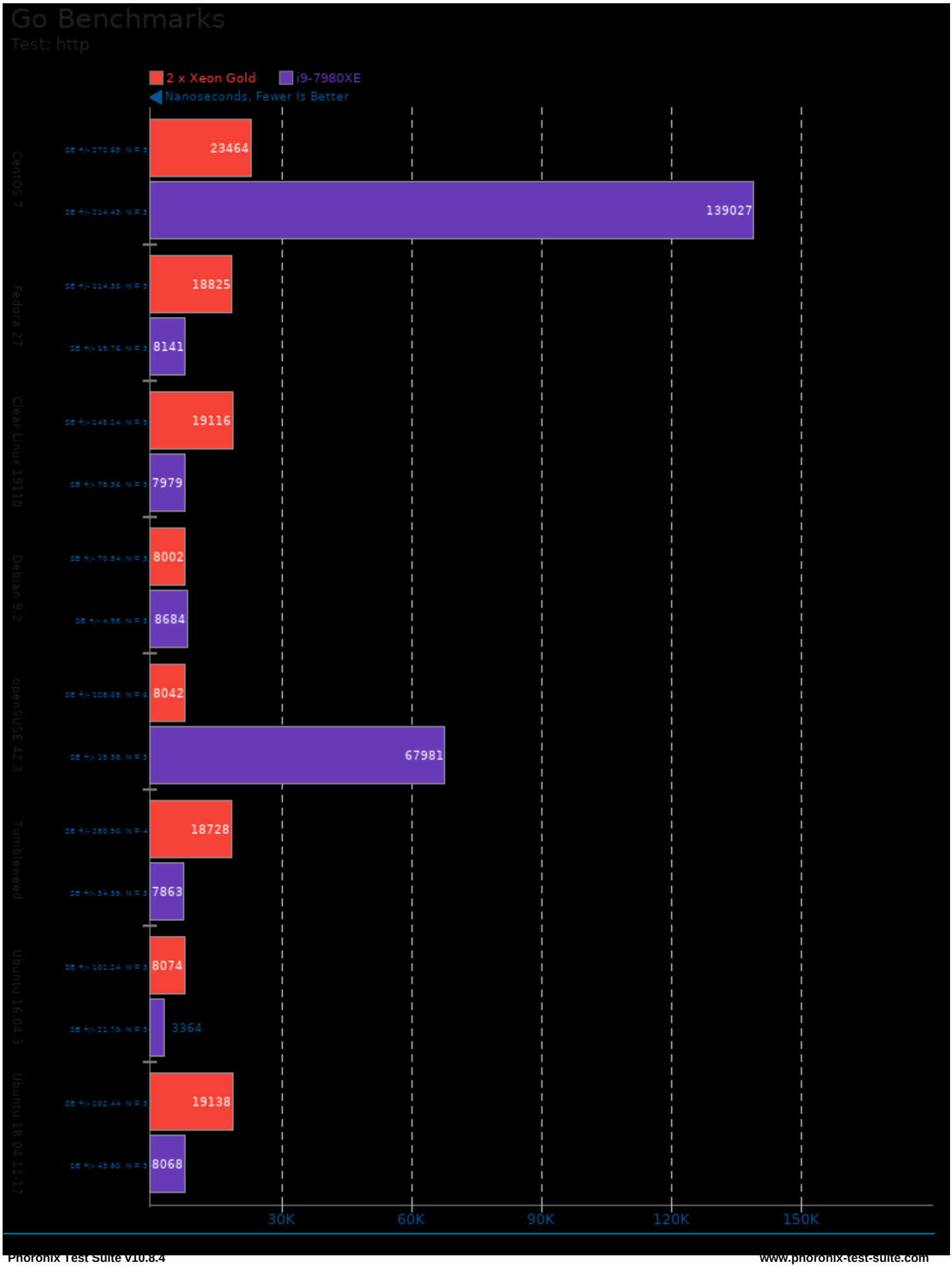

Perl Benchmarks
Test: Pod2html
2 x Xeon Gold
i9-7980XE
seconds, Fewer Is Better
CentOS 7
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
0.13314010
0.12246423
0.11798569
0.10238272
0.12768341
0.11166438
0.12657259
0.11438051
0.11945799
0.09783656
0.14360606
0.12581576
0.13013227
0.10887619
0.0323
0.0646
0.0969
0.1292
0.1615

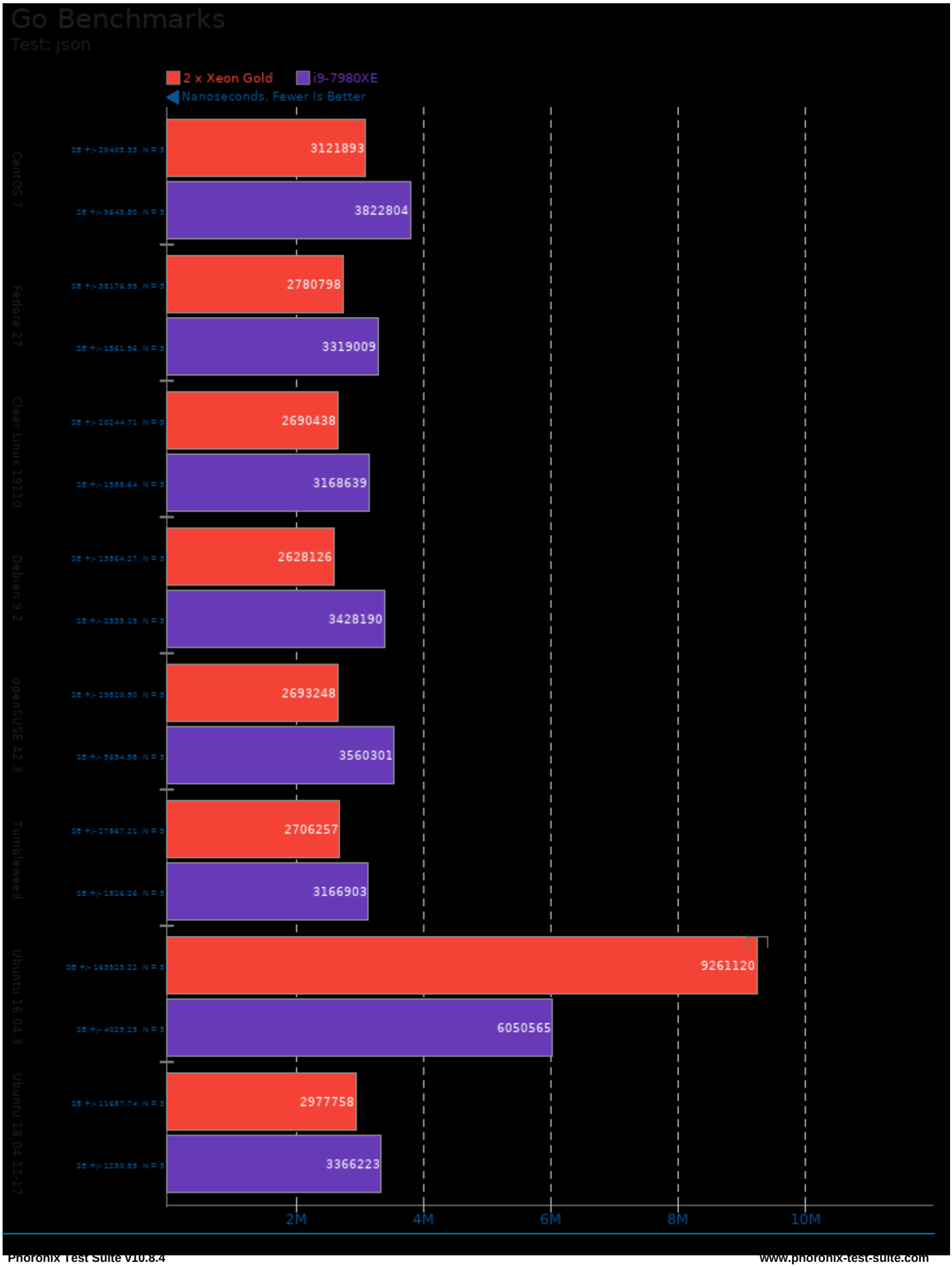

Perl Benchmarks
Test: Interpreter
2 x Xeon Gold
i9-7980XE
seconds, Fewer Is Better
CentOS 7
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
0.00171675
0.00131081
0.00070586
0.00062195
0.00219998
0.00148945
0.00202319
0.00155796
0.00268488
0.00194090
0.00193758
0.00144761
0.00261938
0.00195614
0.0006
0.0012
0.0018
0.0024
0.003

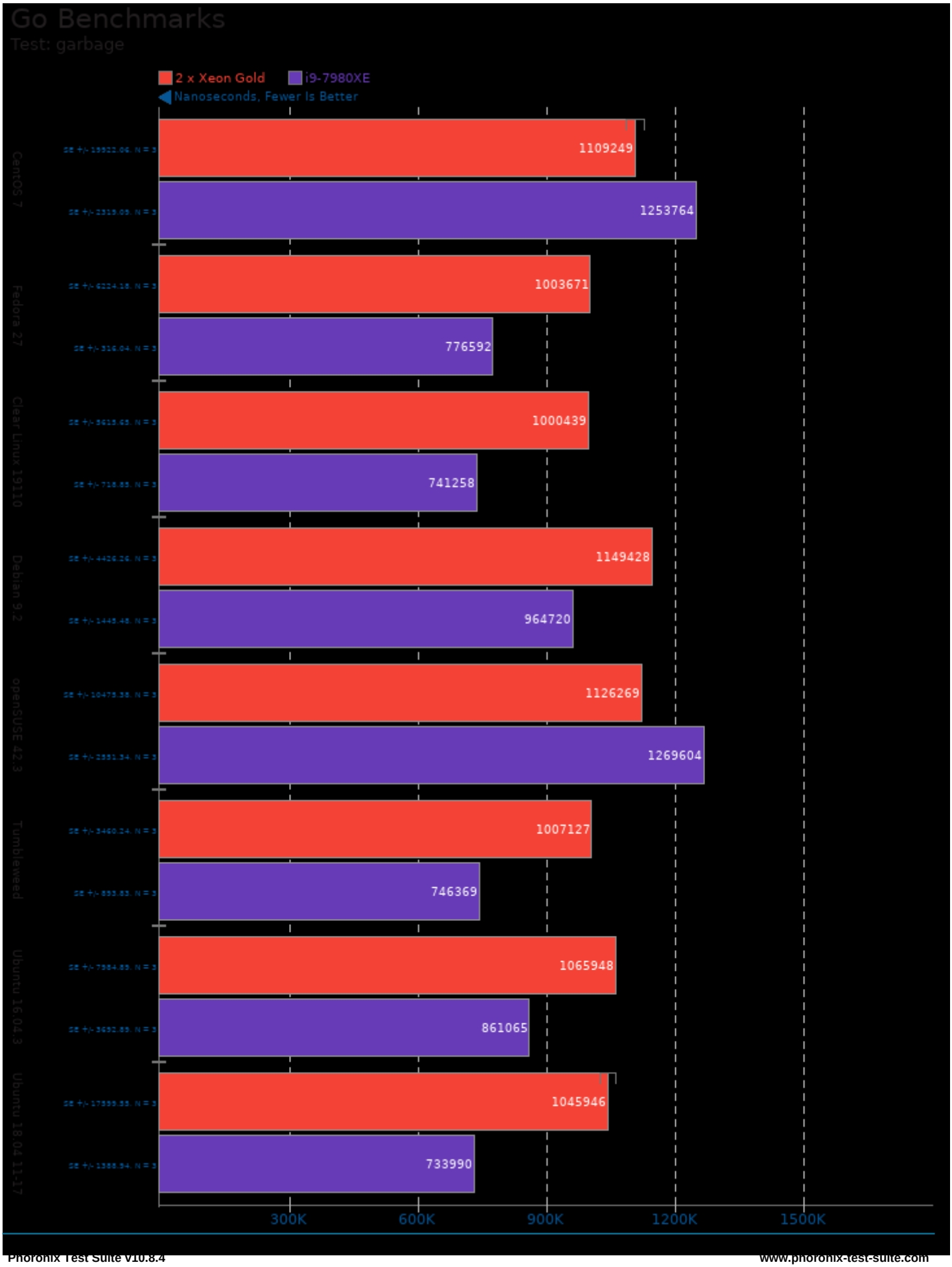

PyBench 2008-08-14
Total For Average Test Times
2 x Xeon Gold
i9-7980XE
Milliseconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
1652
1511
1475
1258
1220
981
1430
1262
1465
1308
1472
1199
1415
1167
1308
1058
400
800
1200
1600
2000

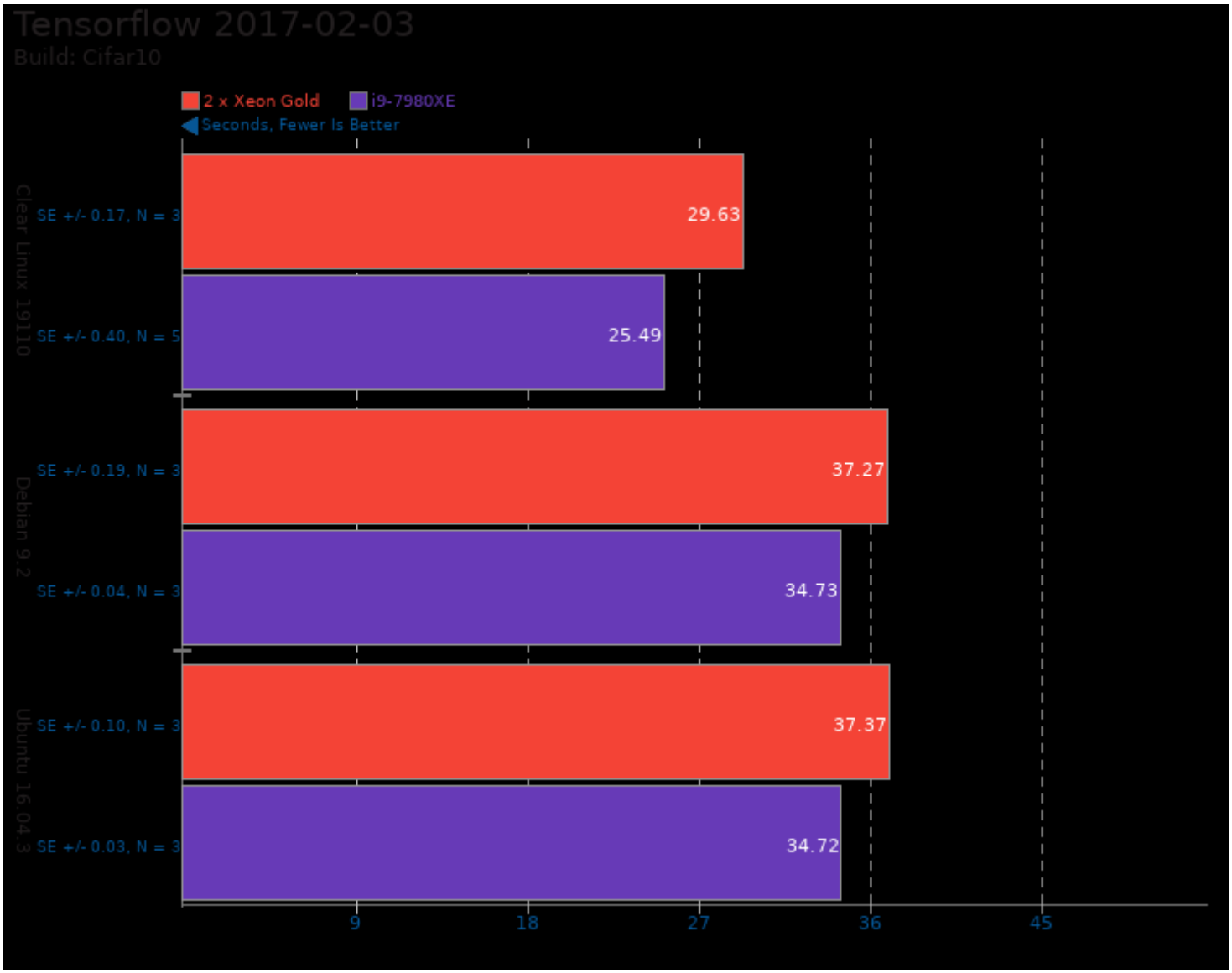

Numpy Benchmark
2 x Xeon Gold
i9-7980XE
Nanoseconds, Fewer Is Better
CentOS 7
12680199
11443829
Fedora 27
5948620
5060637
Clear Linux 19110
5180662
4567593
Debian 9.2
5736618
5035916
openSUSE 42.3
10977241
9886283
Tumbleweed
5789886
4706389
Ubuntu 16.04.3
6179604
5229962
Ubuntu 18.04 11.17
5751058
4567163
3M
6M
9M
12M
15M

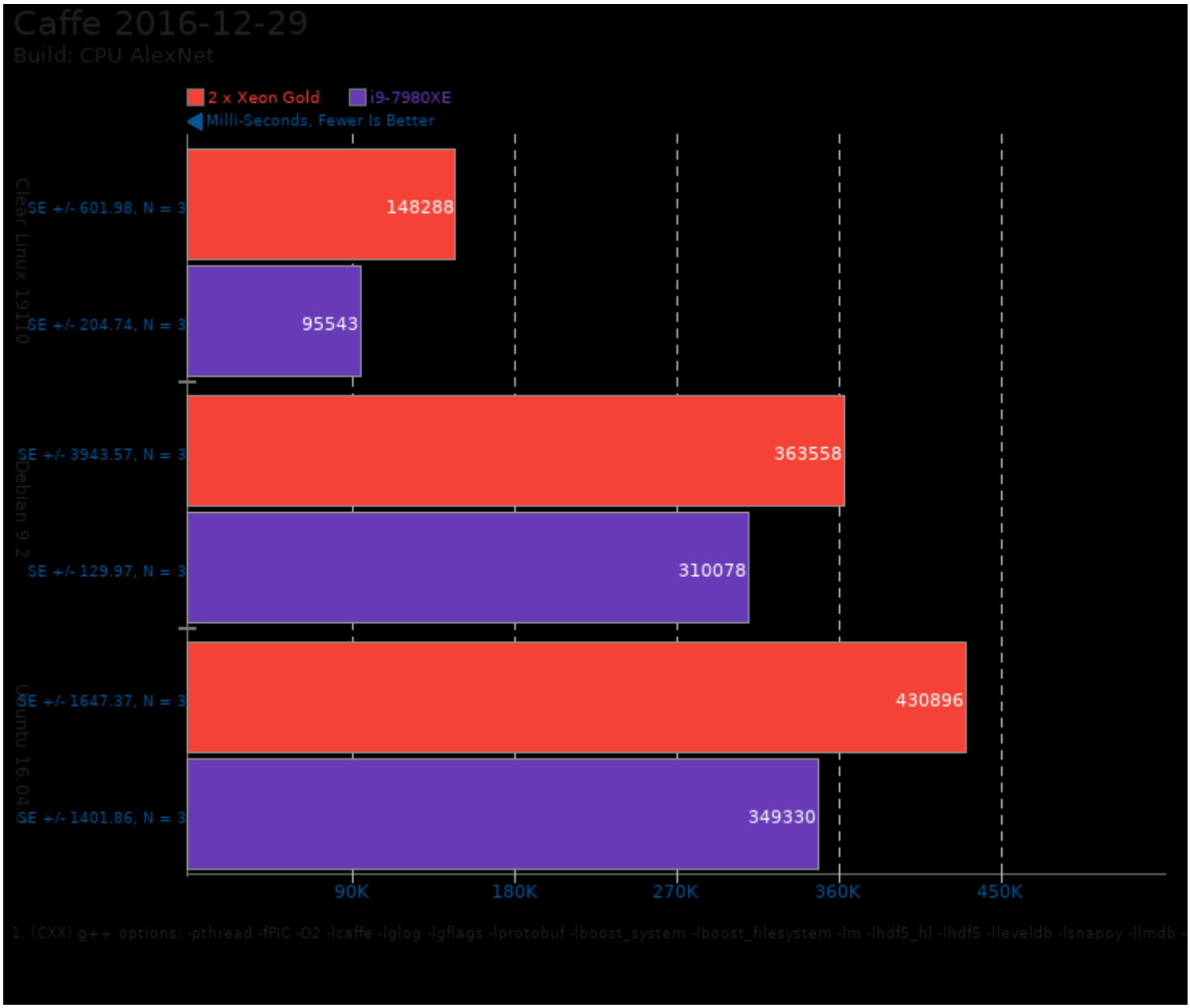

R Benchmark
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04.1.1.17
0.3490
0.3167
0.3454
0.2956
0.3024
0.1454
0.4674
0.3961
0.8970
0.7949
0.8116
0.6514
0.6898
0.5426
0.8337
0.3936
0.2018
0.4036
0.6054
0.8072
1.009
1. CentOS 7: R scripting front-end version 3.4.2 (2017-09-28)
2. Fedora 27: R scripting front-end version 3.4.2 (2017-09-28)
3. Clear Linux 19110: R scripting front-end version 3.4.2 (2017-09-28)
4. Debian 9.2: R scripting front-end version 3.3.3 (2017-03-06)

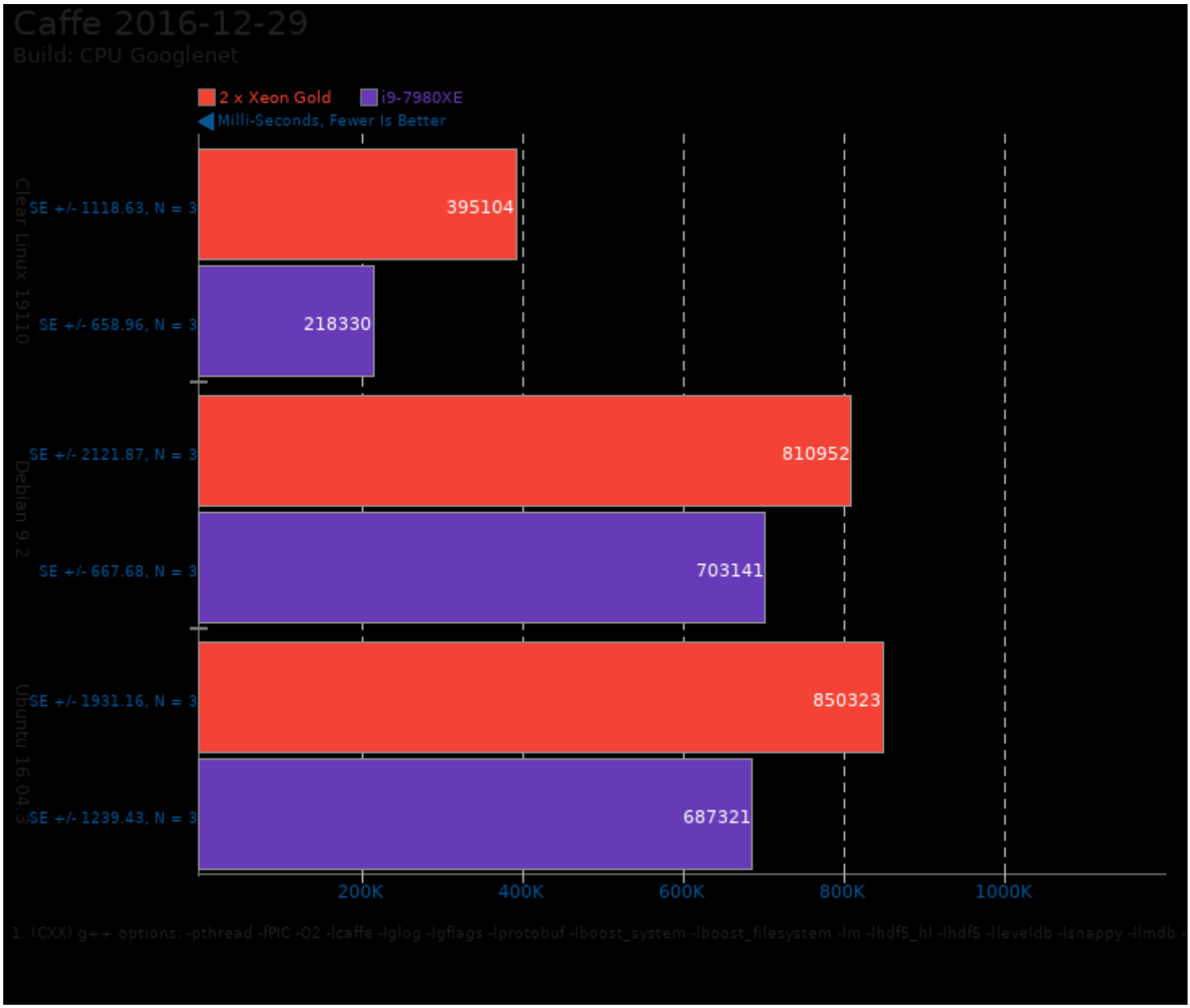

Go Benchmarks
Test: http
2 x Xeon Gold
i9-7980XE
Nanoseconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04
11-17
23464
139027
18825
8141
19116
7979
8002
8684
8042
67981
18728
7863
8074
3364
19138
8068
30K
60K
90K
120K
150K

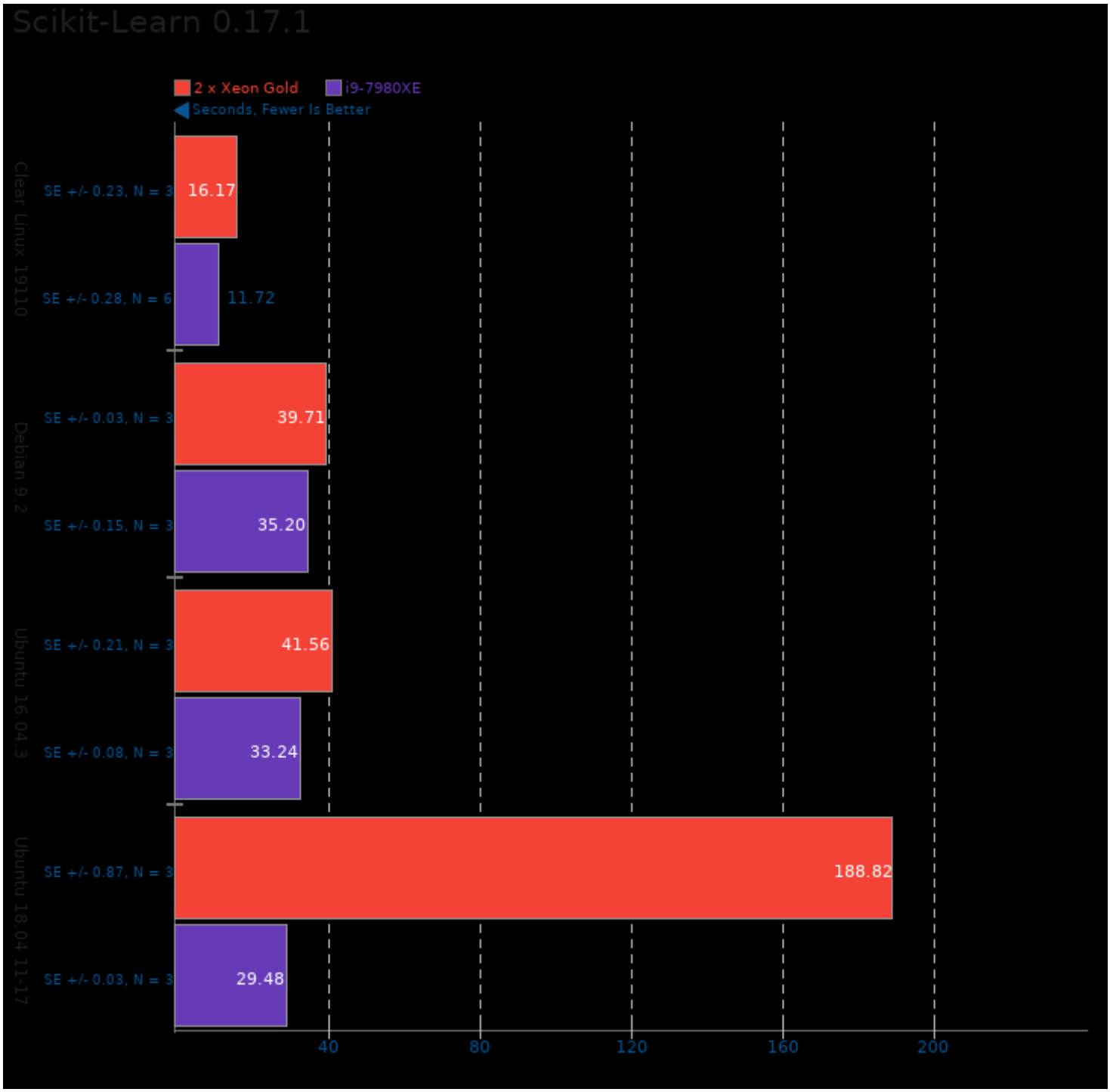

Go Benchmarks
Test: json
2 x Xeon Gold
i9-7980XE
Nanoseconds, Fewer Is Better
CentOS 7
3121893
3822804
Fedora 27
2780798
3319009
Clear Linux 19110
2690438
3168639
Debian 9.2
2628126
3428190
openSUSE 42.3
2693248
3560301
Tumbleweed
2706257
3166903
Ubuntu 16.04.3
9261120
6050565
Ubuntu 18.04 11-17
2977758
3366223
2M
4M
6M
8M
10M

