

www.phoronix-test-suite.com

1300xreview

48 core, 128GB, Ubuntu 17.10 @ Stock

Test Systems:

E5-2680 SAN

E5-2680

E-5-2680-SAN

Processor: 4 x Intel Xeon E5-2680 0 @ 2.70GHz (4 Cores), Motherboard: Intel 440BX, Chipset: Intel 440BX/ZX/DX, Memory: 1 x 16384 MB DRAM, Disk: 32GB Virtual disk, Graphics: VMware SVGA II, Network: Intel 82545EM Gigabit

OS: Ubuntu 17.10, Kernel: 4.13.0-16-generic (x86_64), File-System: ext4, Screen Resolution: 2048x1600, System Layer: VMware

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
System Notes: Disk Scheduler: CFQ.

blake2

desktop-graphics

cpu

Processor: Intel Core i5 430M @ 2.26GHz (4 Cores), Motherboard: Dell 0G2R51, Chipset: Intel Core DRAM, Memory: 2 x 4096 MB DDR3-1600MT/s, Disk: 240GB SanDisk SDSSDHII, Graphics: Intel Core IGP, Audio: IDT 92HD81B1X5, Network: Realtek RTL8111/8168/8411 + Broadcom Limited BCM43224 802.11a/b/g/n

OS: Ubuntu 17.10, Kernel: 4.13.0-16-generic (x86_64), Desktop: GNOME Shell 3.26.1, Display Server: X Server 1.19.5, Display Driver: intel 2.99.917, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1366x768

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
Processor Notes: Scaling Governor: acpi-cpufreq ondemand
Graphics Notes: SNA

-march=znver1

-march=haswell

-march=x86-64

Processor: AMD EPYC 7601 32-Core @ 2.20GHz (64 Cores), Motherboard: TYAN B8026T70AE24HR, Chipset: AMD Device 1450, Memory: 126976MB, Disk: 280GB INTEL SSDPE21D280GA, Graphics: ASPEED ASPEED Family, Monitor: VE228, Network: Broadcom Limited NetXtreme BCM5720 Gigabit PCIe

OS: Ubuntu 17.10, Kernel: 4.13.0-21-generic (x86_64), Desktop: GNOME Shell 3.26.1, Display Driver: modesetting 1.19.5, OpenCL: OpenCL 1.2 pocl 1.0 LLVM 5.0.0, Compiler: Clang 6.0.0 (SVN 321623) + LLVM 6.0.0svn, File-System: ext4, Screen Resolution: 1920x1080, System Layer: vm-other Xen 4.9.0 Hypervisor

Compiler Notes: Optimized build; Default target: x86_64-unknown-linux-gnu; Host CPU: znver1
Disk Notes: NONE / data=ordered,errors=remount-ro,relatime,rw

t1

Full1

Cray2

Processor: AMD Ryzen 7 1800X Eight-Core @ 3.60GHz (16 Cores), Motherboard: ASUS PRIME X370-PRO, Chipset: AMD Device 1450