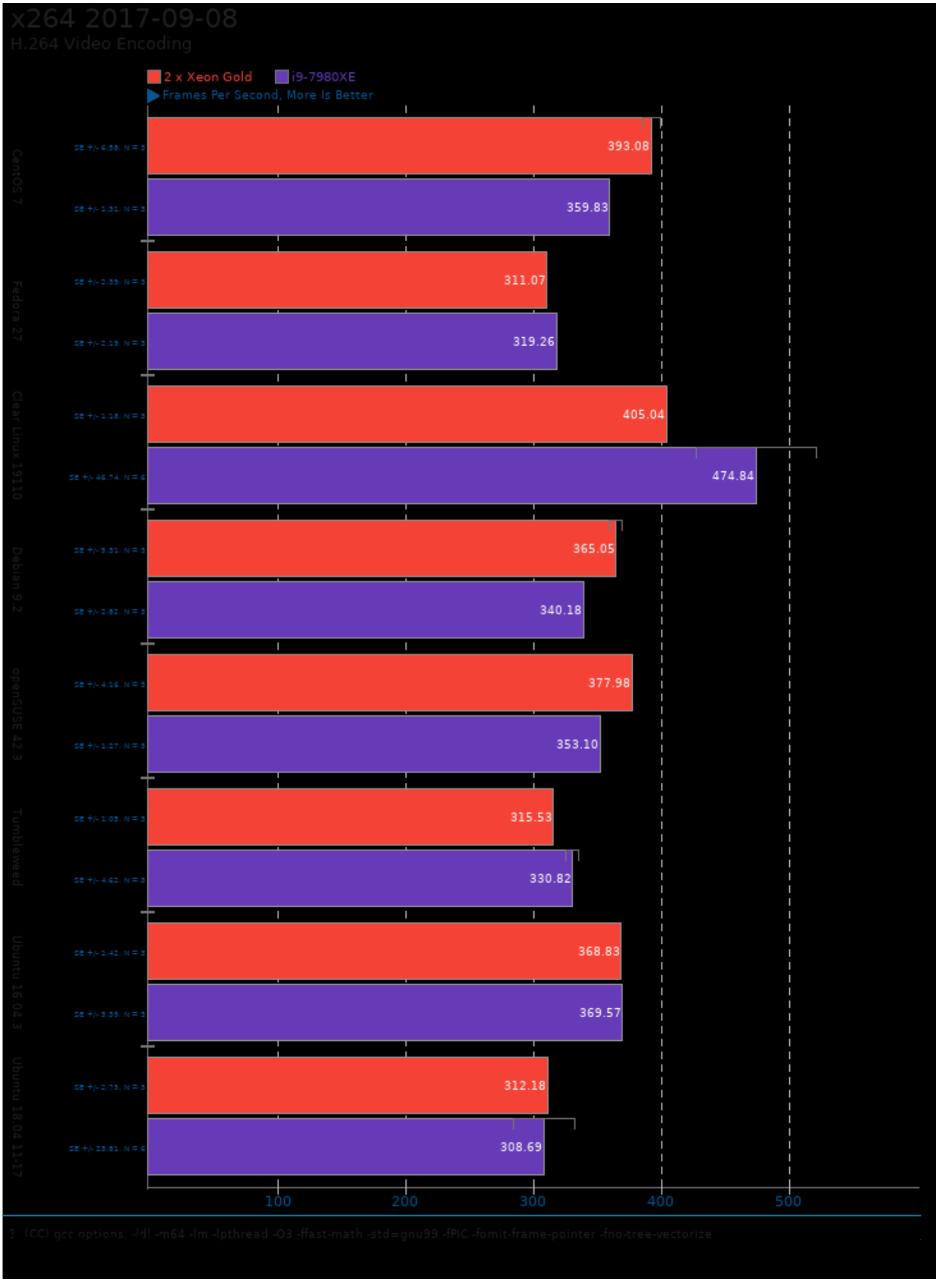

Go Benchmarks
Test: garbage
2 x Xeon Gold
i9-7980XE
Nanoseconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
1109249
1253764
1003671
776592
1000439
741258
1149428
964720
1126269
1269604
1007127
746369
1065948
861065
1045946
733990
300K
600K
900K
1200K
1500K

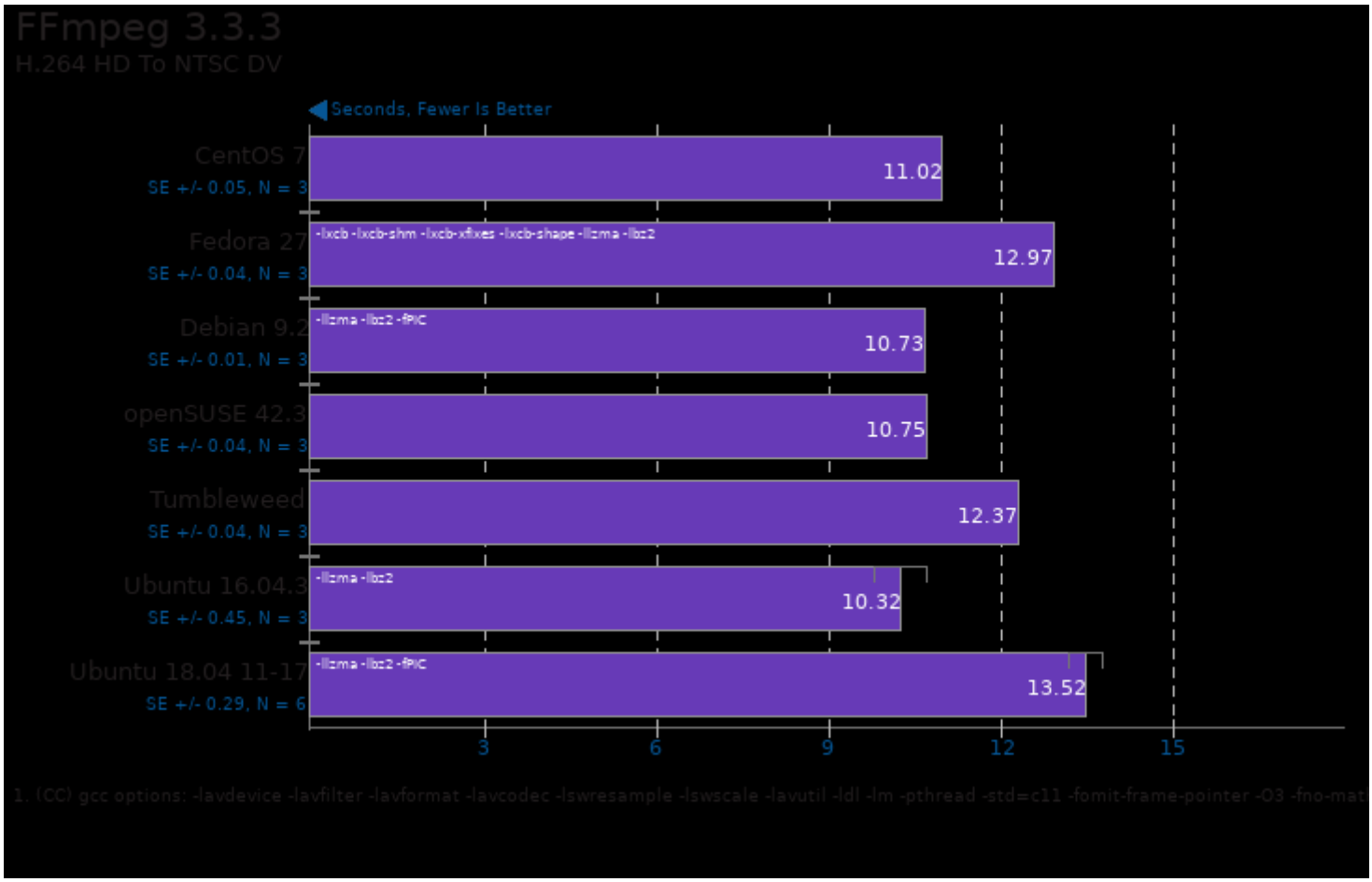

Tensorflow 2017-02-03
Build: Cifar10
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
Clear Linux 19110
SE +/- 0.17, N = 3
29.63
SE +/- 0.40, N = 5
25.49
Debian 9.2
SE +/- 0.19, N = 3
37.27
SE +/- 0.04, N = 3
34.73
Ubuntu 16.04.3
SE +/- 0.10, N = 3
37.37
SE +/- 0.03, N = 3
34.72
9
18
27
36
45

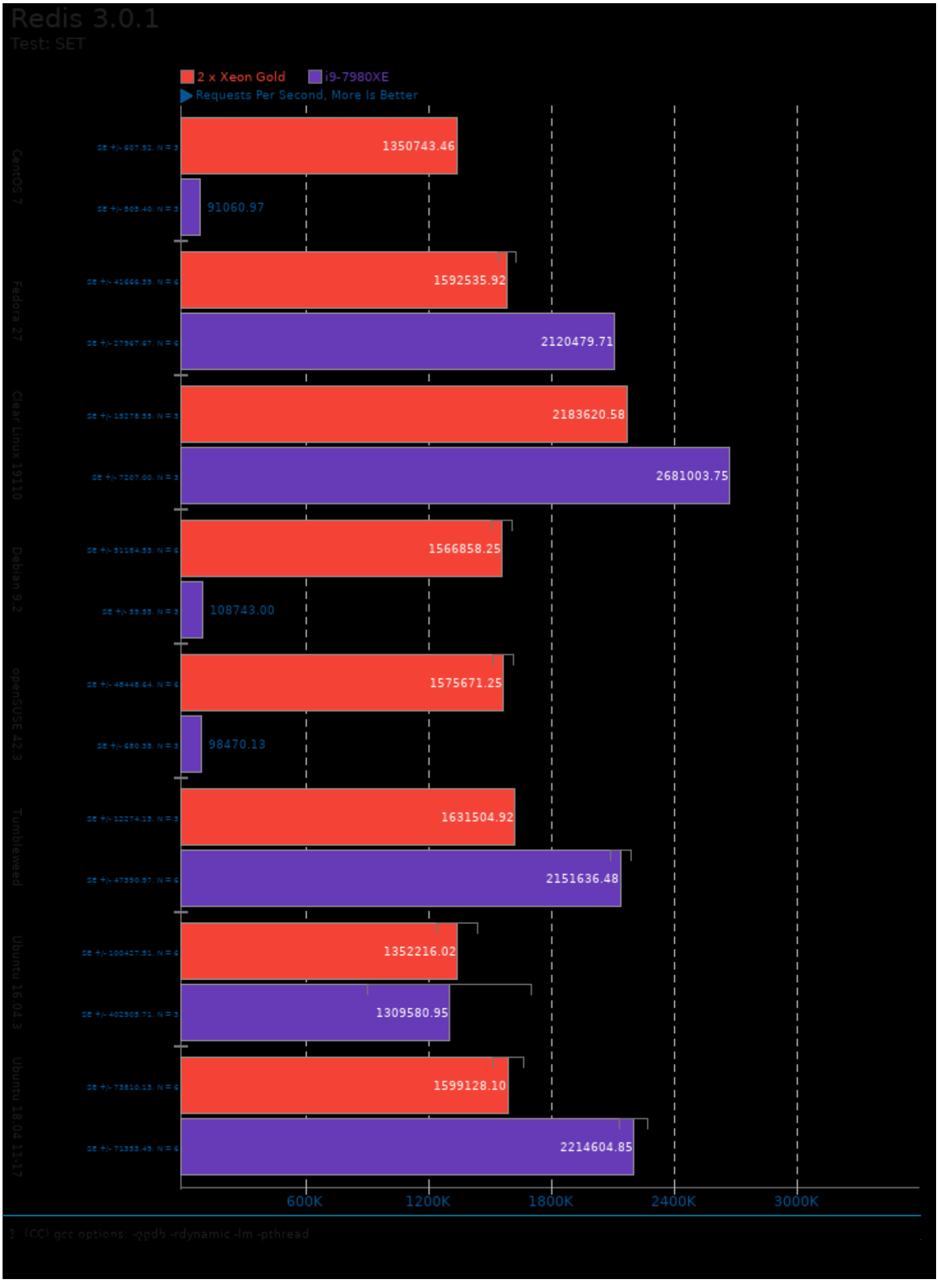

Caffe 2016-12-29
Build: CPU AlexNet
2 x Xeon Gold
i9-7980XE
Milli-Seconds, Fewer Is Better
Clear Linux 19110
SE +/- 601.98, N = 3
148288
SE +/- 204.74, N = 3
95543
Debian 9.2
SE +/- 3943.57, N = 3
363558
SE +/- 129.97, N = 3
310078
Ubuntu 16.04
SE +/- 1647.37, N = 3
430896
SE +/- 1401.86, N = 3
349330
90K
180K
270K
360K
450K
1. (CXX) g++ options: -pthread -fPIC -O2 -lcaffe -lglog -lgflags -lprotobuf -lboost_system -lboost_filesystem -lm -lhdf5_hl -lhdf5 -lleveldb -lsnappy -llmdb -

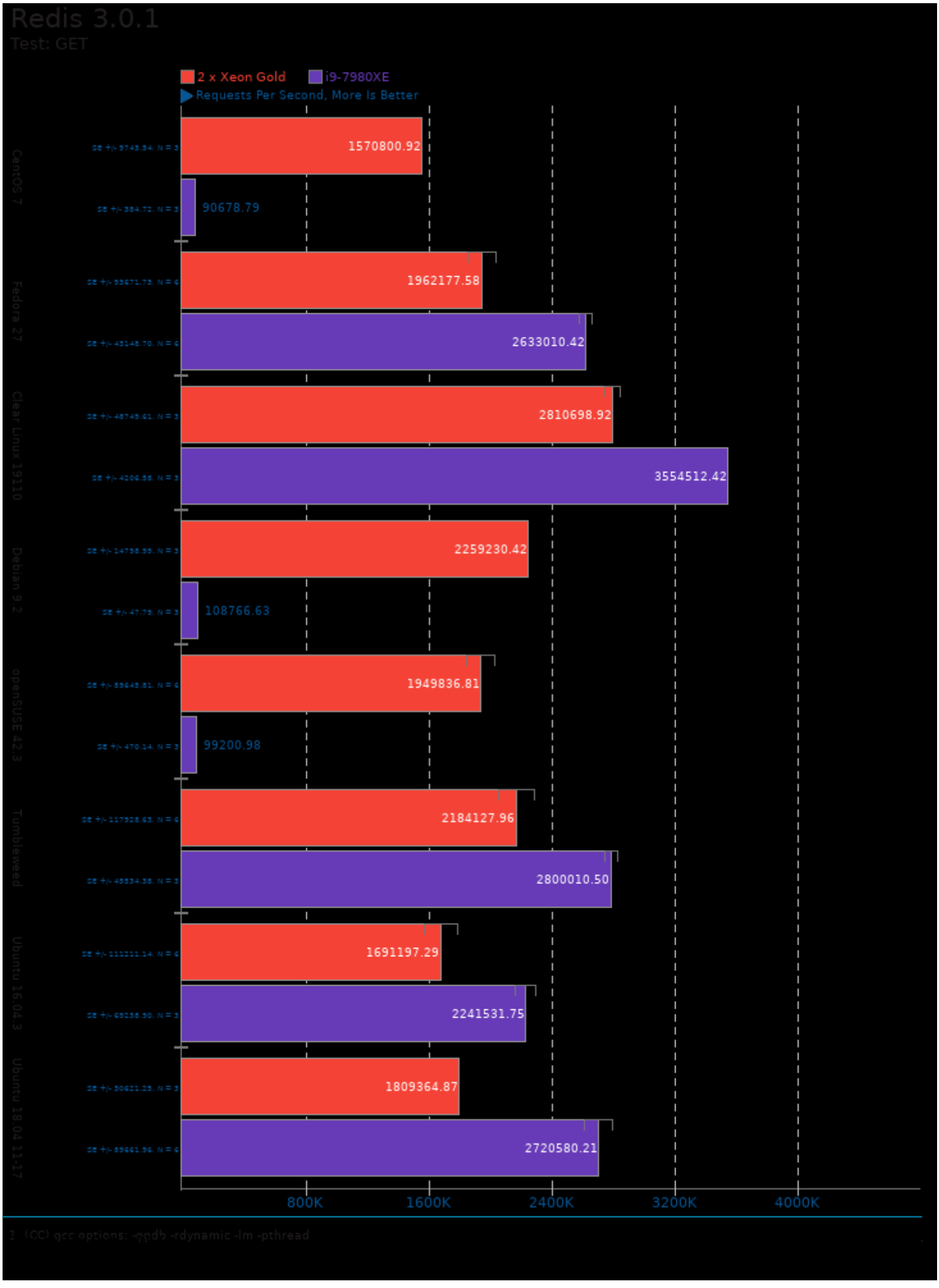

Caffe 2016-12-29
Build: CPU Googlenet
2 x Xeon Gold
i9-7980XE
Milli-Seconds, Fewer Is Better
Clear Linux 19110
SE +/- 1118.63, N = 3
395104
SE +/- 658.96, N = 3
218330
Debian 9.2
SE +/- 2121.87, N = 3
810952
SE +/- 667.68, N = 3
703141
Ubuntu 16.04
SE +/- 1931.16, N = 3
850323
SE +/- 1239.43, N = 3
687321
200K
400K
600K
800K
1000K
1. (CXX) g++ options: -pthread -fPIC -O2 -lcaffe -lglog -lgflags -lprotobuf -lboost_system -lboost_filesystem -lm -lhdf5_hl -lhdf5 -lleveldb -lsnappy -llmdb

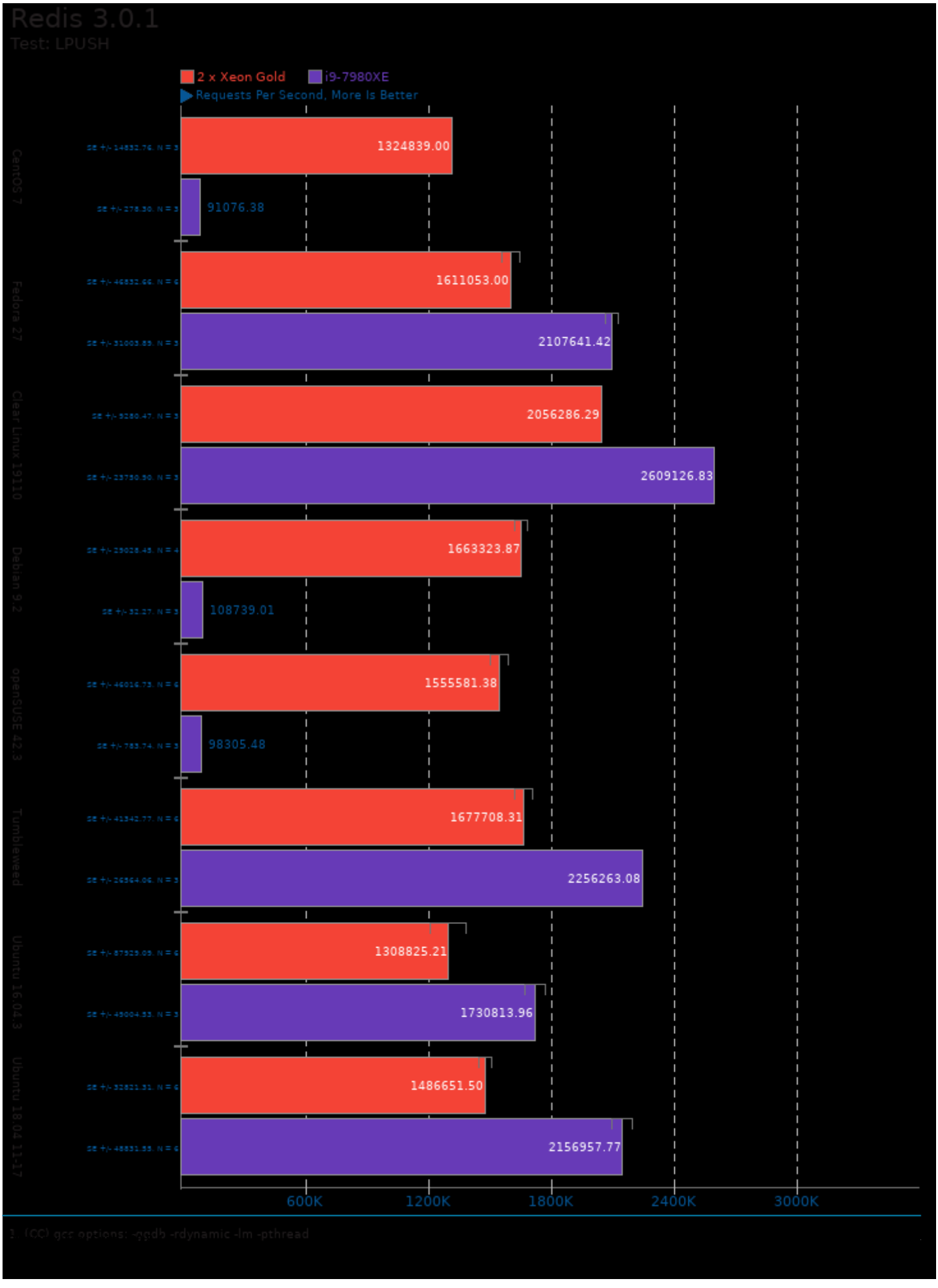

Scikit-Learn 0.17.1
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
Clear Linux 19110
SE +/- 0.23, N = 3
16.17
SE +/- 0.28, N = 6
11.72
Debian 9.2
SE +/- 0.03, N = 3
39.71
SE +/- 0.15, N = 3
35.20
Ubuntu 16.04.3
SE +/- 0.21, N = 3
41.56
SE +/- 0.08, N = 3
33.24
Ubuntu 18.04.1.1-17
SE +/- 0.87, N = 3
188.82
SE +/- 0.03, N = 3
29.48
40
80
120
160
200

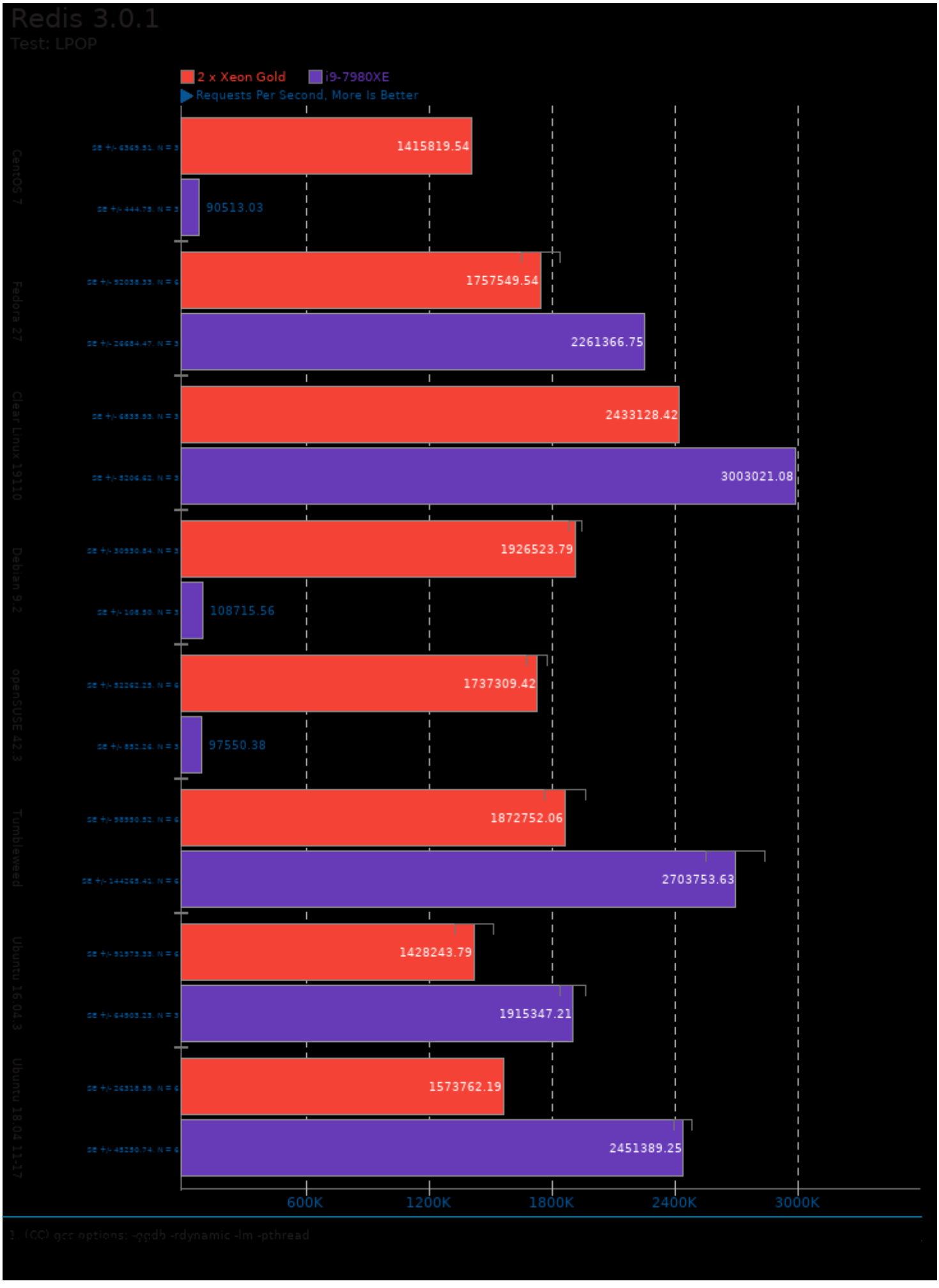

x264 2017-09-08
H.264 Video Encoding
2 x Xeon Gold
i9-7980XE
Frames Per Second, More Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
393.08
359.83
311.07
319.26
405.04
474.84
365.05
340.18
377.98
353.10
315.53
330.82
368.83
369.57
312.18
308.69
100
200
300
400
500
1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -fPIC -fomit-frame-pointer -fno-tree-vectorize

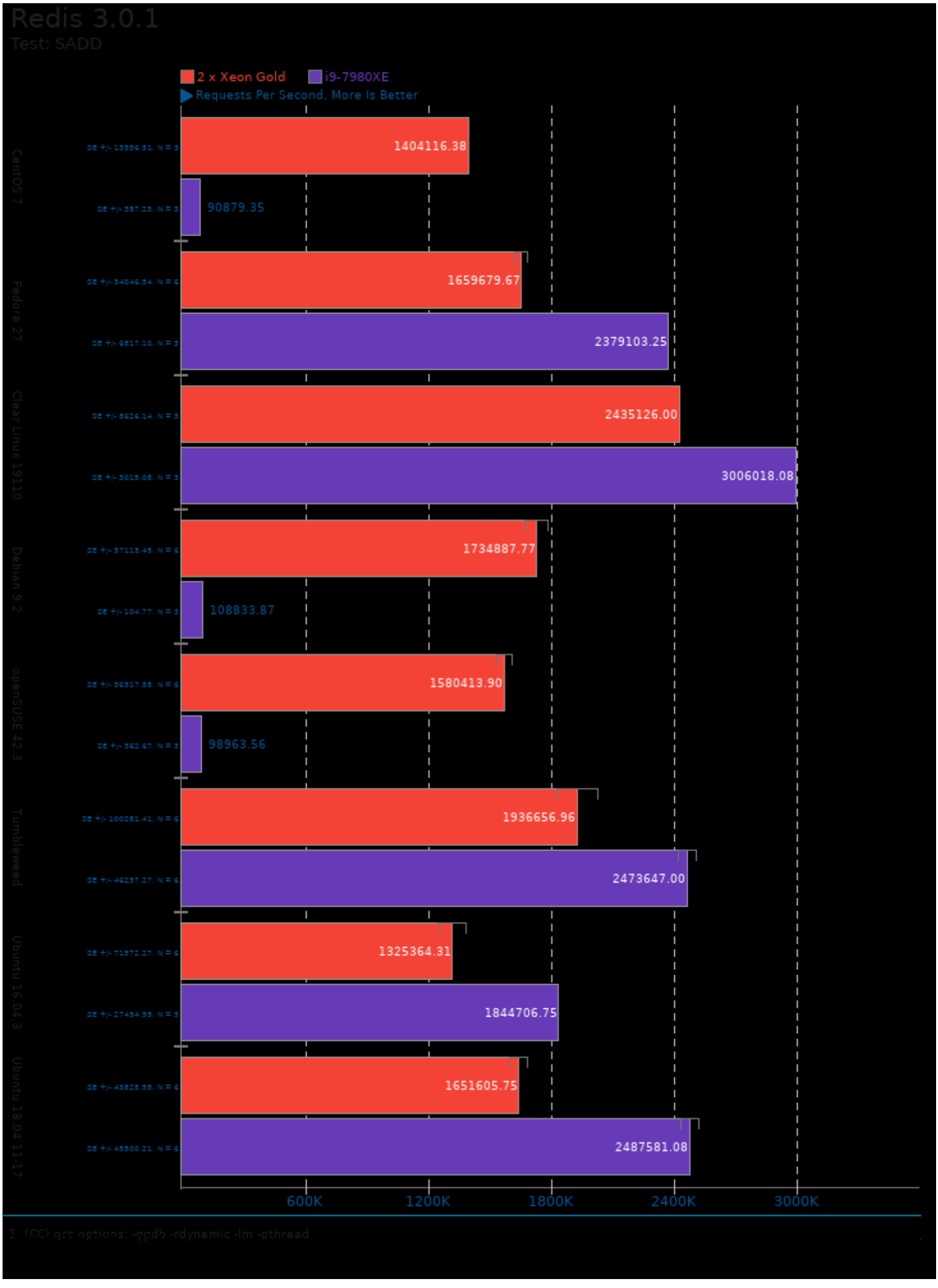

FFmpeg 3.3.3
H.264 HD To NTSC DV
Seconds, Fewer Is Better
CentOS 7
SE +/- 0.05, N = 3
11.02
Fedora 27
SE +/- 0.04, N = 3
-lxcb -lxcb-shm -lxcb-xfixes -lxcb-shape -llzma -lbz2
12.97
Debian 9.2
SE +/- 0.01, N = 3
-llzma -lbz2 -fPIC
10.73
openSUSE 42.3
SE +/- 0.04, N = 3
10.75
Tumbleweed
SE +/- 0.04, N = 3
12.37
Ubuntu 16.04.3
SE +/- 0.45, N = 3
-llzma -lbz2
10.32
Ubuntu 18.04 11-17
SE +/- 0.29, N = 6
-llzma -lbz2 -fPIC
13.52
3
6
9
12
15
1. (CC) gcc options: -lavdevice -lavfilter -lavformat -lavcodec -lswresample -lswscale -lavutil -ldl -lm -pthread -std=c11 -fomit-frame-pointer -O3 -fno-mat

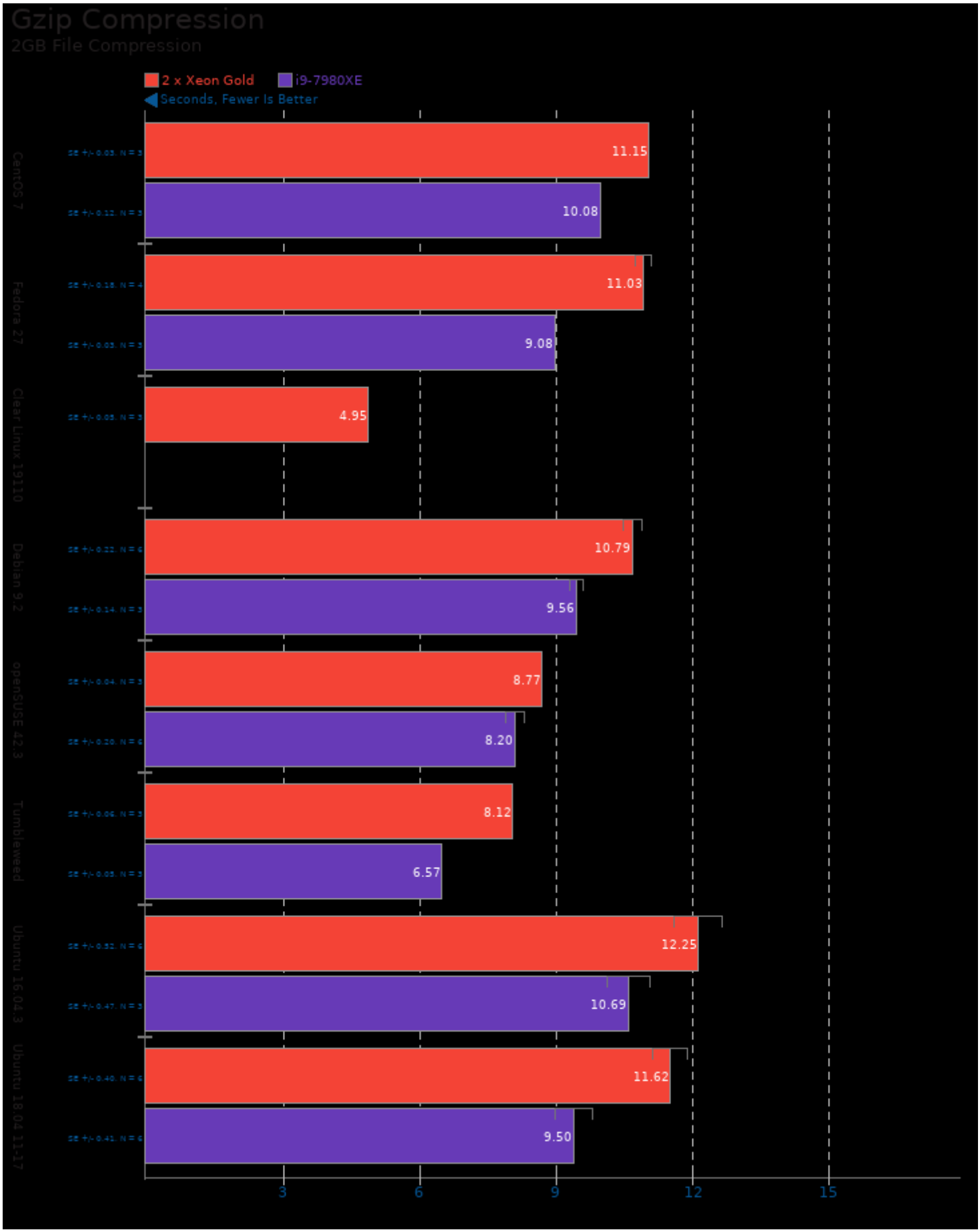

Redis 3.0.1
Test: SET
2 x Xeon Gold
i9-7980XE
Requests Per Second, More Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
1350743.46
91060.97
1592535.92
2120479.71
2183620.58
2681003.75
1566858.25
108743.00
1575671.25
98470.13
1631504.92
2151636.48
1352216.02
1309580.95
1599128.10
2214604.85
600K
1200K
1800K
2400K
3000K
1. (CC) gcc options: -ggdb -rdynamic -lm -pthread

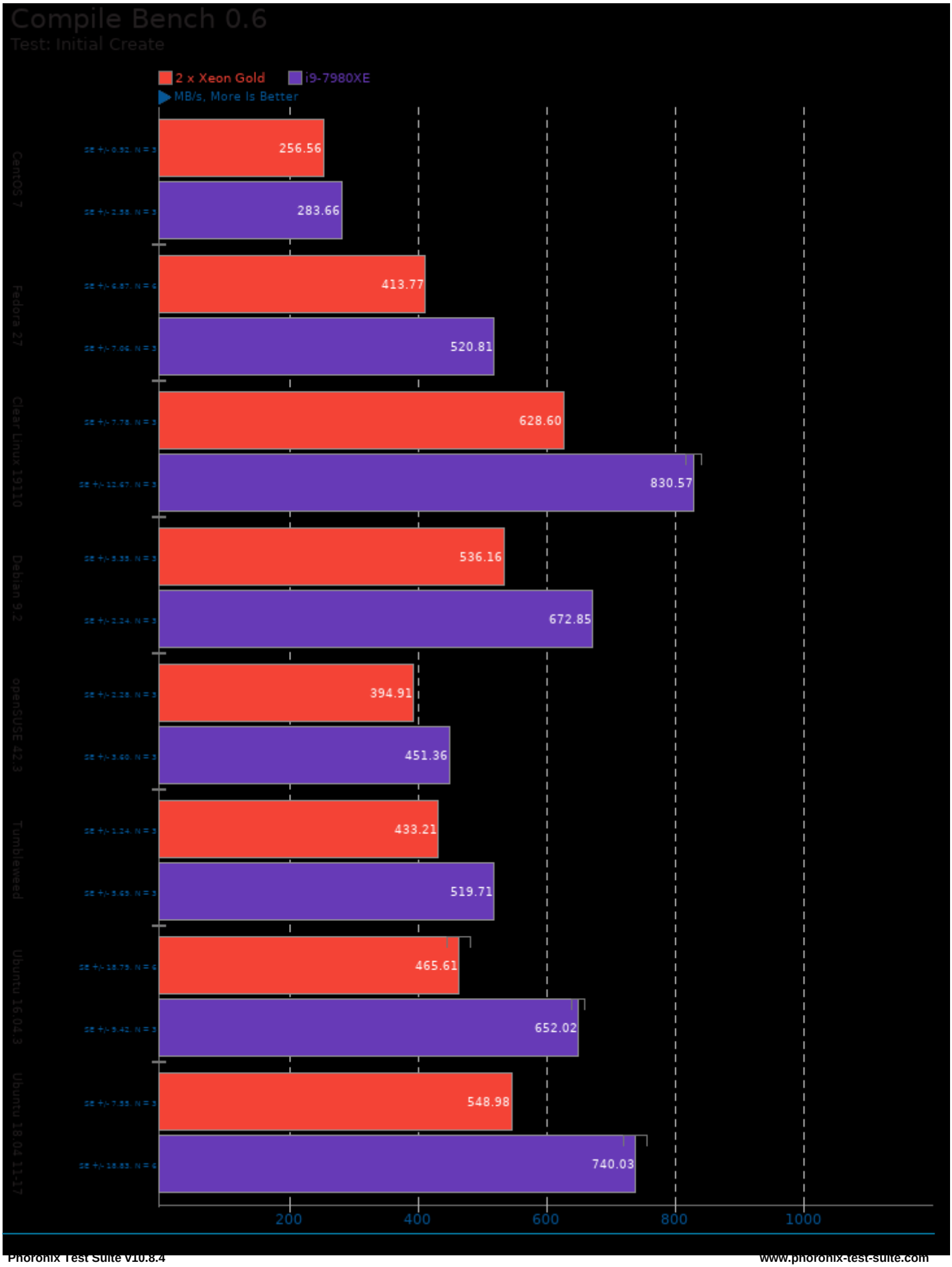

Redis 3.0.1
Test: GET
2 x Xeon Gold
i9-7980XE
Requests Per Second, More Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
1570800.92
90678.79
1962177.58
2633010.42
2810698.92
3554512.42
2259230.42
108766.63
1949836.81
99200.98
2184127.96
2800010.50
1691197.29
2241531.75
1809364.87
2720580.21
800K
1600K
2400K
3200K
4000K
1. (CC) gcc options: -pgdb -rdynamic -lm -pthread

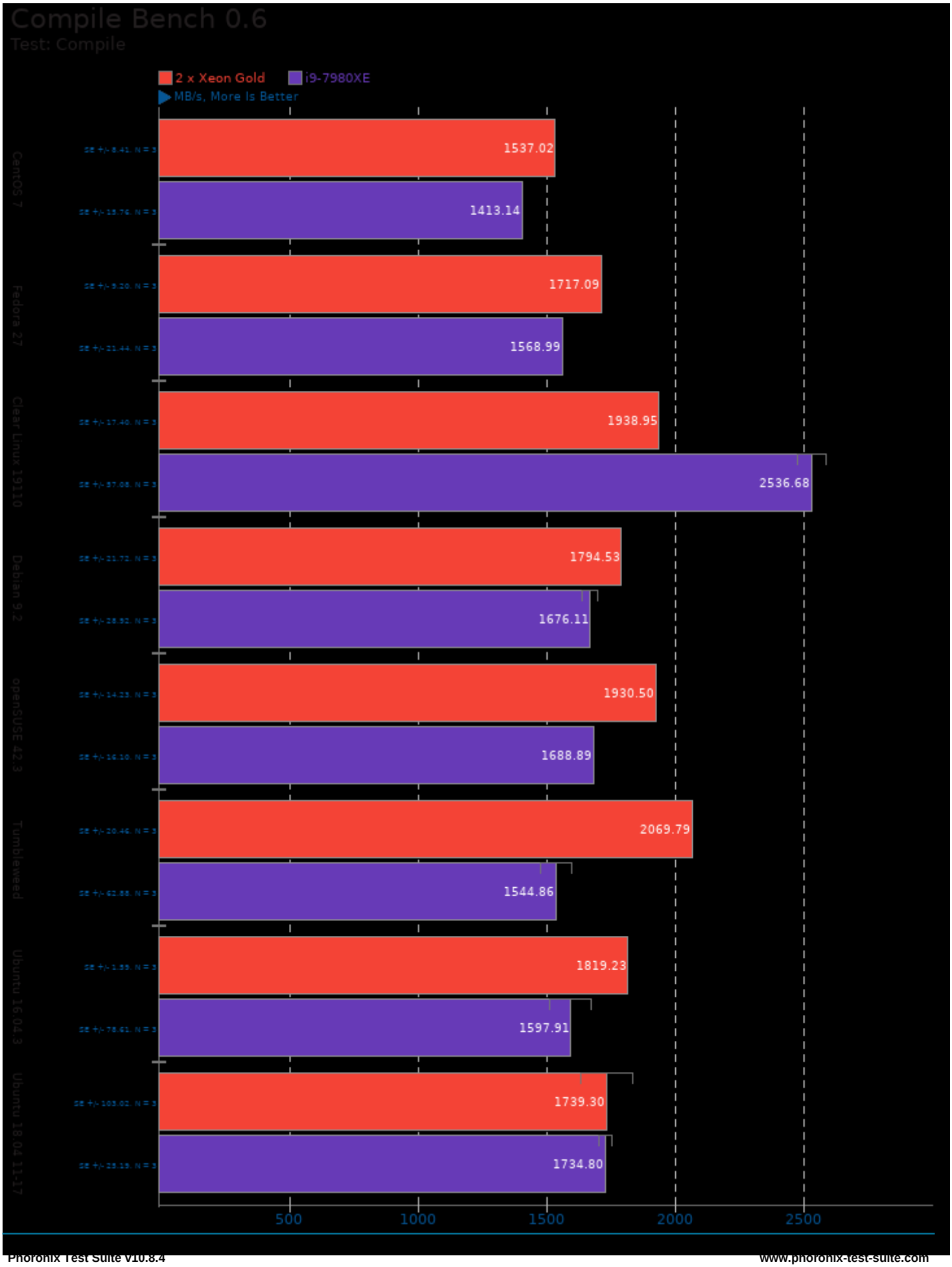

Redis 3.0.1
Test: LPUSH
2 x Xeon Gold
i9-7980XE
Requests Per Second, More Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
1324839.00
91076.38
1611053.00
2107641.42
2056286.29
2609126.83
1663323.87
108739.01
1555581.38
98305.48
1677708.31
2256263.08
1308825.21
1730813.96
1486651.50
2156957.77
600K
1200K
1800K
2400K
3000K
1. (CC) gcc options: -ggdb -rdynamic -lm -pthread

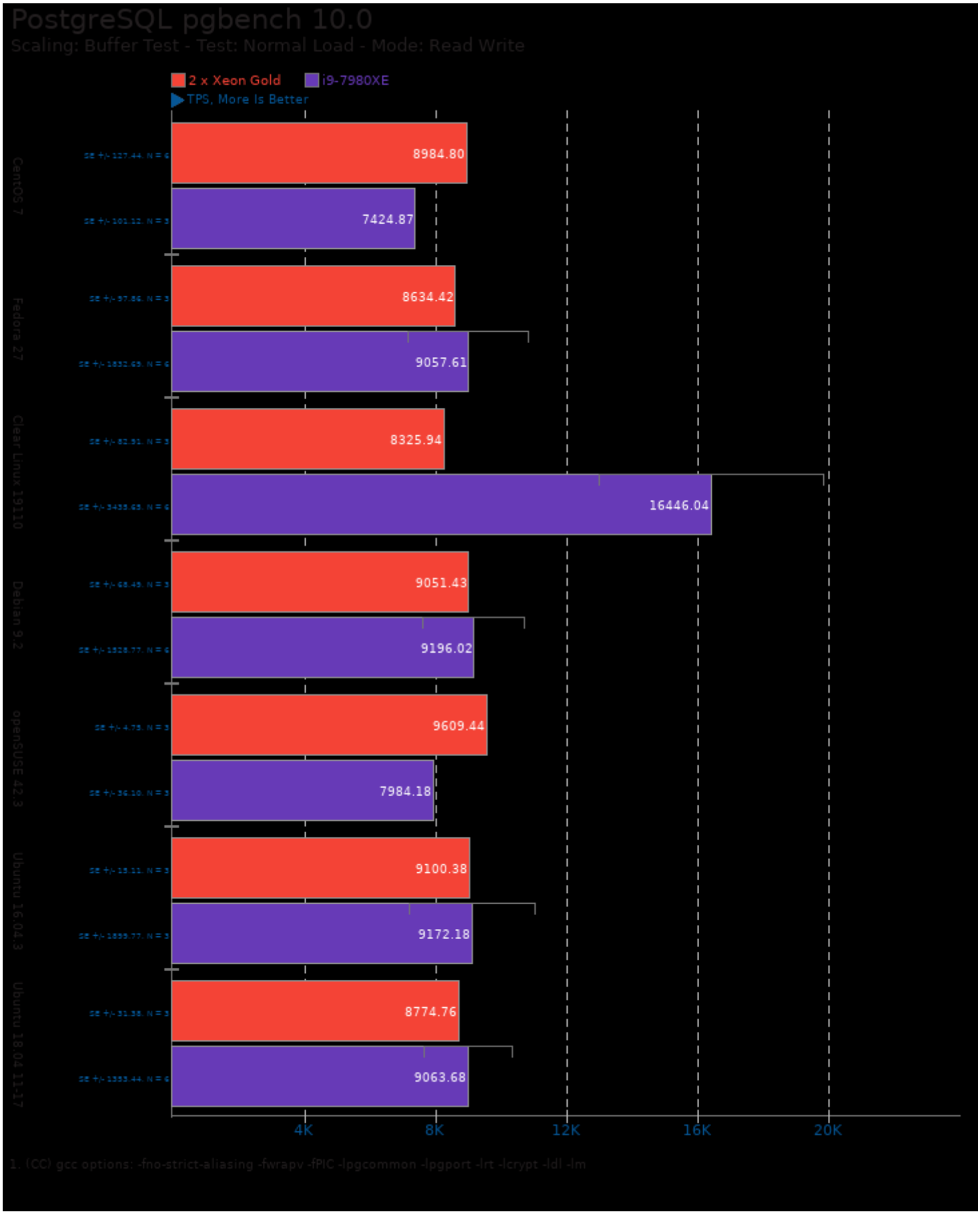

Redis 3.0.1
Test: LPOP
2 x Xeon Gold
i9-7980XE
Requests Per Second, More Is Better
CentOS 7
1415819.54
Fedora 27
90513.03
Clear Linux 19110
1757549.54
Debian 9.2
2261366.75
openSUSE 42.3
2433128.42
Tumbleweed
3003021.08
Ubuntu 16.04.3
1926523.79
Ubuntu 18.04 11-17
108715.56
1737309.42
97550.38
1872752.06
2703753.63
1428243.79
1915347.21
1573762.19
2451389.25
600K
1200K
1800K
2400K
3000K
1. (CC) gcc options: -pgdb -rdynamic -lm -pthread

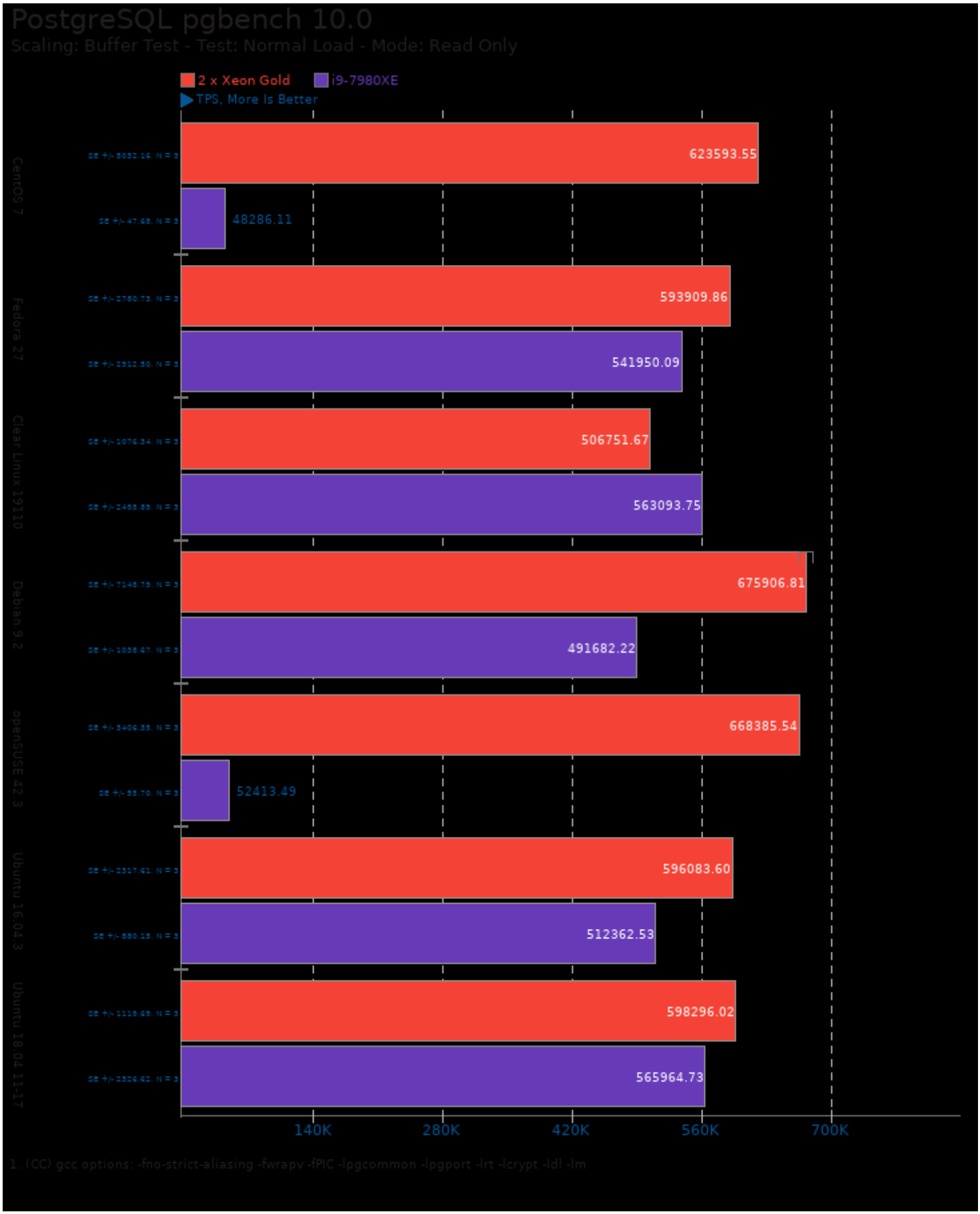

Redis 3.0.1
Test: SADD
2 x Xeon Gold
i9-7980XE
Requests Per Second, More Is Better
CentOS 7
1404116.38
Fedora 27
90879.35
Clear Linux 19110
1659679.67
Debian 9.2
2379103.25
openSUSE 42.3
2435126.00
Tumbleweed
3006018.08
Ubuntu 16.04.3
1734887.77
Ubuntu 18.04 11-17
108833.87
1580413.90
98963.56
1936656.96
2473647.00
1325364.31
1844706.75
1651605.75
2487581.08
600K
1200K
1800K
2400K
3000K
1. (CC) gcc options: -pgdb -rdynamic -lm -pthread

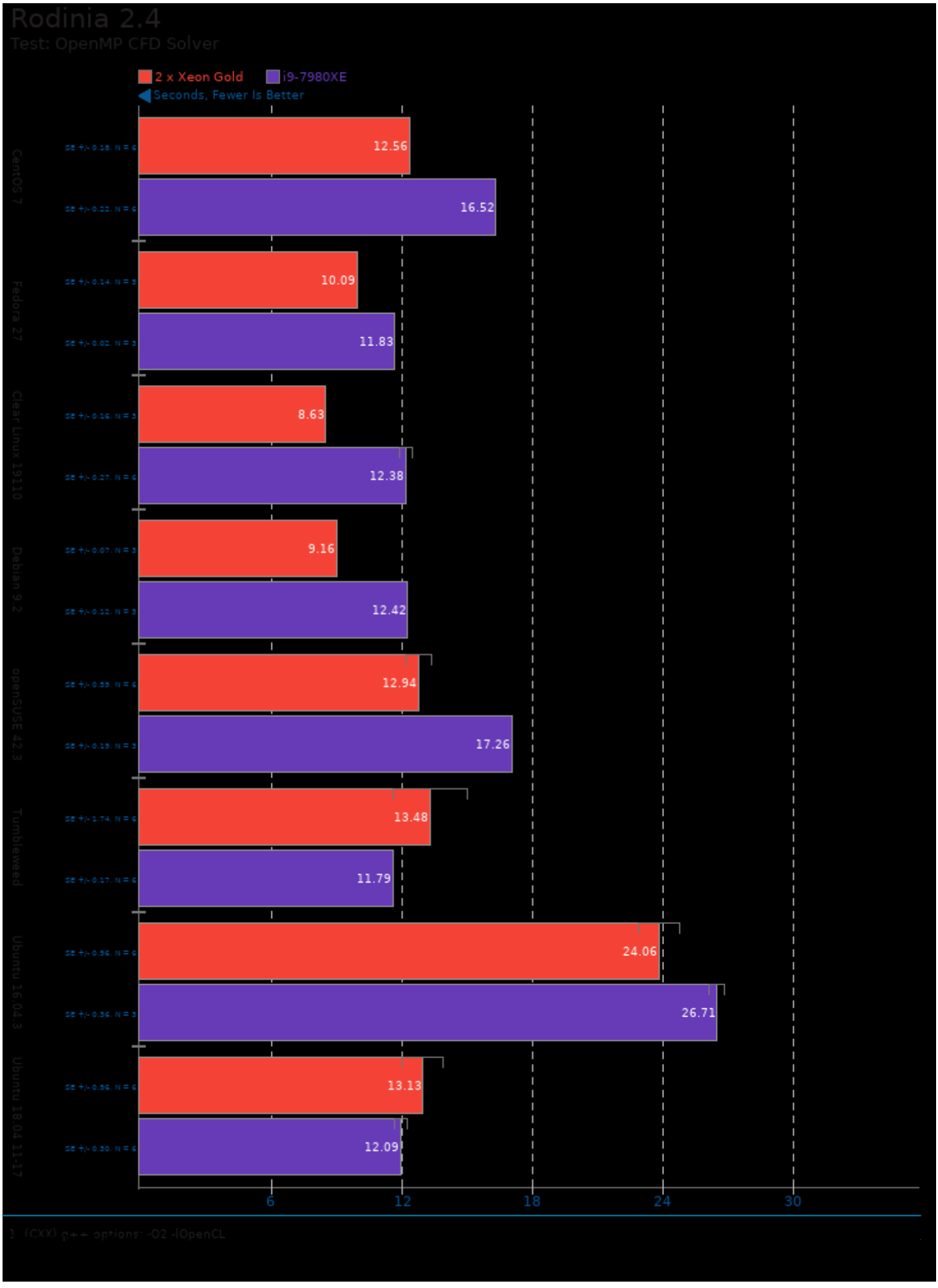

Gzip Compression
2GB File Compression
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
11.15
10.08
11.03
9.08
4.95
10.79
9.56
8.77
8.20
8.12
6.57
12.25
10.69
11.62
9.50
3
6
9
12
15

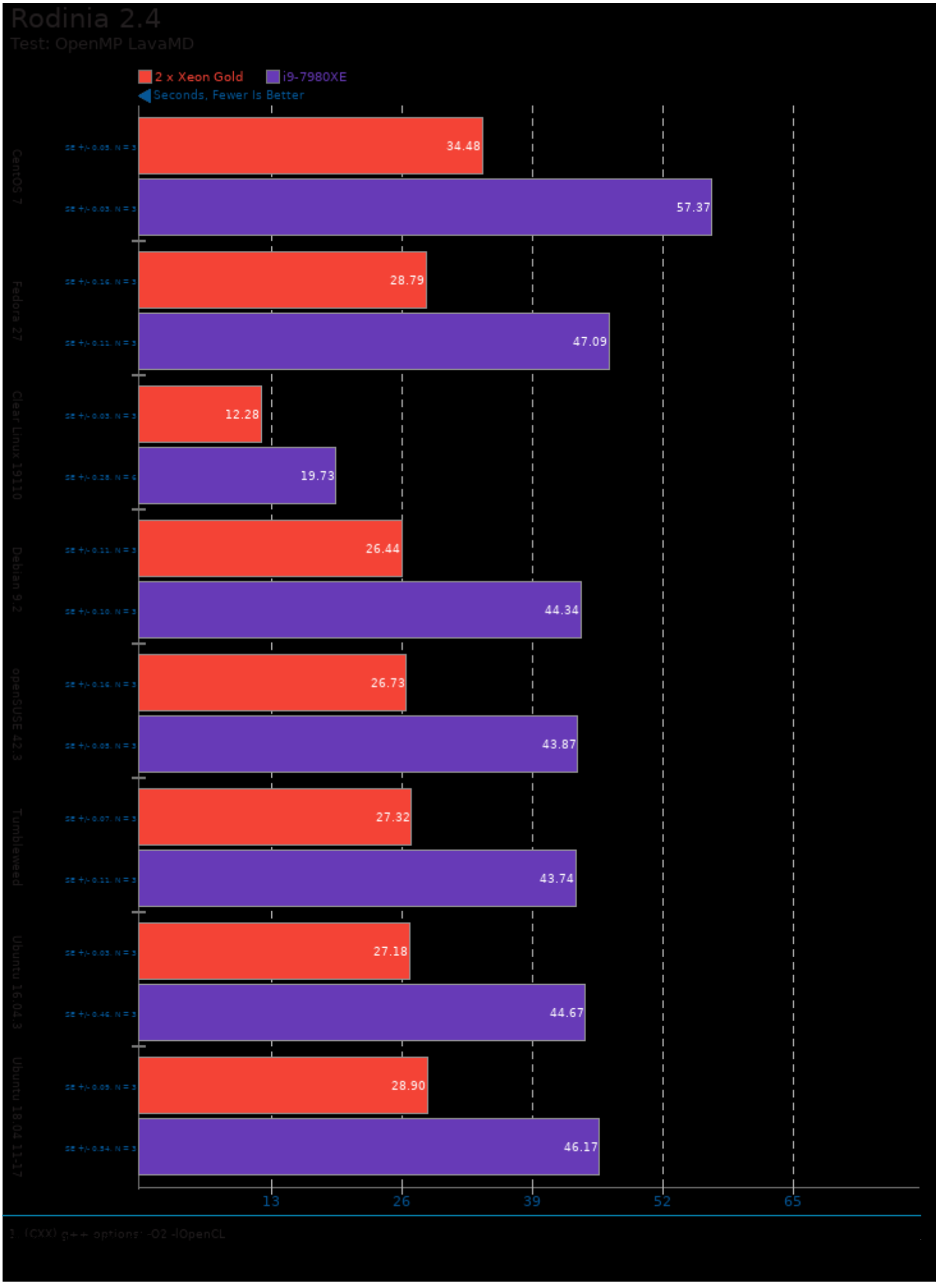

Compile Bench 0.6
Test: Initial Create
2 x Xeon Gold
i9-7980XE
MB/s, More Is Better
256.56
283.66
413.77
520.81
628.60
830.57
536.16
672.85
394.91
451.36
433.21
519.71
465.61
652.02
548.98
740.03
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
200
400
600
800
1000

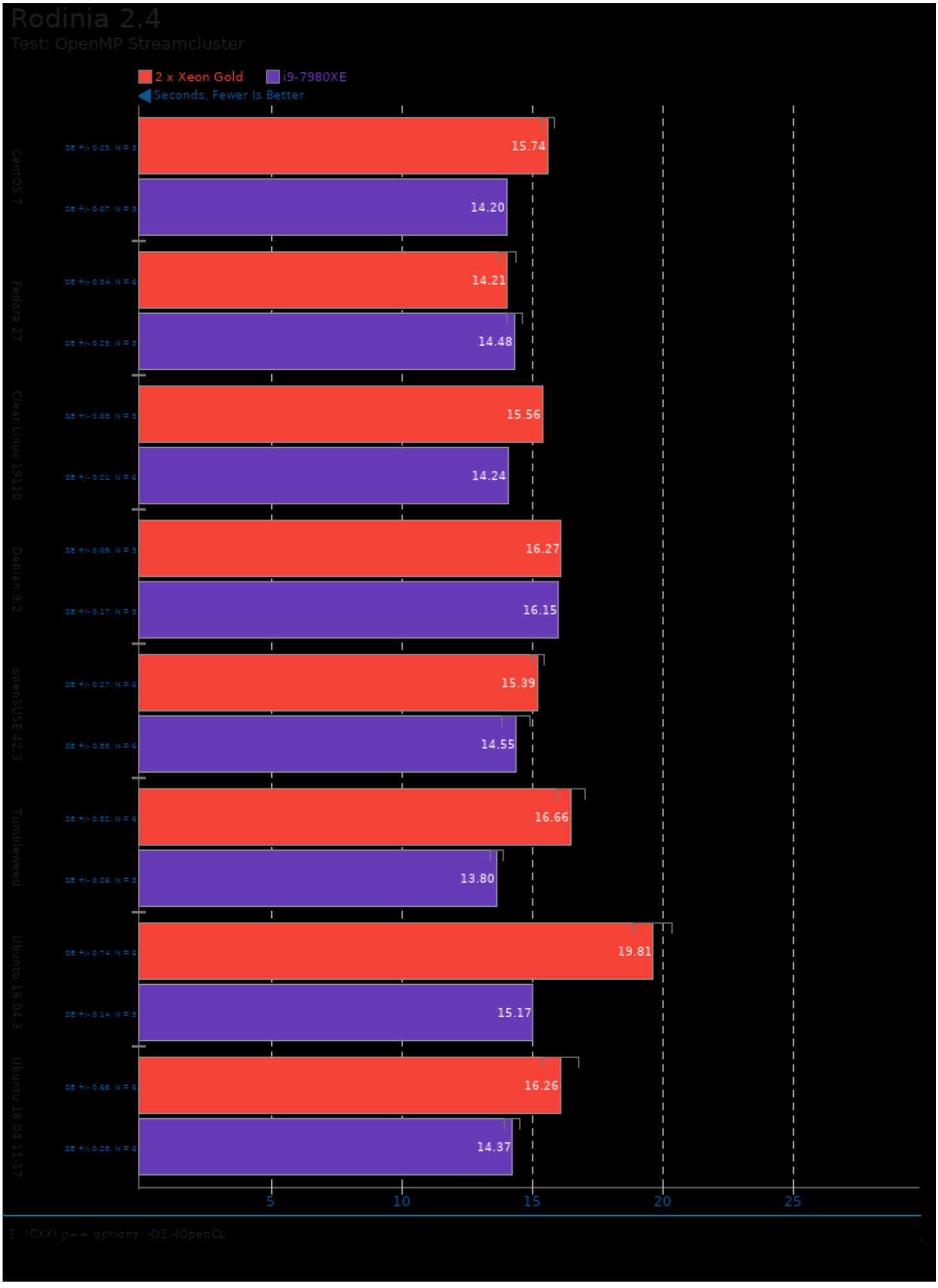

Compile Bench 0.6
Test: Compile
2 x Xeon Gold
i9-7980XE
MB/s, More Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
1537.02
1413.14
1717.09
1568.99
1938.95
2536.68
1794.53
1676.11
1930.50
1688.89
2069.79
1544.86
1819.23
1597.91
1739.30
1734.80
500
1000
1500
2000
2500

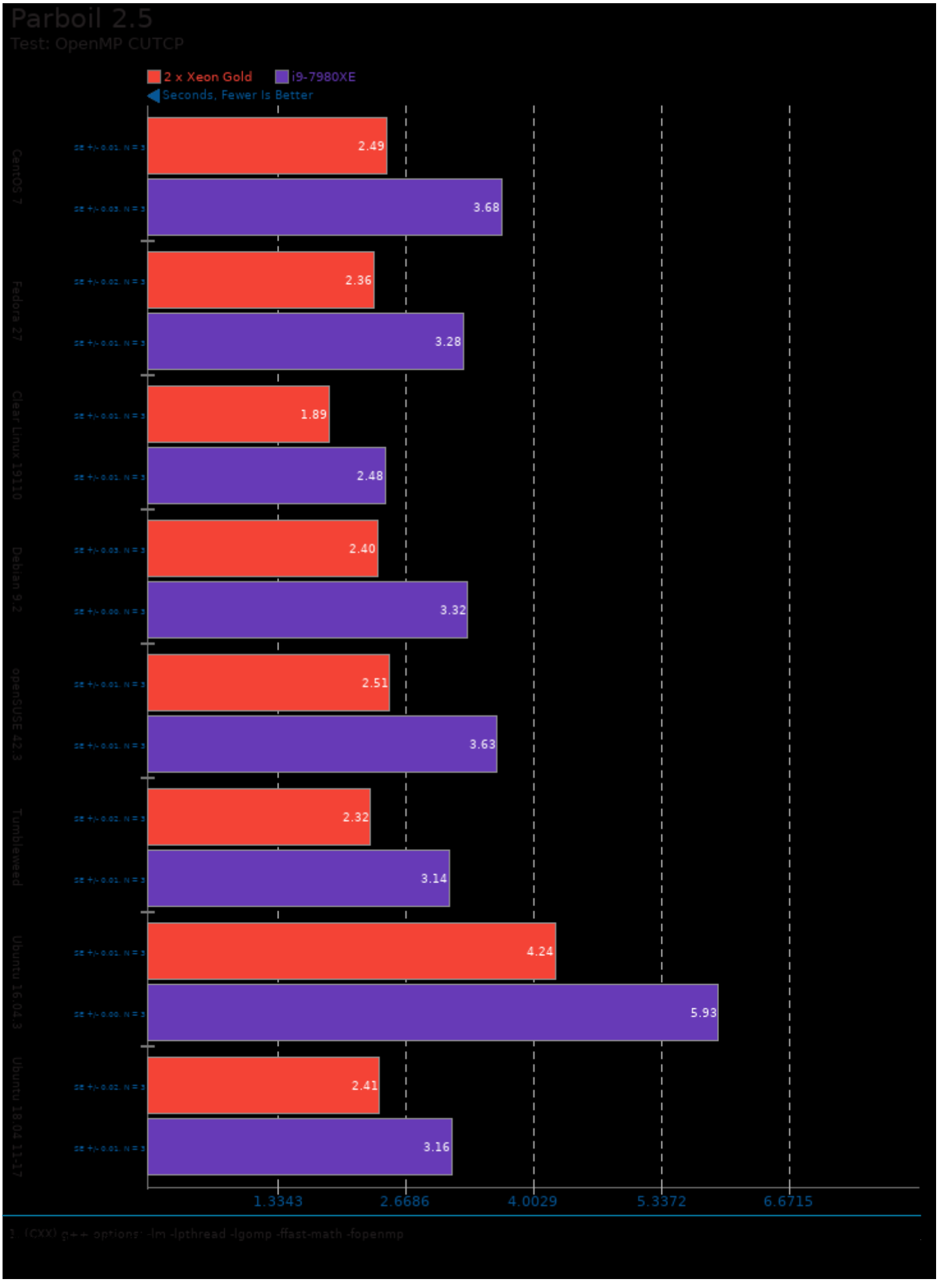

PostgreSQL pgbench 10.0
Scaling: Buffer Test - Test: Normal Load - Mode: Read Write
2 x Xeon Gold
i9-7980XE
TPS, More Is Better
CentOS 7
8984.80
7424.87
Fedora 27
8634.42
9057.61
Clear Linux 19110
8325.94
16446.04
Debian 9.2
9051.43
9196.02
openSUSE 42.3
9609.44
7984.18
Ubuntu 16.04.3
9100.38
9172.18
Ubuntu 18.04 11-17
8774.76
9063.68
4K
8K
12K
16K
20K
1. (CC) gcc options: -fno-strict-aliasing -fwrapv -fPIC -lpgcommon -lpgport -lrt -lcrypt -ldl -lm

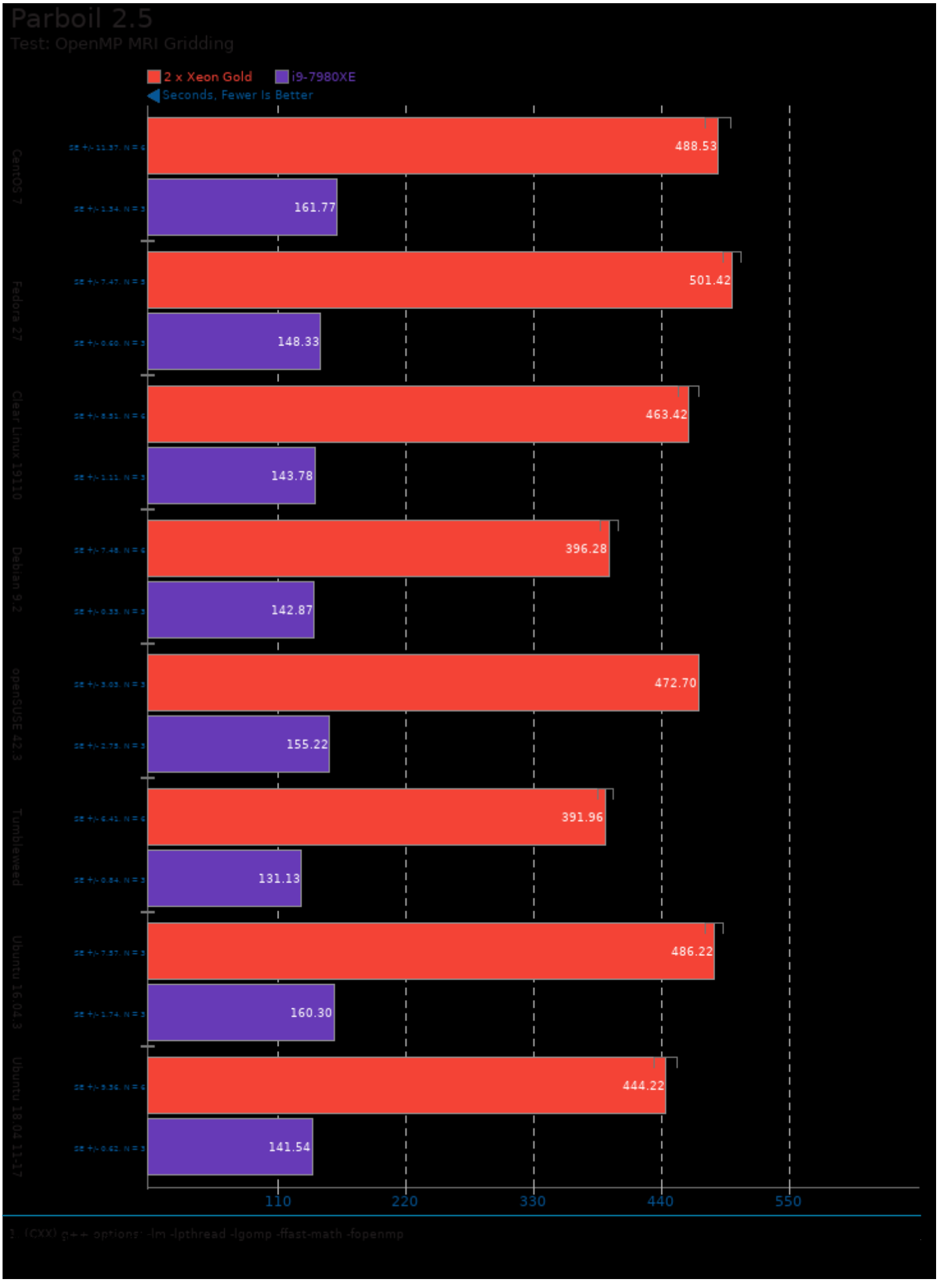

PostgreSQL pgbench 10.0
Scaling: Buffer Test - Test: Normal Load - Mode: Read Only
2 x Xeon Gold
i9-7980XE
TPS, More Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Ubuntu 16.04.3
Ubuntu 18.04 11-17
623593.55
48286.11
593909.86
541950.09
506751.67
563093.75
675906.81
491682.22
668385.54
52413.49
596083.60
512362.53
598296.02
565964.73
140K
280K
420K
560K
700K
1. (CC) gcc options: -fno-strict-aliasing -fwrapv -fPIC -lpgcommon -lpgport -lrt -lcrypt -ldl -lm

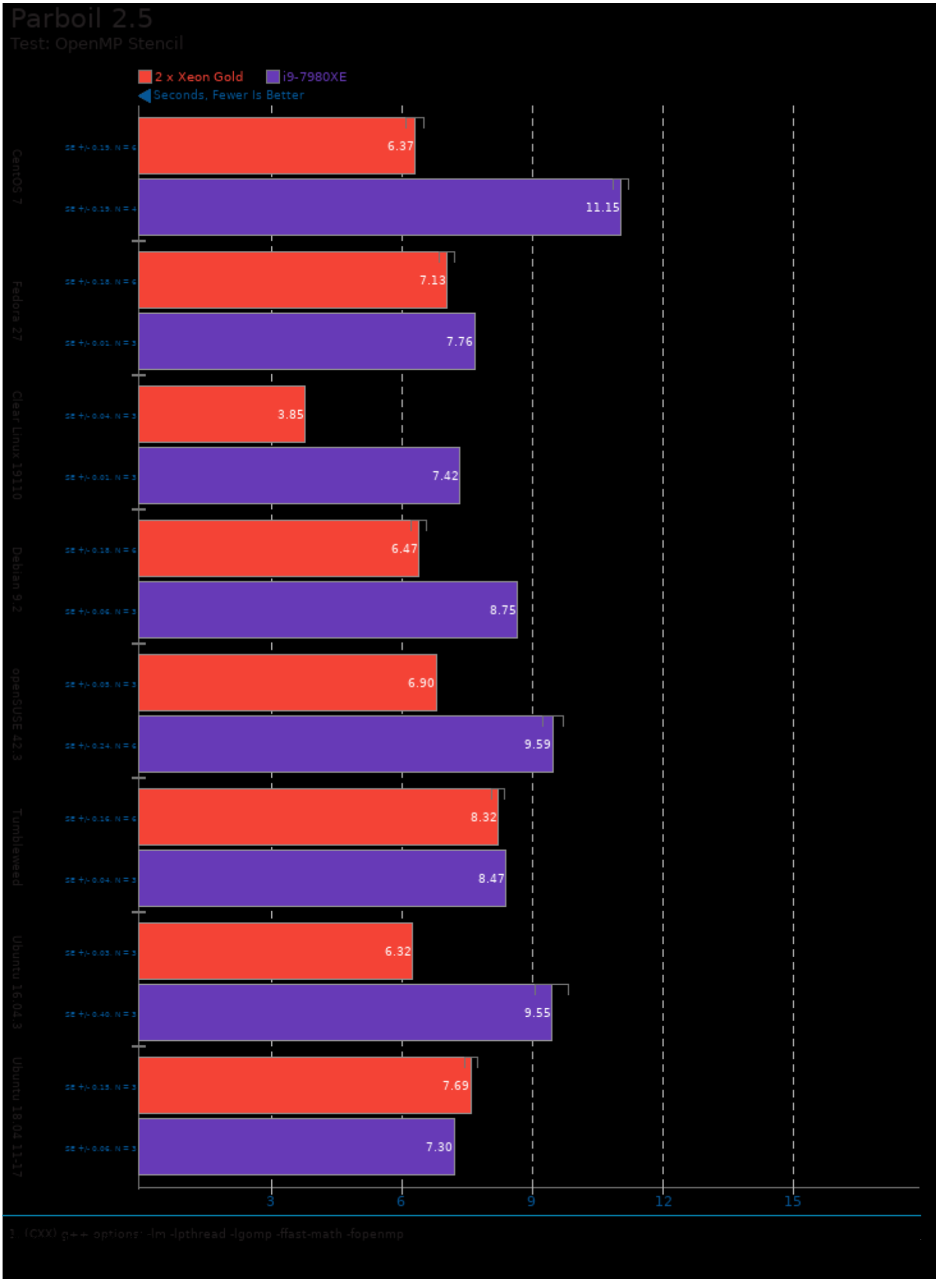

Rodinia 2.4
Test: OpenMP CFD Solver
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
12.56
16.52
10.09
11.83
8.63
12.38
9.16
12.42
12.94
17.26
13.48
11.79
24.06
26.71
13.13
12.09
6
12
18
24
30
(CXX) g++ options: -O2 -lOpenCL

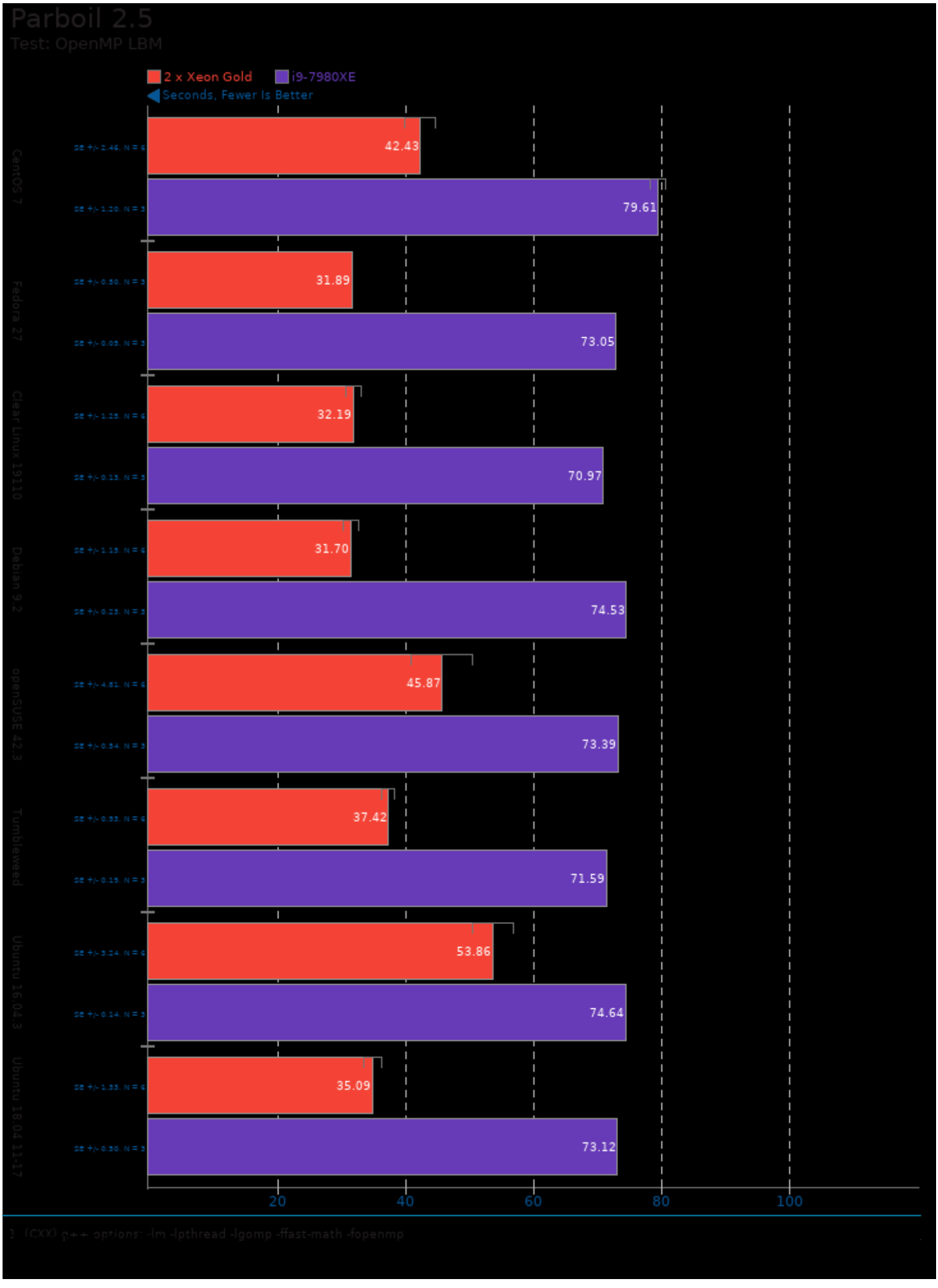

Rodinia 2.4
Test: OpenMP LavaMD
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
34.48
57.37
28.79
47.09
12.28
19.73
26.44
44.34
26.73
43.87
27.32
43.74
27.18
44.67
28.90
46.17
13
26
39
52
65
1. (CXX) g++ options: -O2 -lOpenCL

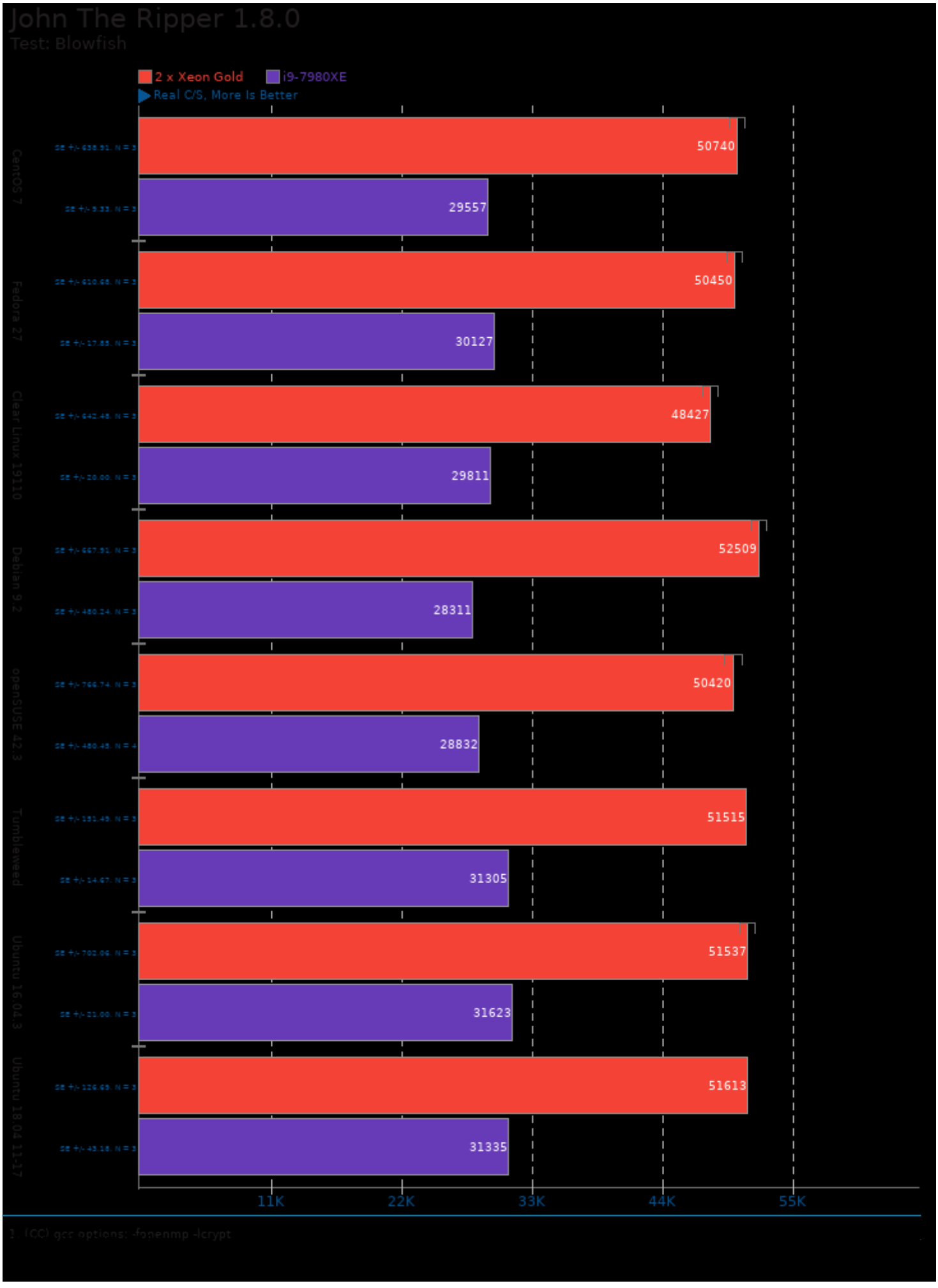

Rodinia 2.4
Test: OpenMP Streamcluster
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
15.74
14.20
14.21
14.48
15.56
14.24
16.27
16.15
15.39
14.55
16.66
13.80
19.81
15.17
16.26
14.37
5
10
15
20
25
(CXX) g++ options: -O2 -lOpenCL

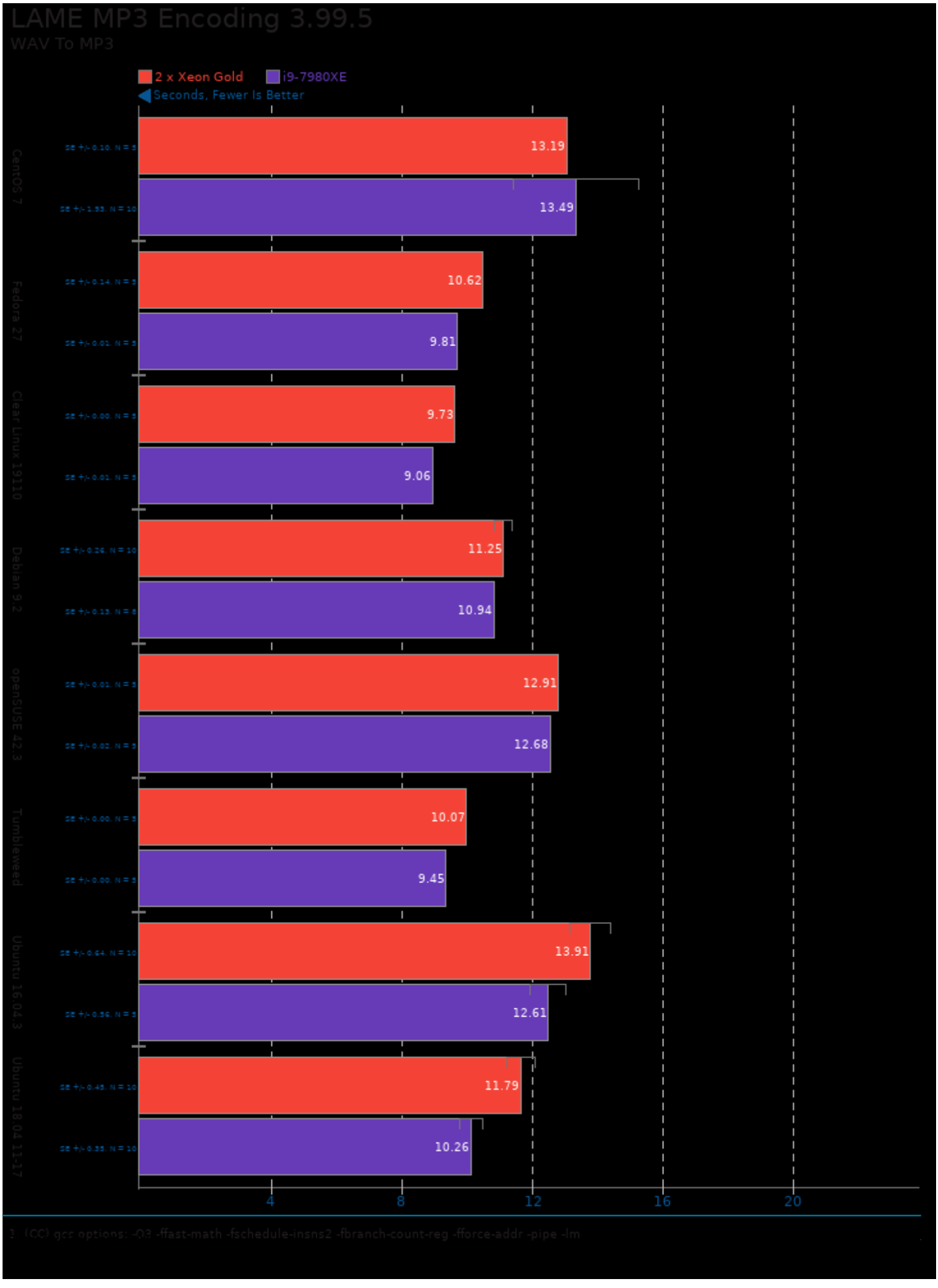

Parboil 2.5
Test: OpenMP CUTCP
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
2.49
3.68
2.36
3.28
1.89
2.48
2.40
3.32
2.51
3.63
2.32
3.14
4.24
5.93
2.41
3.16
1.3343
2.6686
4.0029
5.3372
6.6715
(CXX) g++ options: -lm -lpthread -lgomp -ffast-math -fopenmp

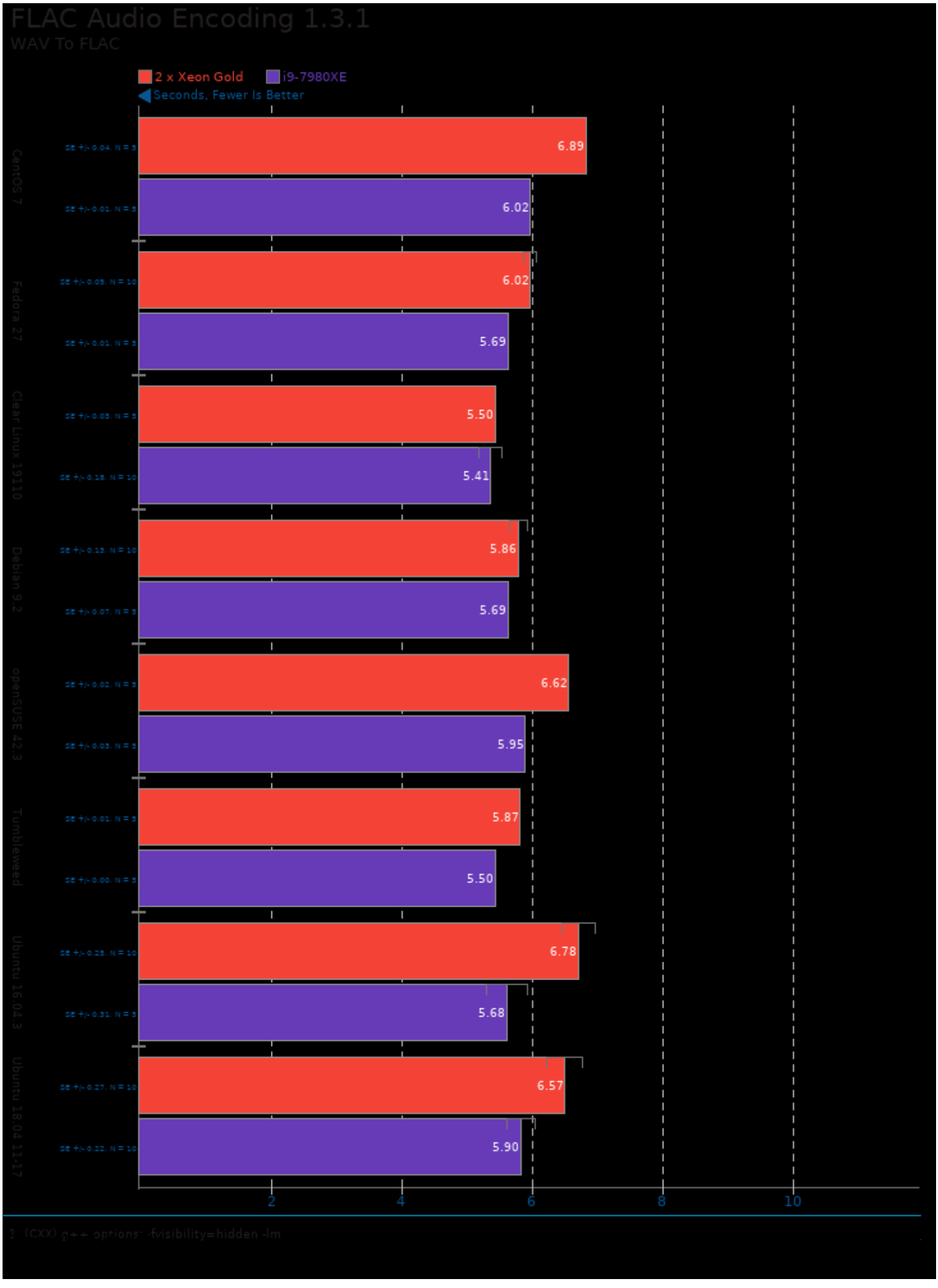

Parboil 2.5
Test: OpenMP MRI Gridding
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04
11-17
488.53
161.77
501.42
148.33
463.42
143.78
396.28
142.87
472.70
155.22
391.96
131.13
486.22
160.30
444.22
141.54
110
220
330
440
550
(CXX) g++ options: -lm -lpthread -lgomp -ffast-math -fopenmp

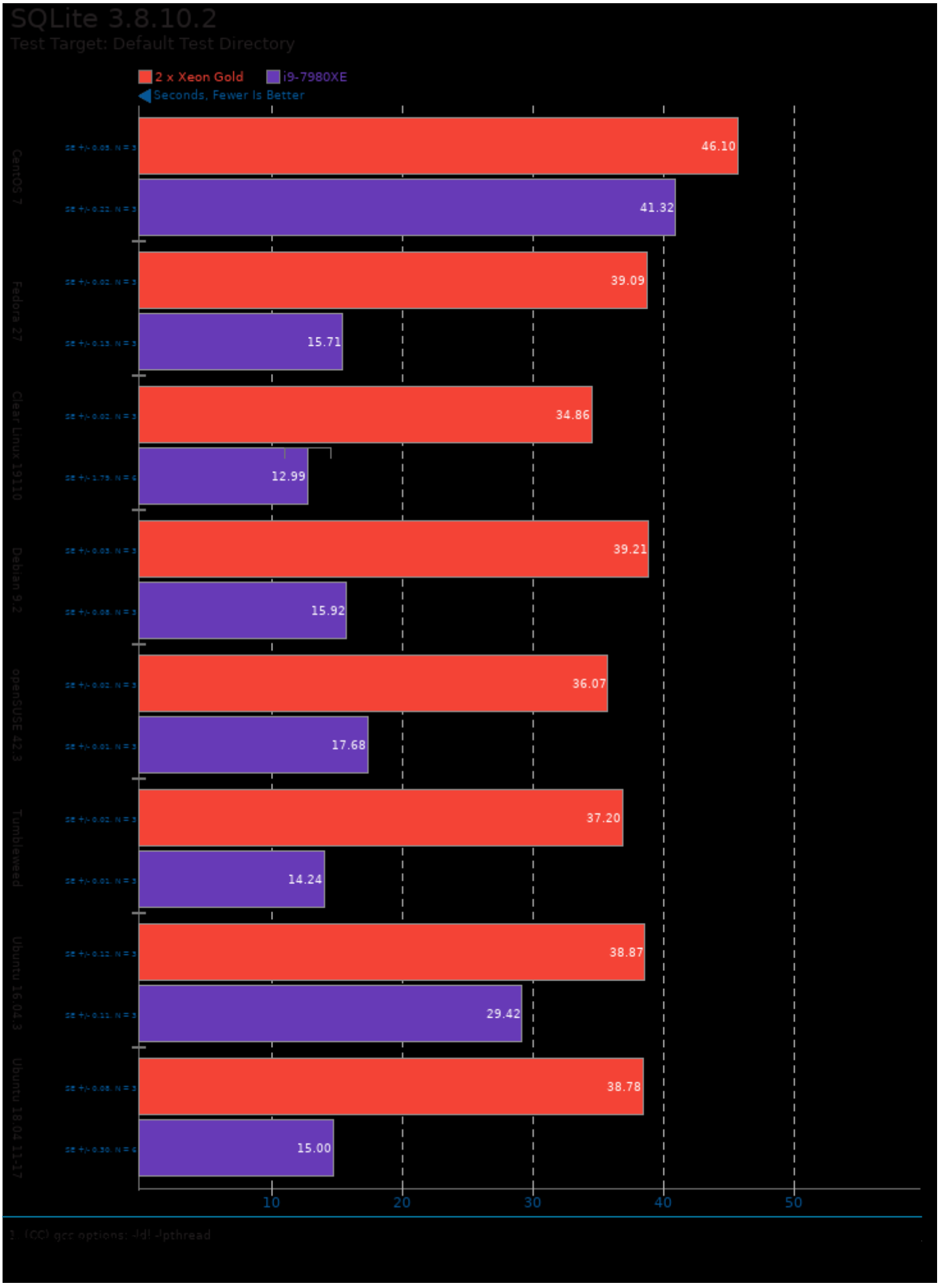

Parboil 2.5
Test: OpenMP Stencil
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
6.37
11.15
7.13
7.76
3.85
7.42
6.47
8.75
6.90
9.59
8.32
8.47
6.32
9.55
7.69
7.30
3
6
9
12
15
(CXX) g++ options: -lm -lpthread -lgomp -ffast-math -fopenmp

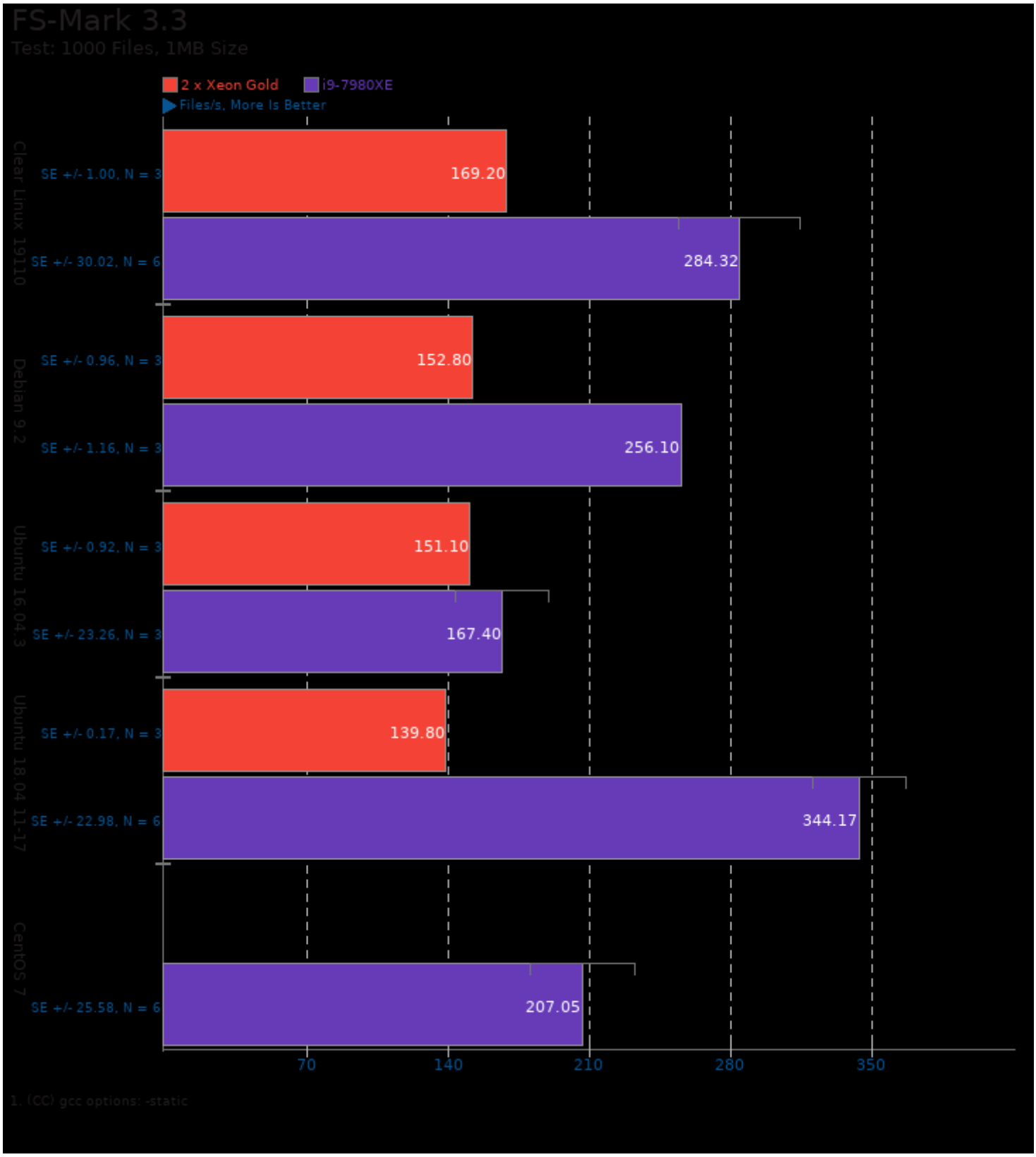

Parboil 2.5
Test: OpenMP LBM
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
42.43
79.61
31.89
73.05
32.19
70.97
31.70
74.53
45.87
73.39
37.42
71.59
53.86
74.64
35.09
73.12
20
40
60
80
100
(CXX) g++ options: -lm -lpthread -lgomp -ffast-math -fopenmp

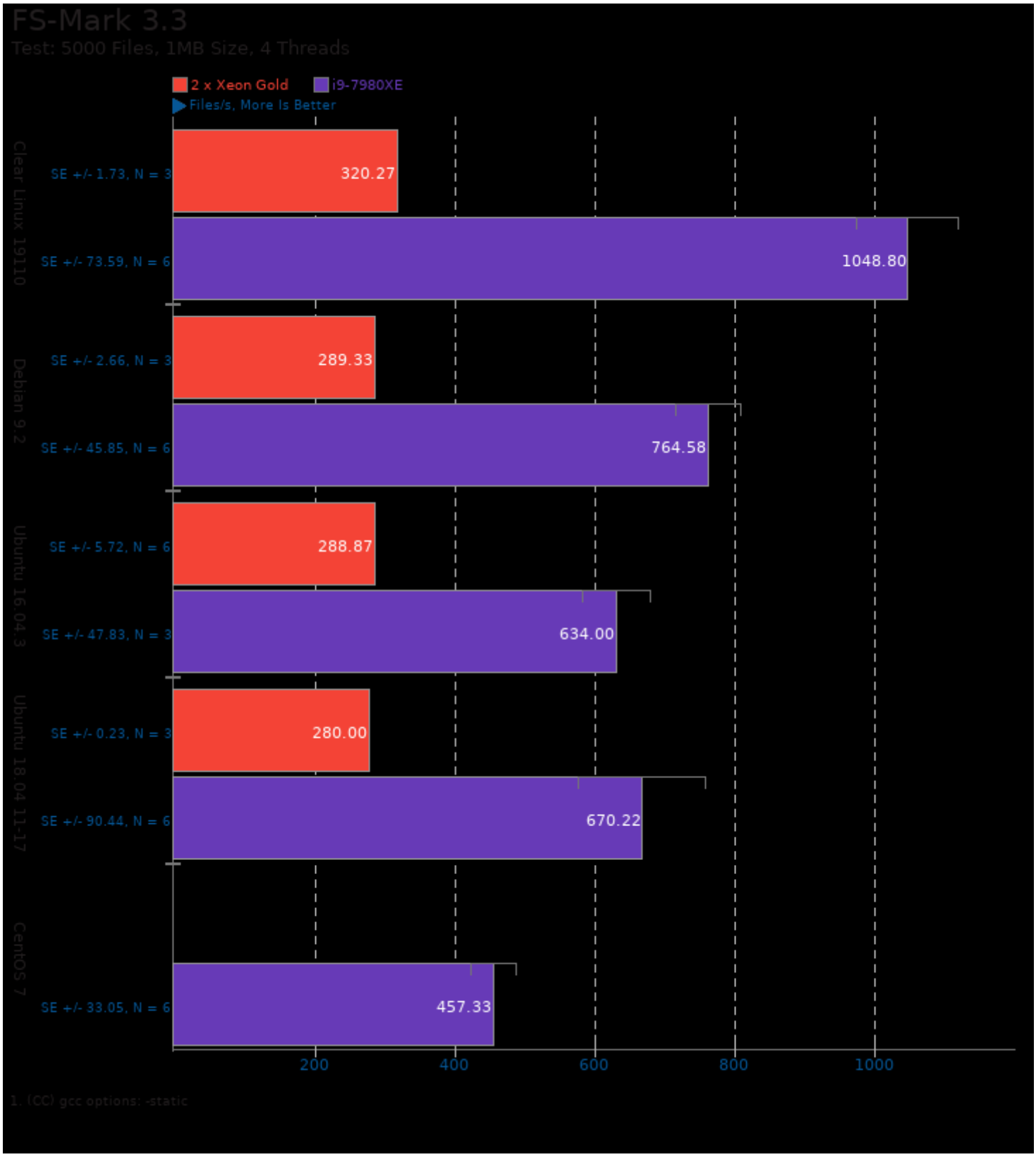

John The Ripper 1.8.0
Test: Blowfish
2 x Xeon Gold
i9-7980XE
Real C/S, More Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
50740
29557
50450
30127
48427
29811
52509
28311
50420
28832
51515
31305
51537
31623
51613
31335
11K
22K
33K
44K
55K
1. (CC) gcc options: -fopenmp -lcrypt

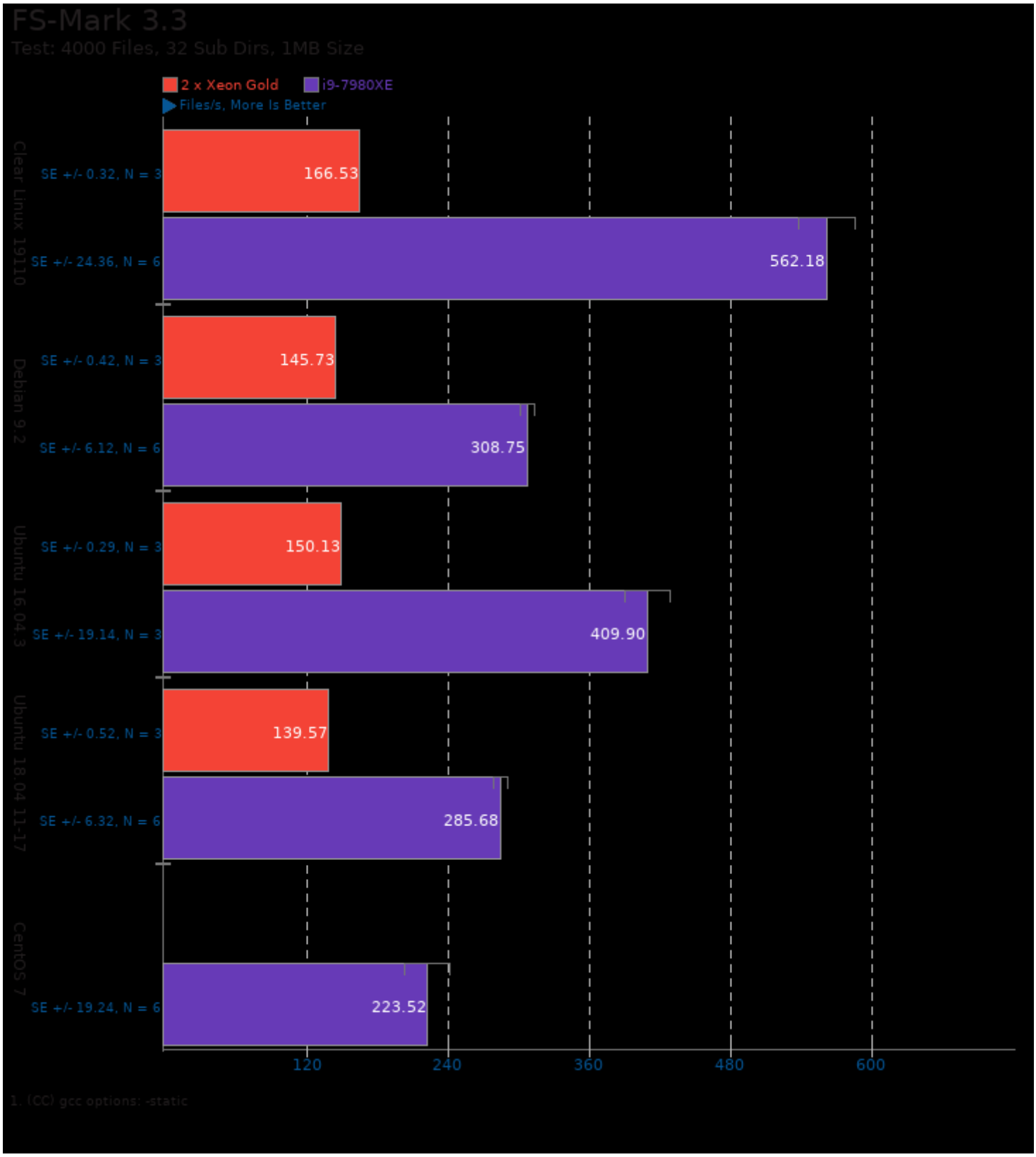

LAME MP3 Encoding 3.99.5
WAV To MP3
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
13.19
13.49
10.62
9.81
9.73
9.06
11.25
10.94
12.91
12.68
10.07
9.45
13.91
12.61
11.79
10.26
4
8
12
16
20
1. (CC) gcc options: -O3 -ffast-math -fschedule-insns2 -fbranch-count-reg -fforce-addr -pipe -lm

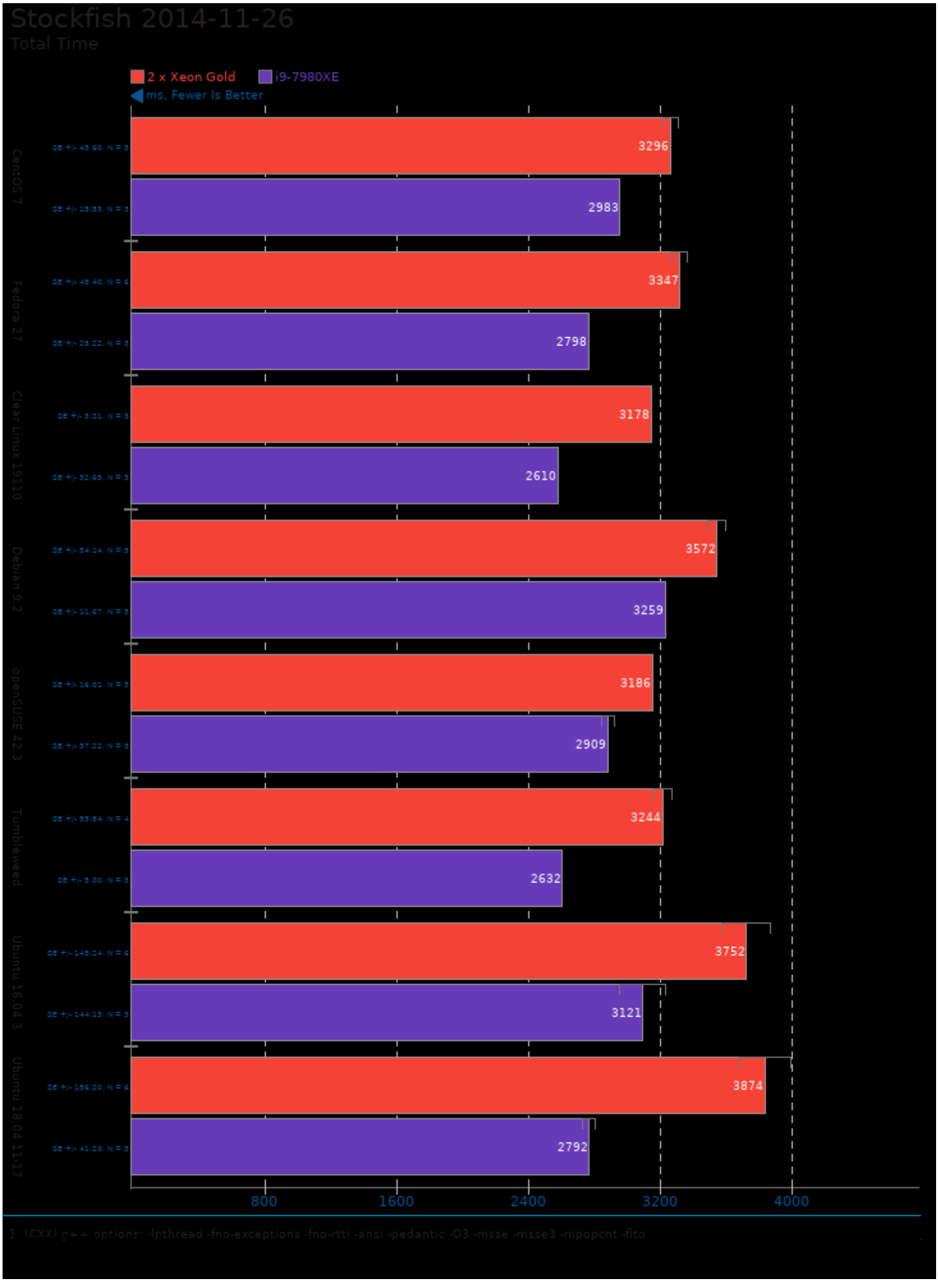

FLAC Audio Encoding 1.3.1
WAV To FLAC
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
6.89
6.02
6.02
5.69
5.50
5.41
5.86
5.69
6.62
5.95
5.87
5.50
6.78
5.68
6.57
5.90
2
4
6
8
10
(CXX) g++ options: -fvisibility=hidden -lm

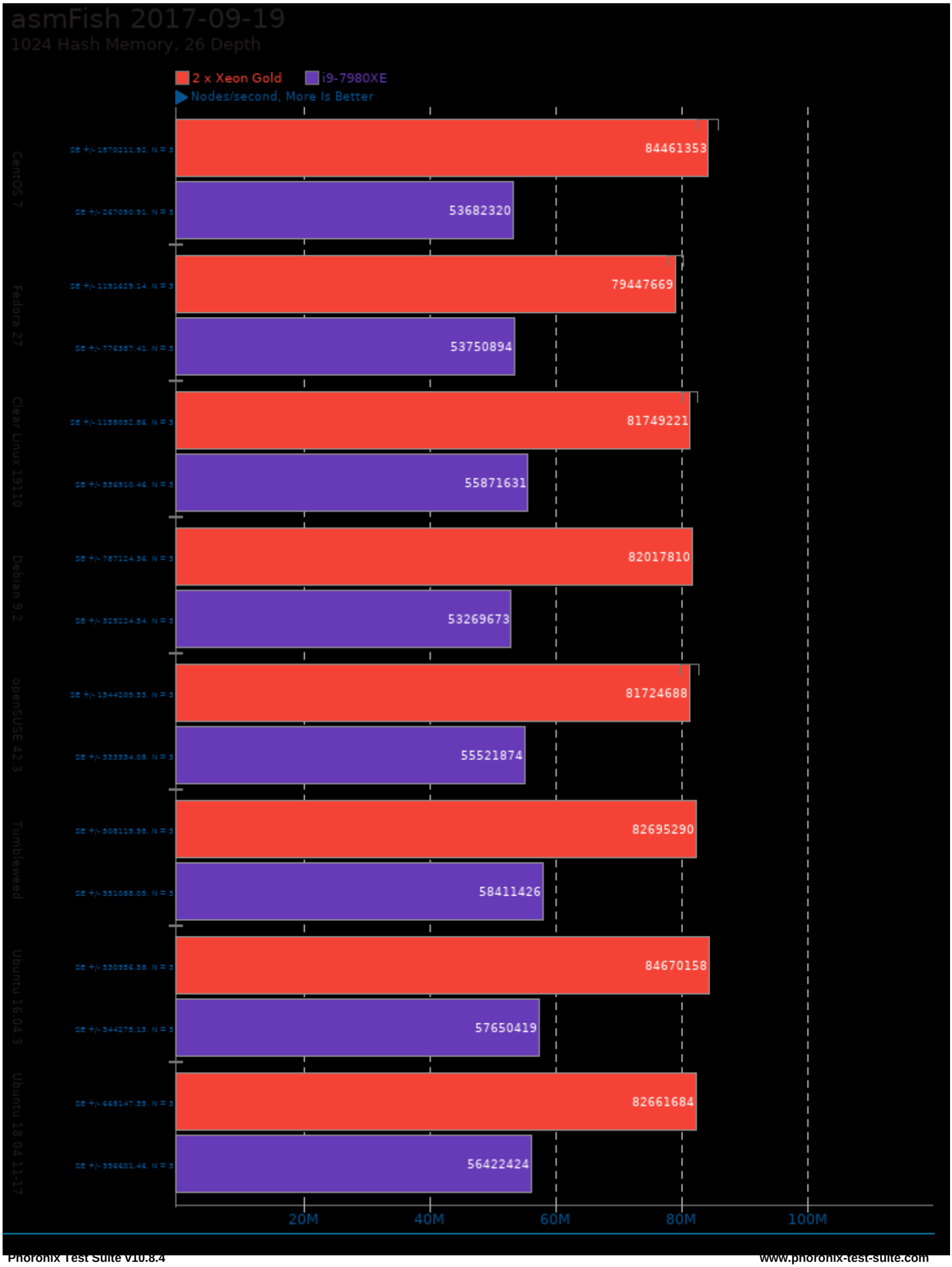

SQLite 3.8.10.2
Test Target: Default Test Directory
2 x Xeon Gold
i9-7980XE
Seconds, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
46.10
41.32
39.09
15.71
34.86
12.99
39.21
15.92
36.07
17.68
37.20
14.24
38.87
29.42
38.78
15.00
10
20
30
40
50
1. (CC) gcc options: -Jdl -lpthread

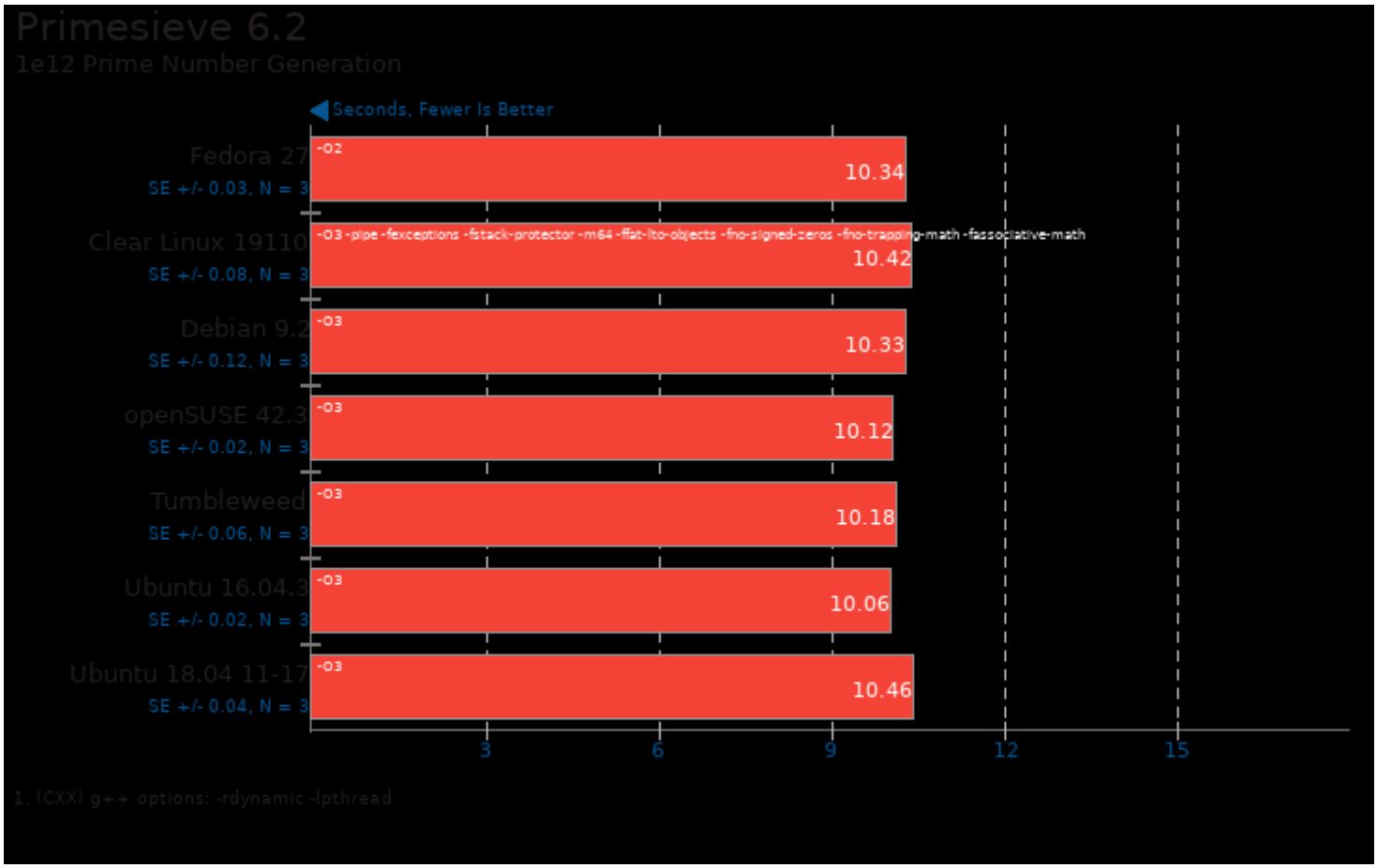

FS-Mark 3.3
Test: 1000 Files, 1MB Size
2 x Xeon Gold
i9-7980XE
Files/s, More Is Better
Clear Linux 19110
SE +/- 1.00, N = 3
169.20
SE +/- 30.02, N = 6
284.32
Debian 9.2
SE +/- 0.96, N = 3
152.80
SE +/- 1.16, N = 3
256.10
Ubuntu 16.04.3
SE +/- 0.92, N = 3
151.10
SE +/- 23.26, N = 3
167.40
Ubuntu 18.04 11-17
SE +/- 0.17, N = 3
139.80
SE +/- 22.98, N = 6
344.17
CentOS 7
SE +/- 25.58, N = 6
207.05
70
140
210
280
350
1. (CC) gcc options: -static


FS-Mark 3.3
Test: 5000 Files, 1MB Size, 4 Threads
2 x Xeon Gold
i9-7980XE
Files/s, More Is Better
Clear Linux 19110
SE +/- 1.73, N = 3
320.27
SE +/- 73.59, N = 6
1048.80
Debian 9.2
SE +/- 2.66, N = 3
289.33
SE +/- 45.85, N = 6
764.58
Ubuntu 16.04.3
SE +/- 5.72, N = 6
288.87
SE +/- 47.83, N = 3
634.00
Ubuntu 18.04 11-17
SE +/- 0.23, N = 3
280.00
SE +/- 90.44, N = 6
670.22
CentOS 7
SE +/- 33.05, N = 6
457.33
200
400
600
800
1000
1. (CC) gcc options: -static

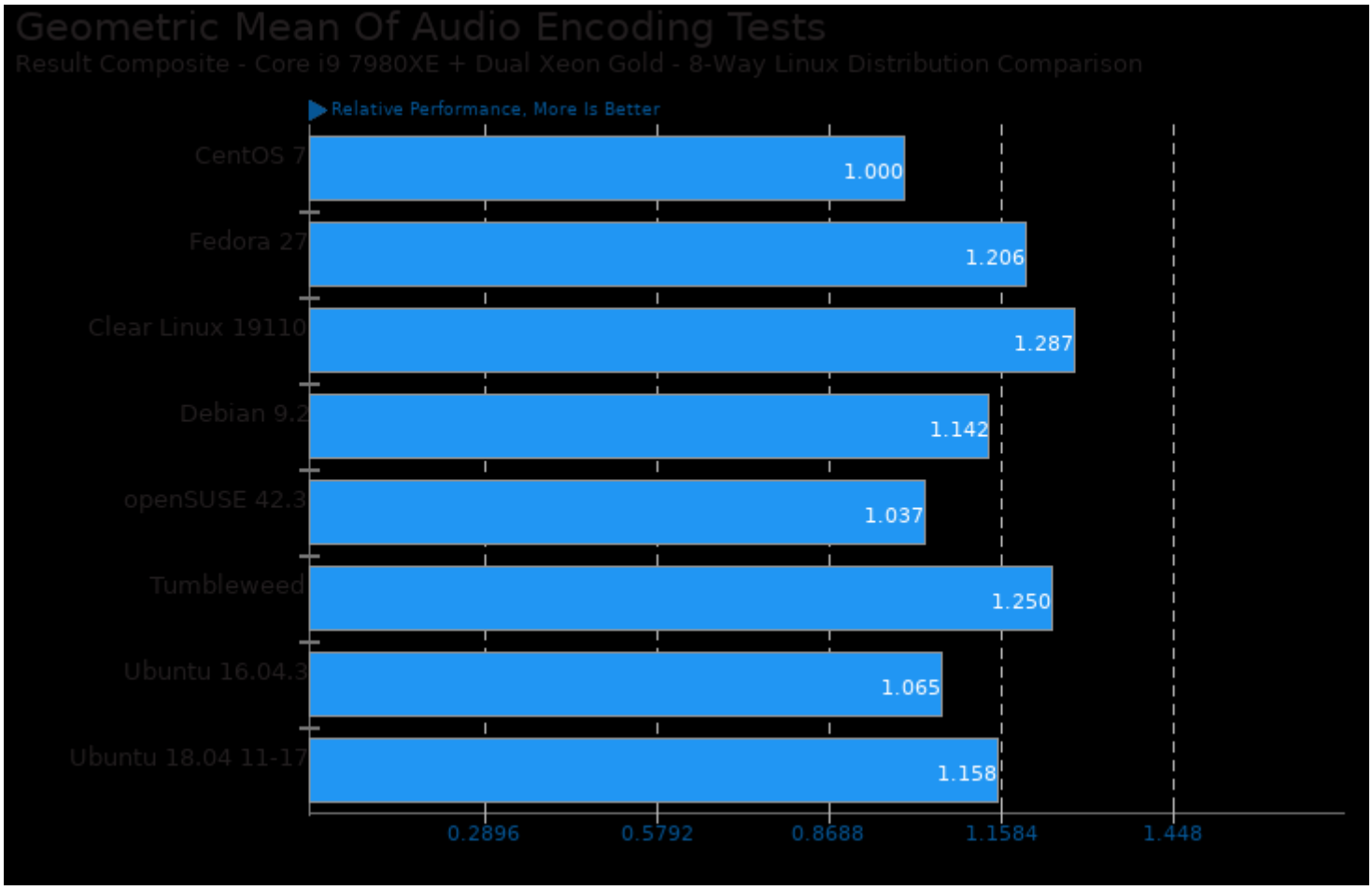

FS-Mark 3.3
Test: 4000 Files, 32 Sub Dirs, 1MB Size
2 x Xeon Gold
i9-7980XE
Files/s, More Is Better
Clear Linux 19110
SE +/- 0.32, N = 3
166.53
SE +/- 24.36, N = 6
562.18
Debian 9.2
SE +/- 0.42, N = 3
145.73
SE +/- 6.12, N = 6
308.75
Ubuntu 16.04.3
SE +/- 0.29, N = 3
150.13
SE +/- 19.14, N = 3
409.90
Ubuntu 18.04 11-17
SE +/- 0.52, N = 3
139.57
SE +/- 6.32, N = 6
285.68
CentOS 7
SE +/- 19.24, N = 6
223.52
120
240
360
480
600
1. (CC) gcc options: -static


Stockfish 2014-11-26
Total Time
2 x Xeon Gold
i9-7980XE
ms, Fewer Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
3296
2983
3347
2798
3178
2610
3572
3259
3186
2909
3244
2632
3752
3121
3874
2792
800
1600
2400
3200
4000
(CXX) g++ options: -lpthread -fno-exceptions -fno-rtti -ansi -pedantic -O3 -msse -msse3 -mpopcnt -flto

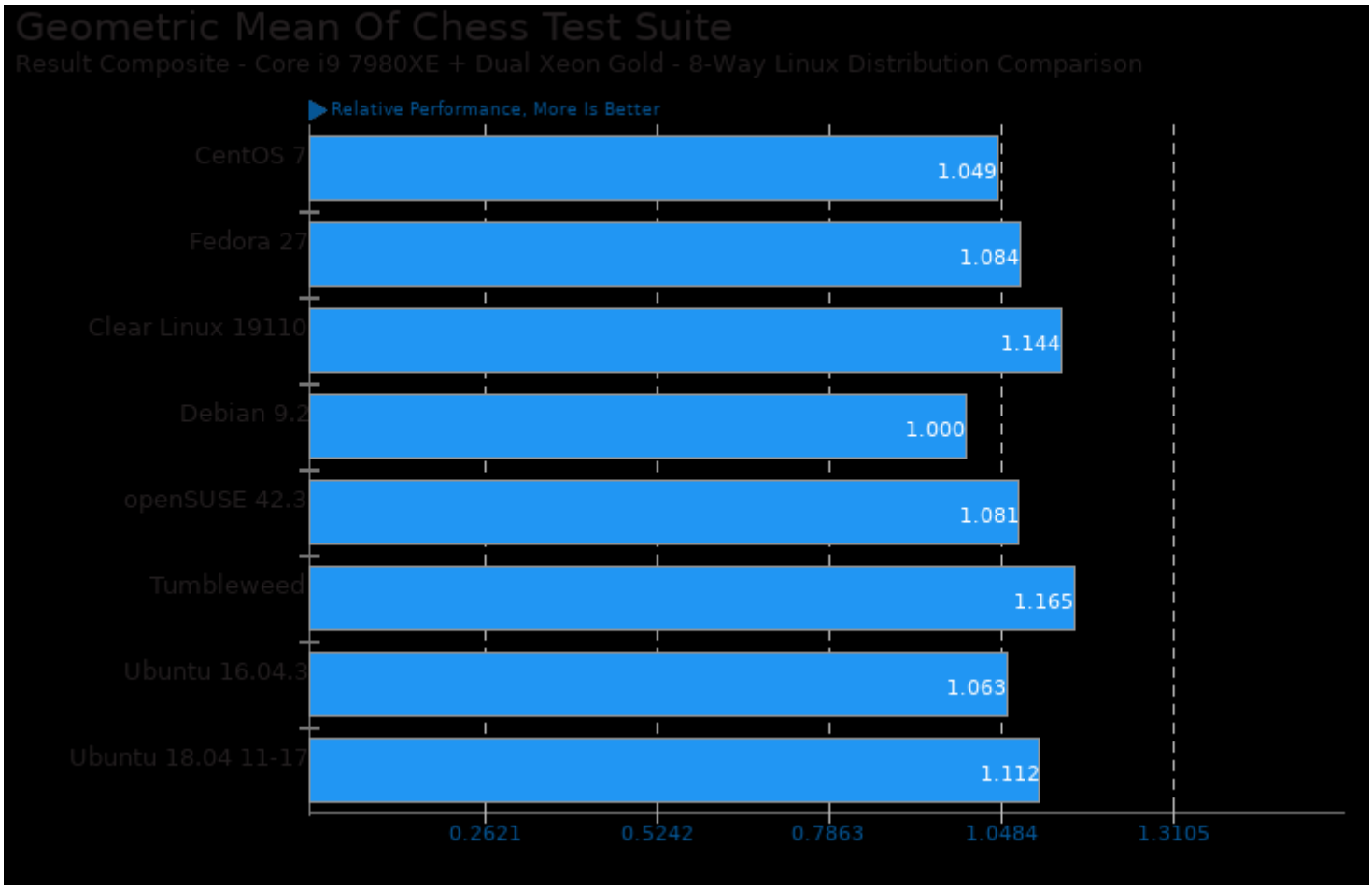

asmFish 2017-09-19
1024 Hash Memory, 26 Depth
2 x Xeon Gold
i9-7980XE
Nodes/second, More Is Better
CentOS 7
Fedora 27
Clear Linux 19110
Debian 9.2
openSUSE 42.3
Tumbleweed
Ubuntu 16.04.3
Ubuntu 18.04 11-17
84461353
53682320
79447669
53750894
81749221
55871631
82017810
53269673
81724688
55521874
82695290
58411426
84670158
57650419
82661684
56422424
20M
40M
60M
80M
100M


Primesieve 6.2
1e12 Prime Number Generation
Seconds, Fewer Is Better
Fedora 27
SE +/- 0.03, N = 3
-O2
10.34
Clear Linux 19110
SE +/- 0.08, N = 3
-O3 -pipe -fexceptions -fstack-protector -m64 -ffat-lto-objects -fno-signed-zeros -fno-trapping-math -fassociative-math
10.42
Debian 9.2
SE +/- 0.12, N = 3
-O3
10.33
openSUSE 42.3
SE +/- 0.02, N = 3
-O3
10.12
Tumbleweed
SE +/- 0.06, N = 3
-O3
10.18
Ubuntu 16.04.3
SE +/- 0.02, N = 3
-O3
10.06
Ubuntu 18.04 11-17
SE +/- 0.04, N = 3
-O3
10.46
3
6
9
12
15
1. (CXX) g++ options: -rdynamic -lpthread

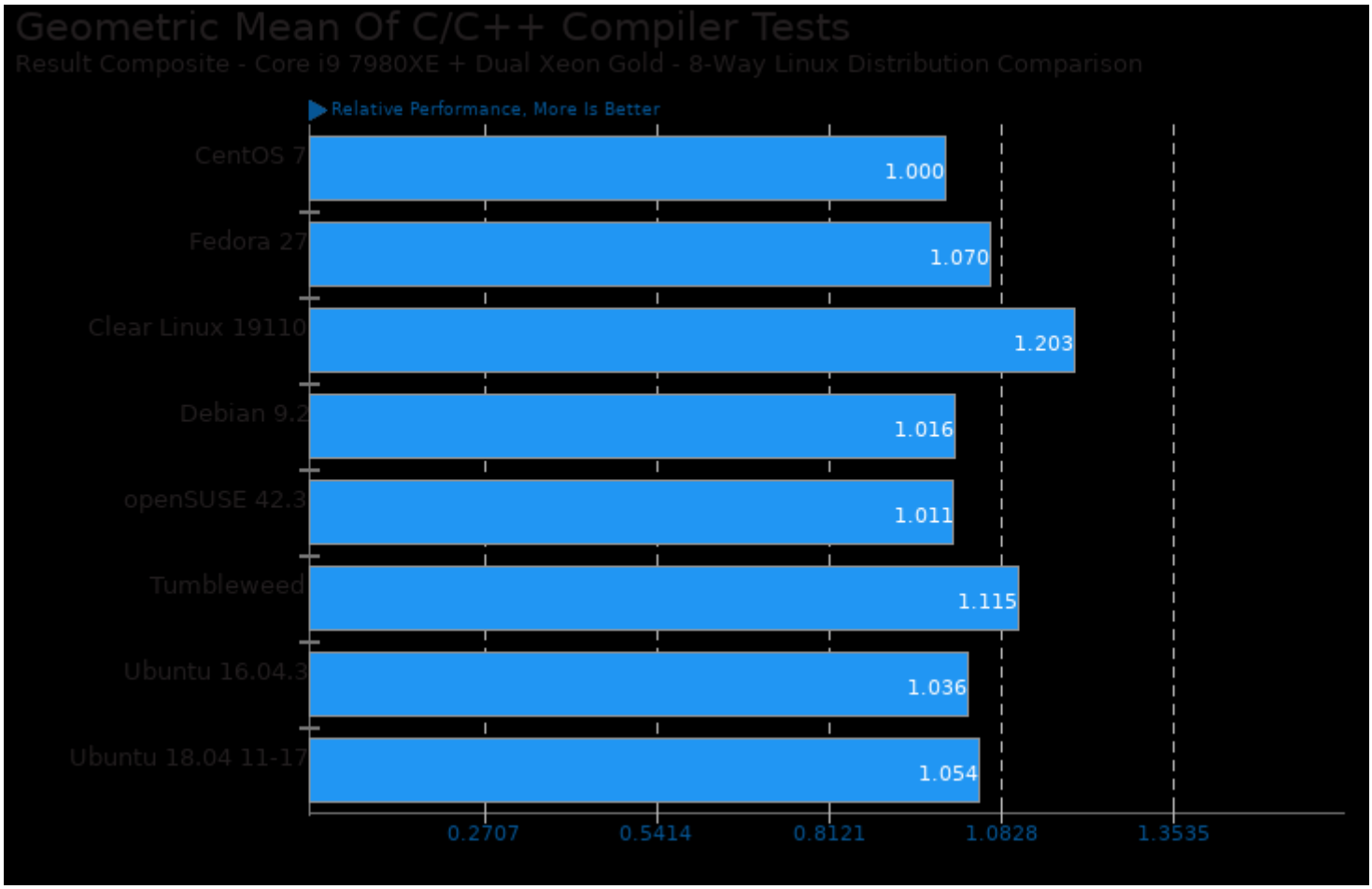
These geometric means are based upon test groupings / test suites for this result file.



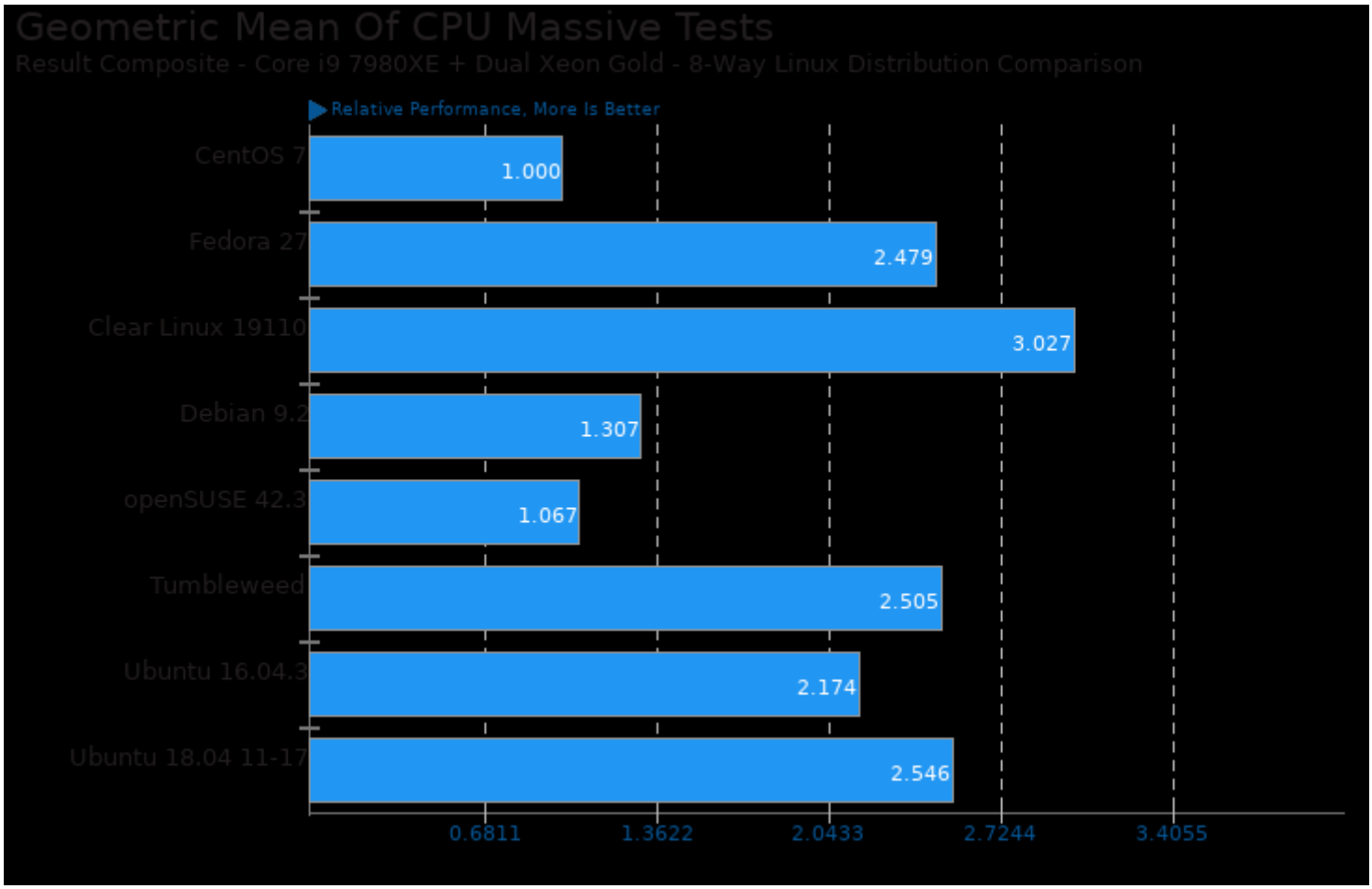
Geometric mean based upon tests: pts/encode-mp3 and pts/encode-flac



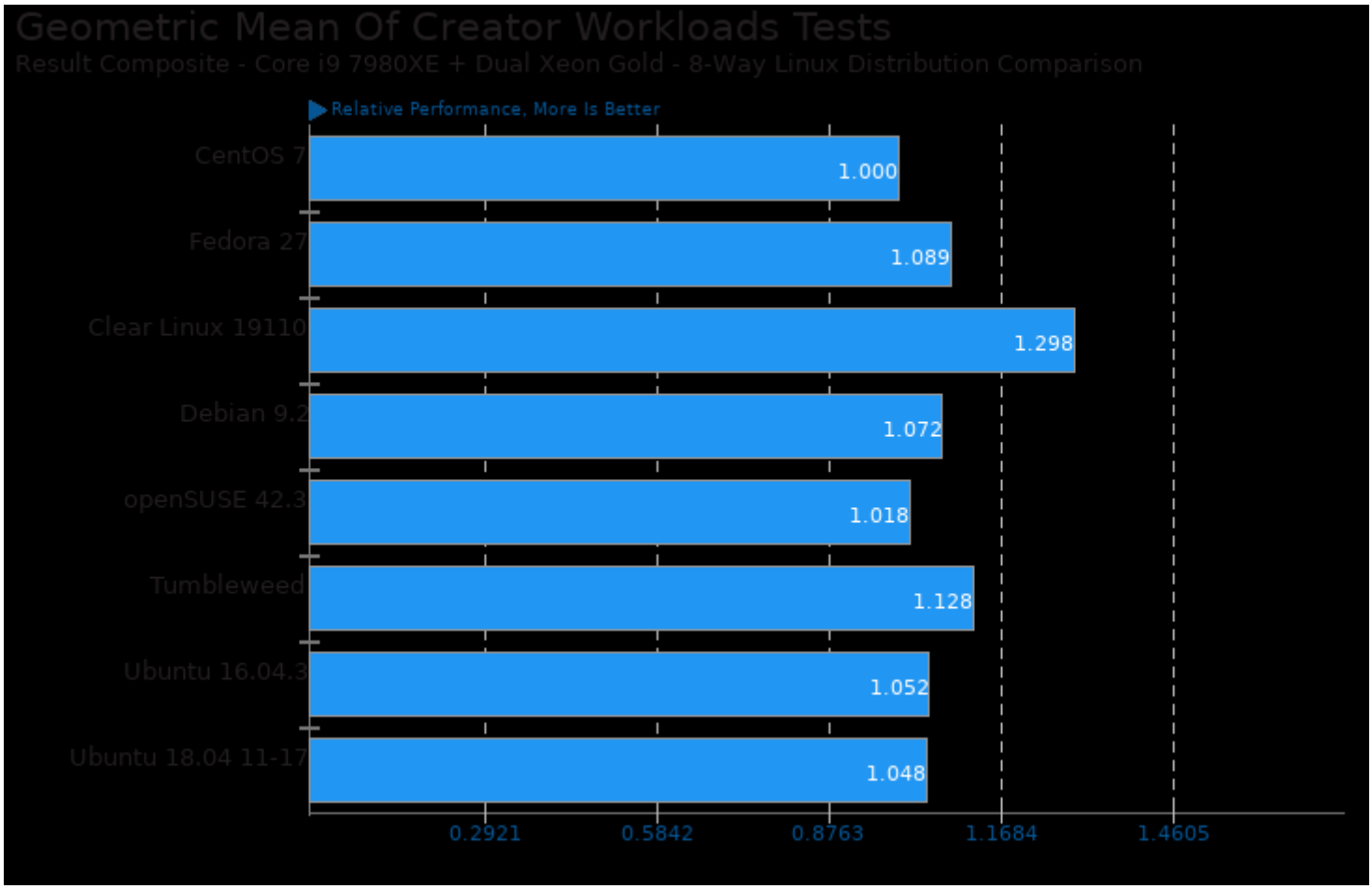
Geometric mean based upon tests: pts/stockfish and pts/asmfish



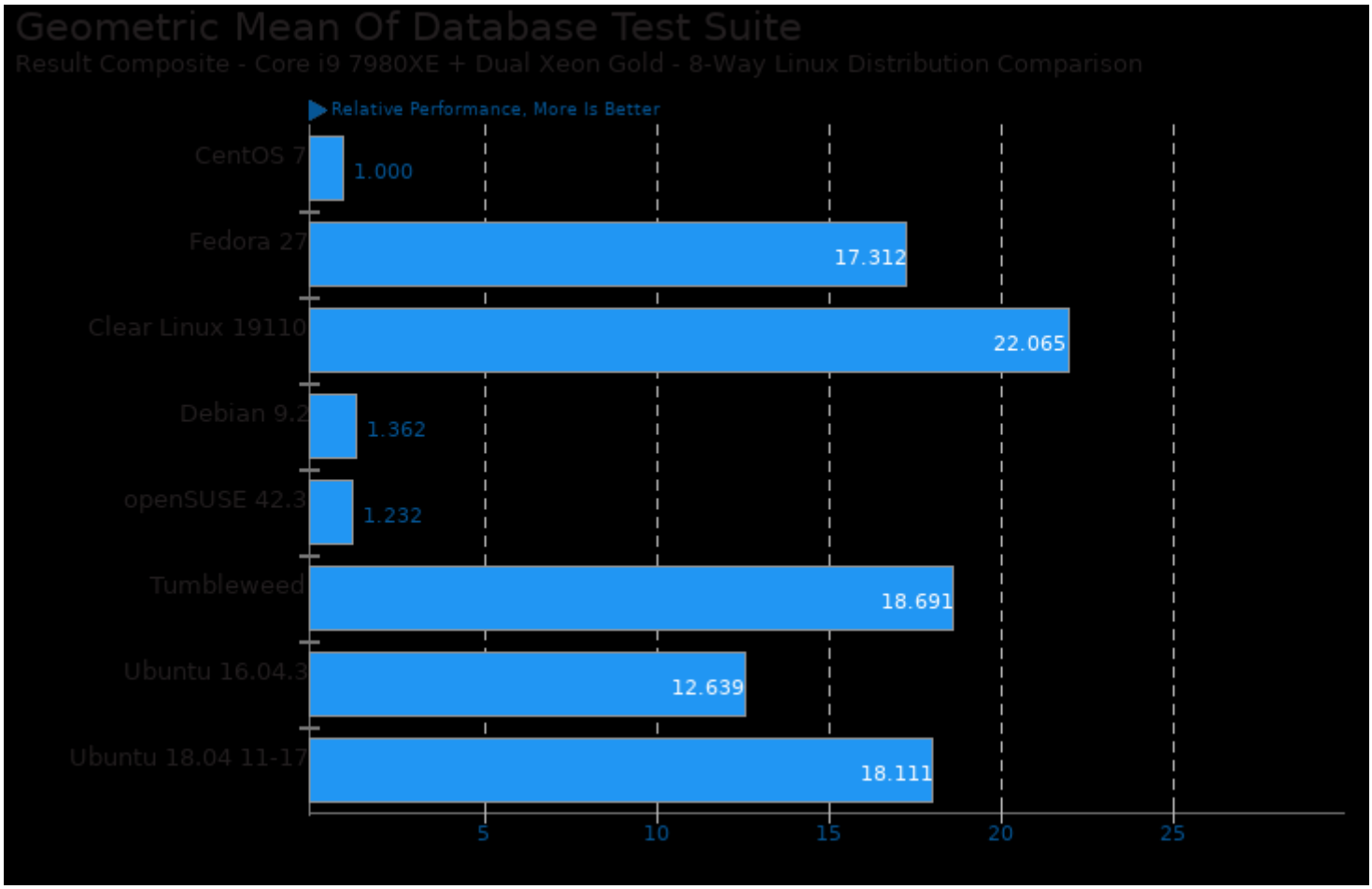
Geometric mean based upon tests: pts/stockfish, pts/encode-mp3, pts/encode-flac, pts/pgbench, pts/john-the-ripper and pts/x264



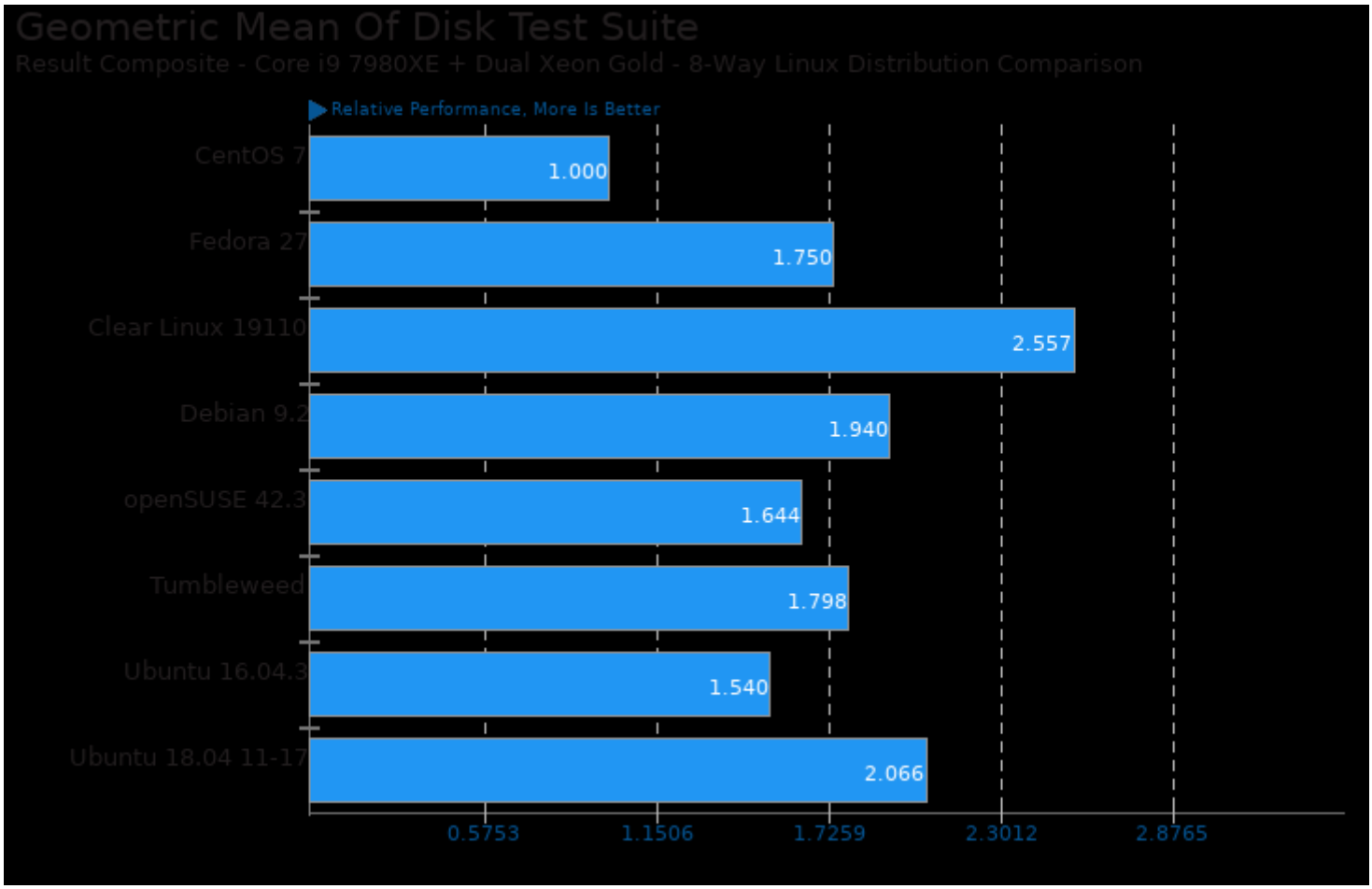
Geometric mean based upon tests: pts/asmfish, pts/compilebench, pts/x264, pts/encode-flac, pts/encode-mp3, pts/go-benchmark, pts/john-the-ripper, pts/numpy, pts/parboil, pts/pgbench, pts/phpbench, pts/primesieve, pts/rbenchmark, pts/redis, pts/rodinia, pts/scikit-learn, pts/stockfish and pts/tensorflow



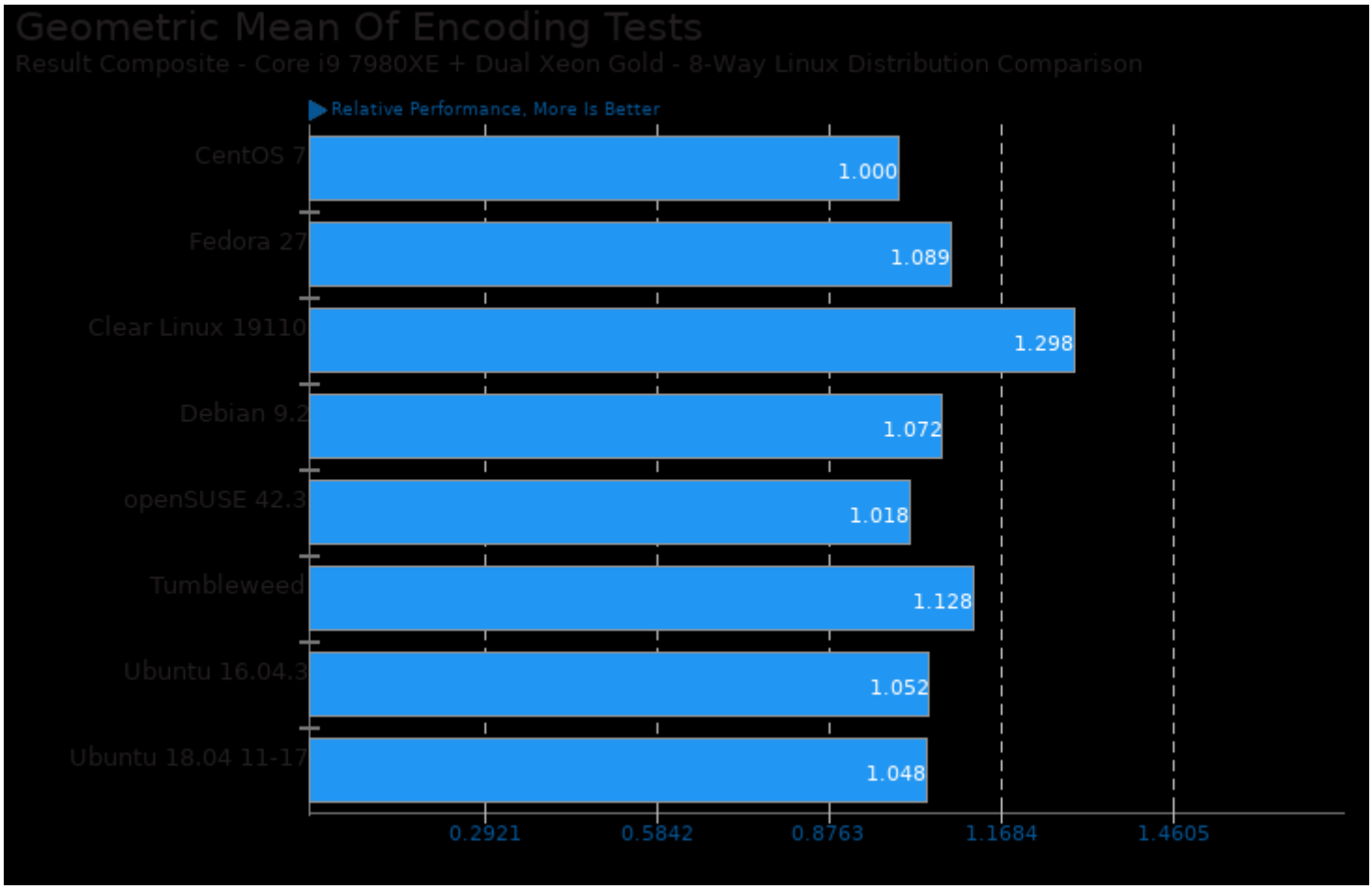
Geometric mean based upon tests: pts/x264, pts/ffmpeg, pts/encode-mp3 and pts/encode-flac



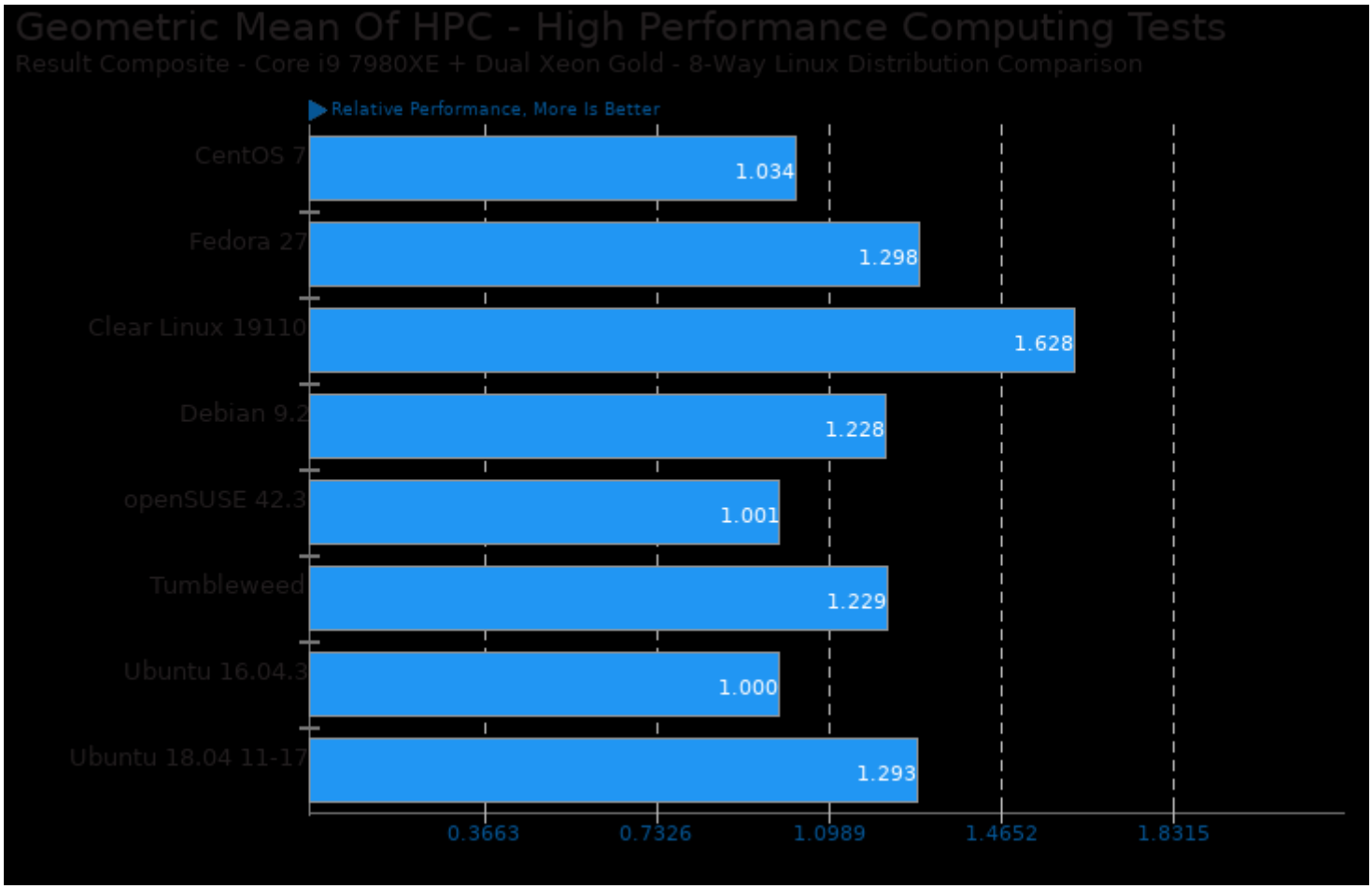
Geometric mean based upon tests: pts/sqlite, pts/redis and pts/pgbench



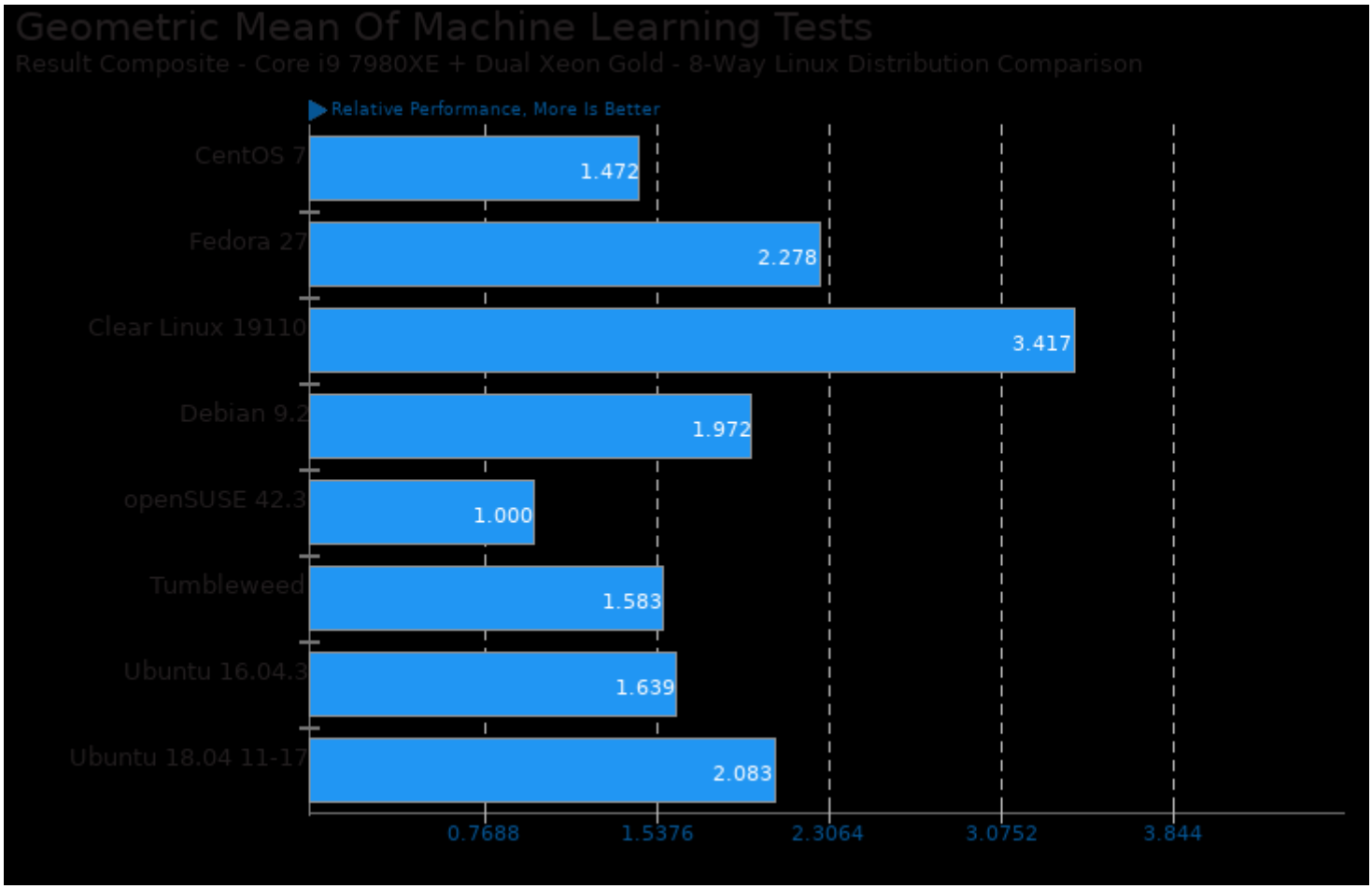
Geometric mean based upon tests: pts/sqlite, pts/fs-mark and pts/compilebench



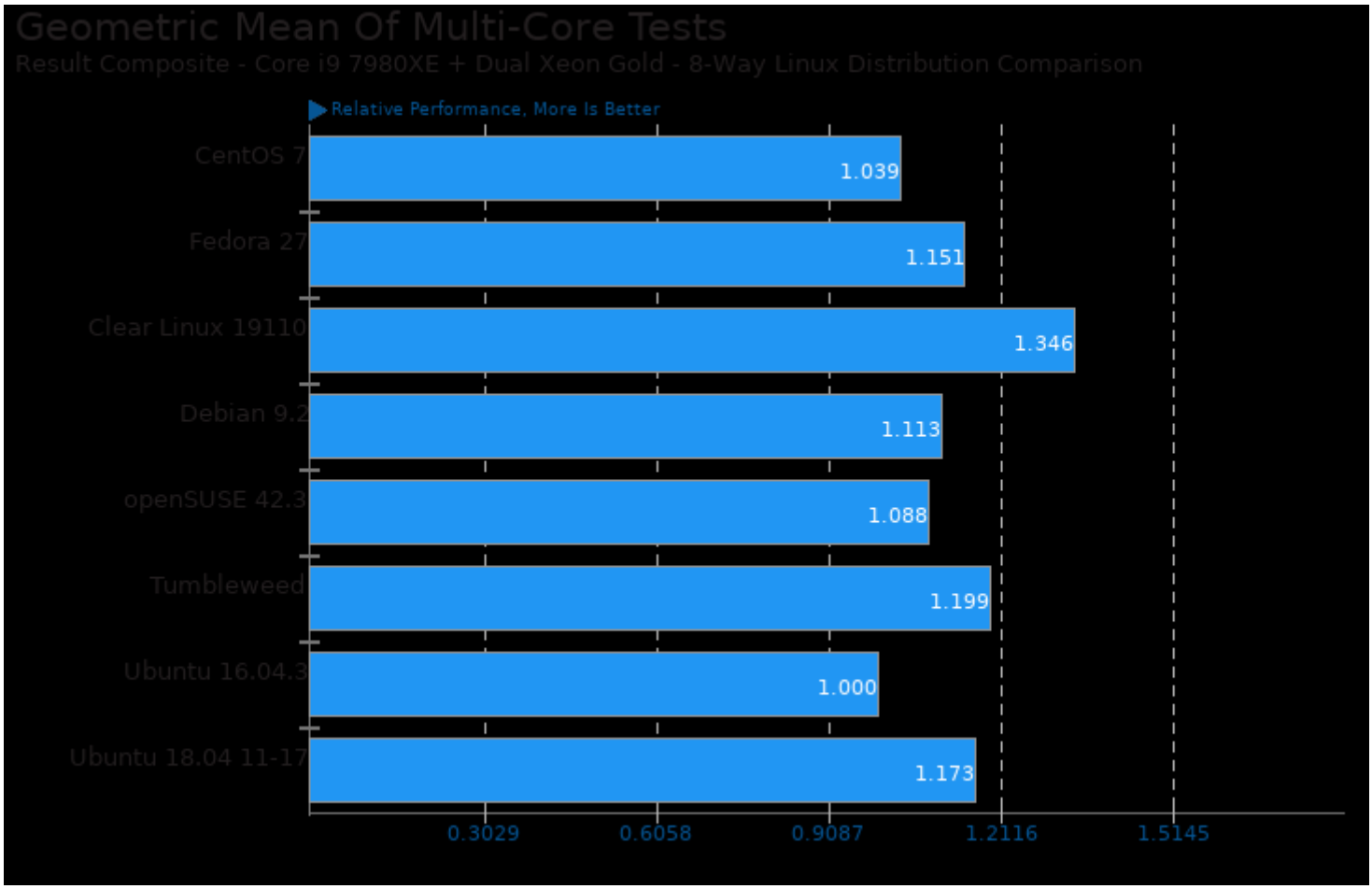
Geometric mean based upon tests: pts/encode-mp3, pts/encode-flac, pts/x264 and pts/ffmpeg



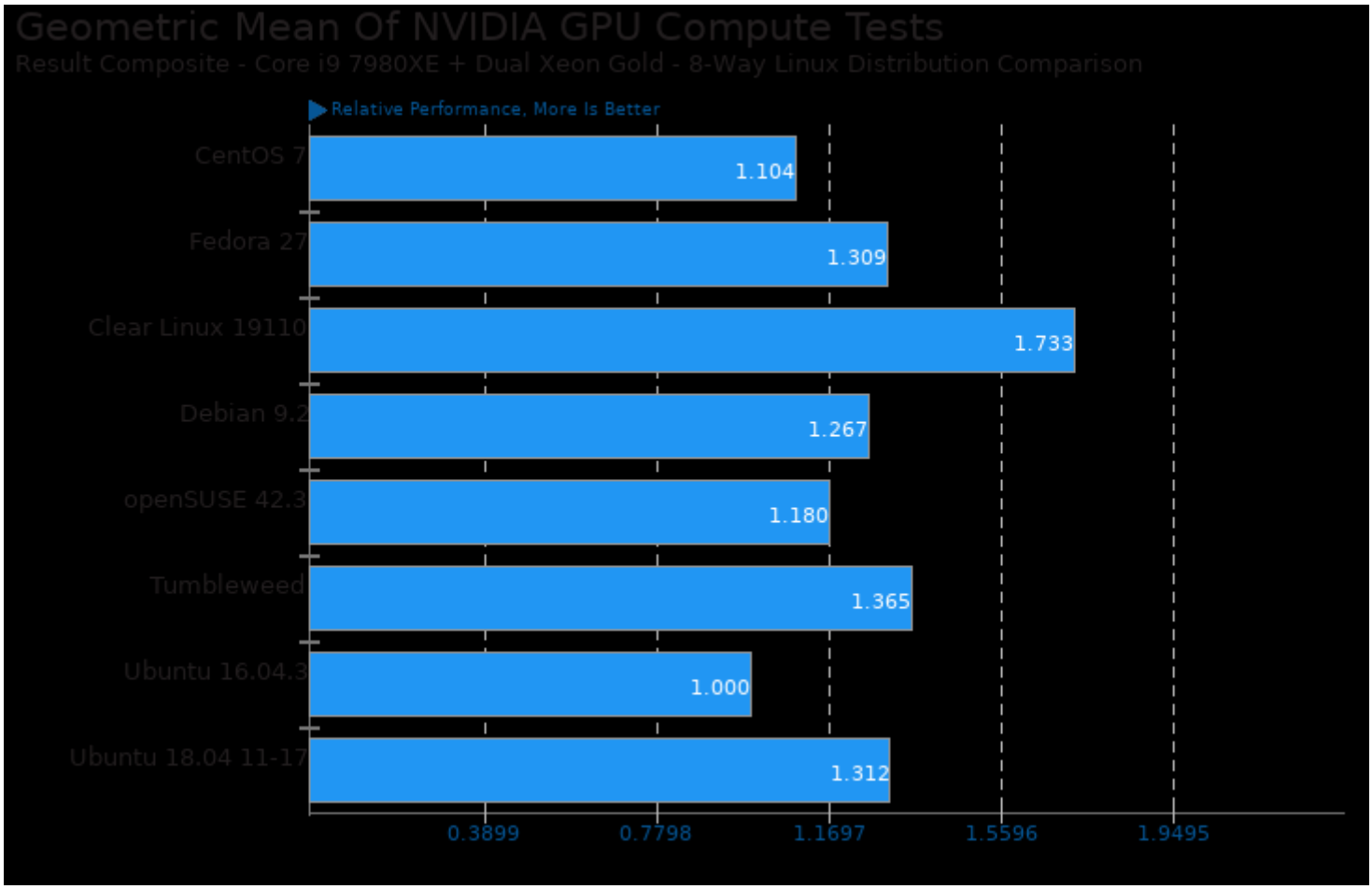
Geometric mean based upon tests: pts/rodinia, pts/parboil, pts/caffe, pts/rbenchmark, pts/numpy, pts/scikit-learn and pts/tensorflow



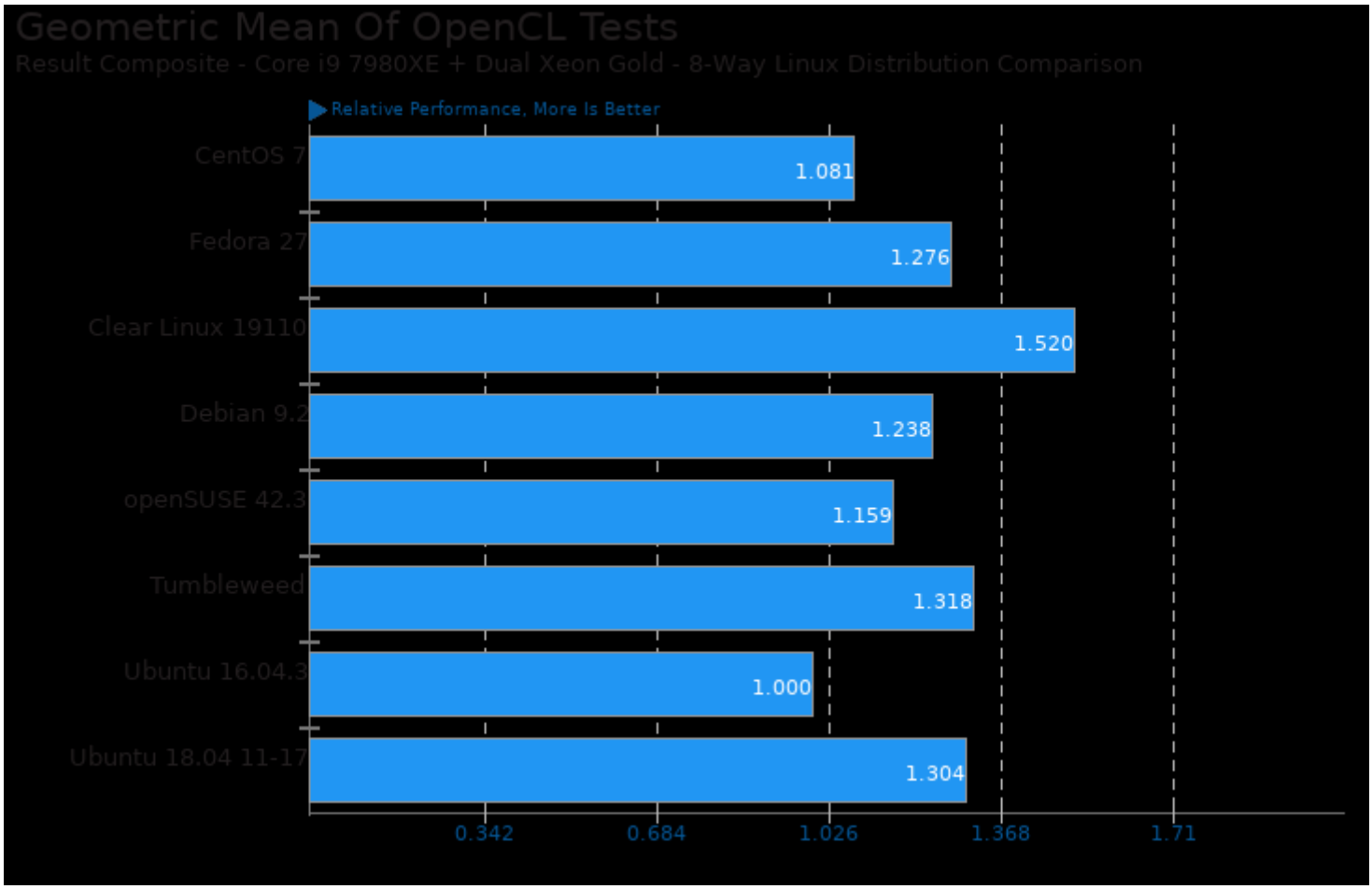
Geometric mean based upon tests: pts/caffe, pts/rbenchmark, pts/numpy, pts/scikit-learn and pts/tensorflow



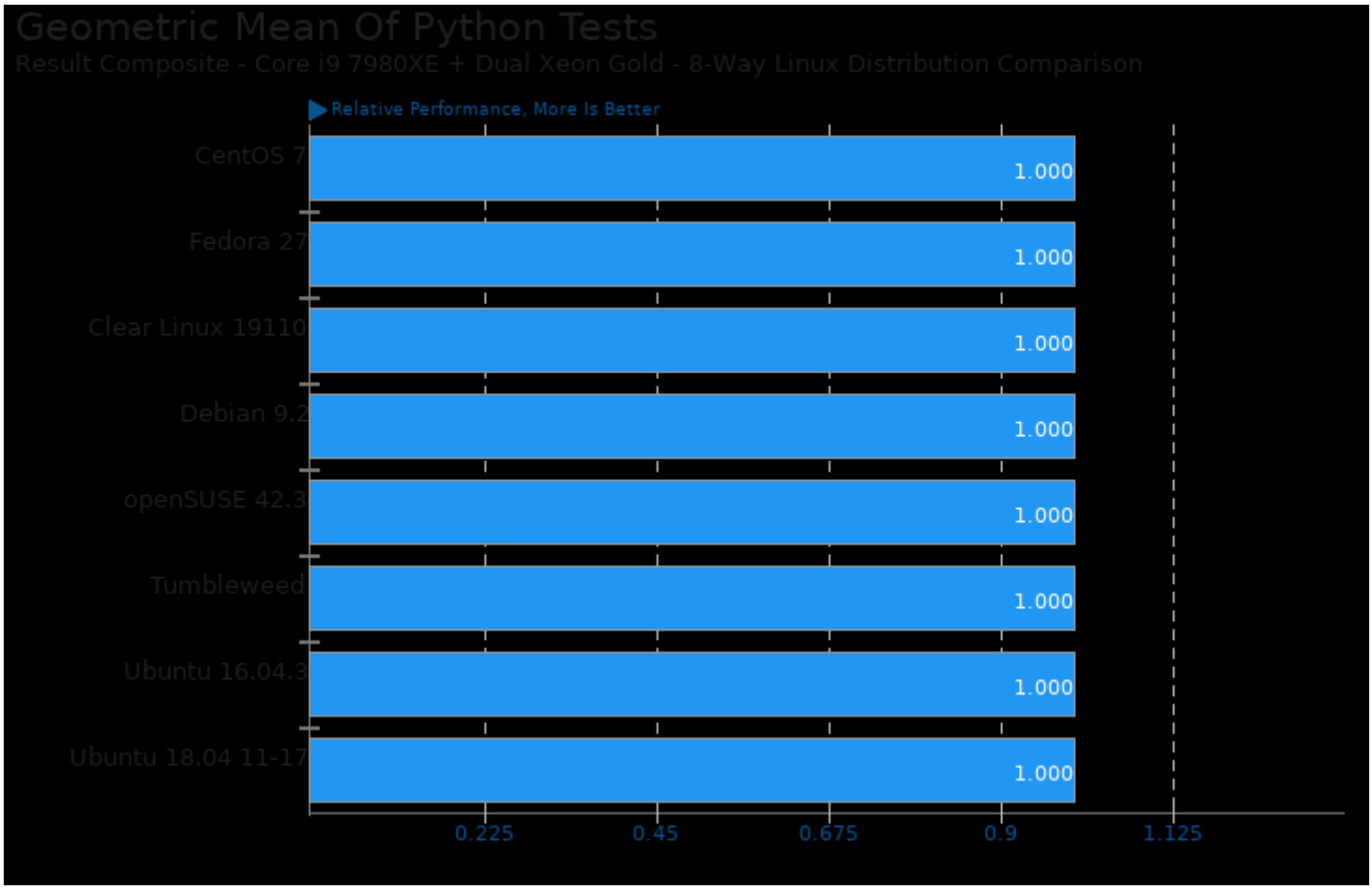
Geometric mean based upon tests: pts/stockfish, pts/x264, pts/ffmpeg, pts/primesieve, pts/rodinia, pts/parboil, pts/john-the-ripper, pts/asmfish and pts/pgbench



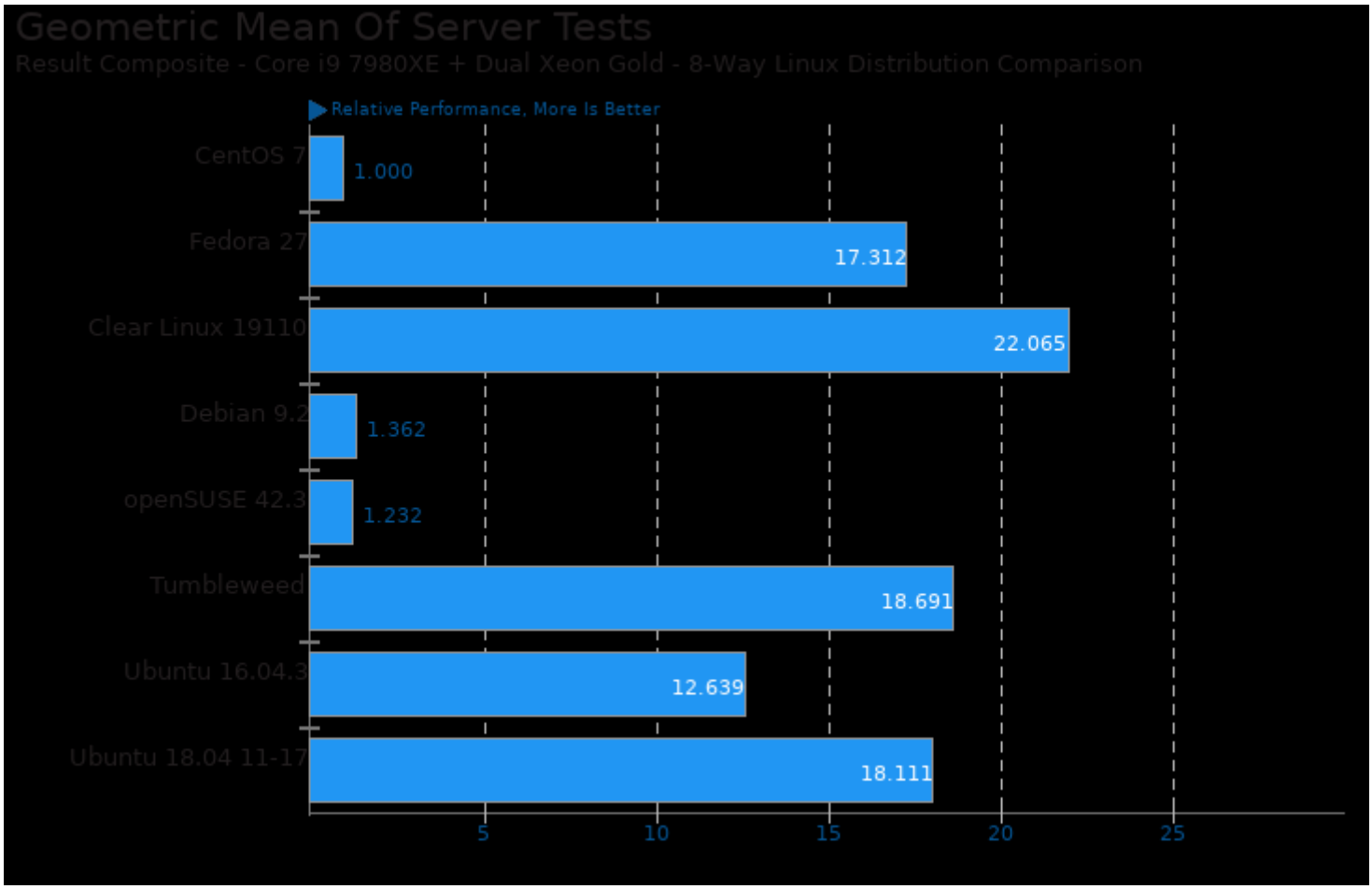
Geometric mean based upon tests: pts/rodinia and pts/caffe



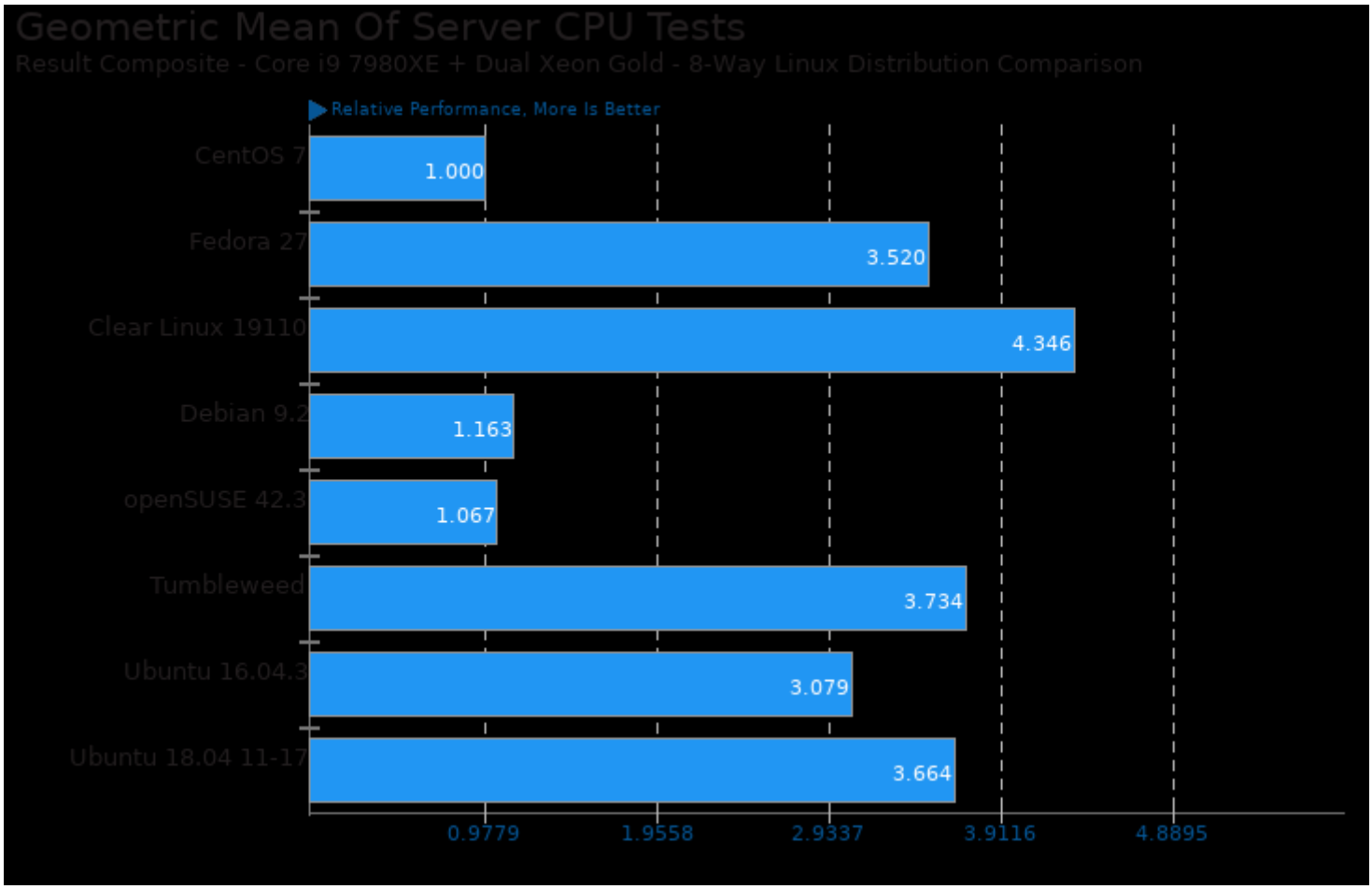
Geometric mean based upon tests: pts/rodinia and pts/parboil



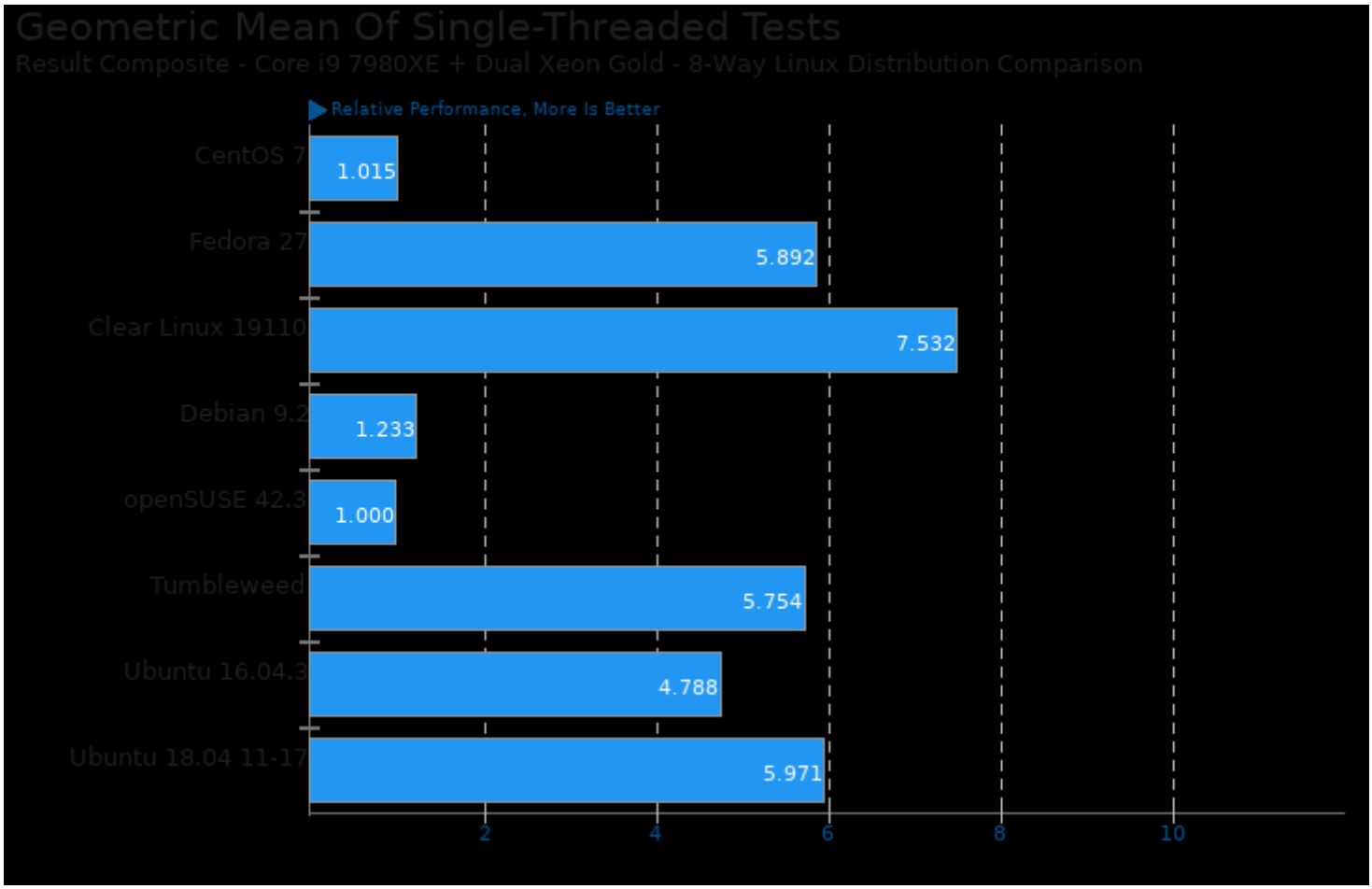
Geometric mean based upon tests: pts/pybench, pts/numpy and pts/scikit-learn



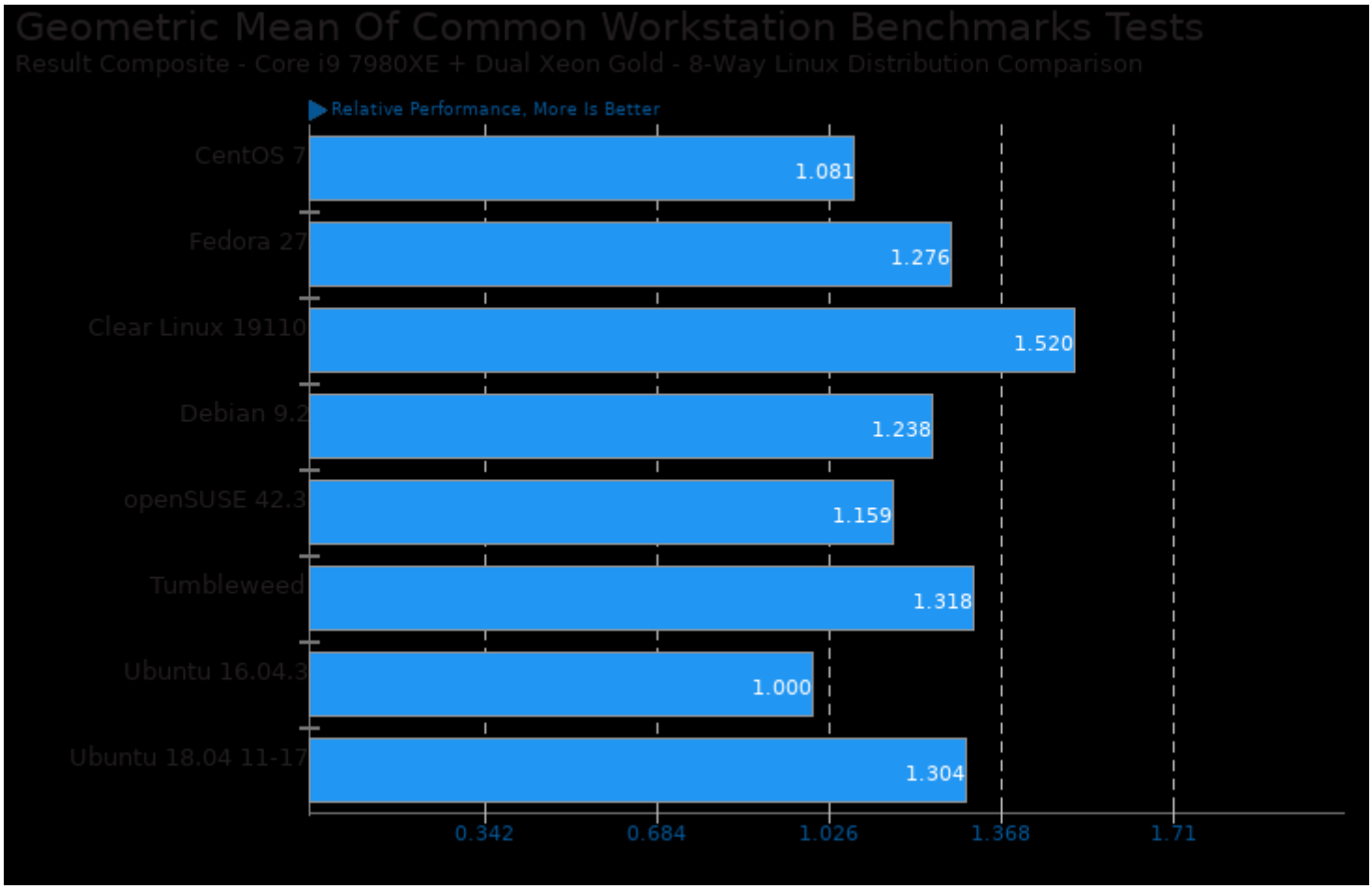
Geometric mean based upon tests: pts/pgbench, pts/redis, pts/phpbench, pts/perl-benchmark and pts/sqlite



Geometric mean based upon tests: pts/rodinia, pts/john-the-ripper, pts/x264, pts/stockfish, pts/asmfish, pts/redis, pts/pybench, pts/numpy, pts/phpbench and pts/scikit-learn



Geometric mean based upon tests: pts/numpy, pts/compress-gzip, pts/encode-flac, pts/encode-mp3, pts/perl-benchmark, pts/rbenchmark, pts/redis, pts/pybench and pts/phpbench



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

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 15:39.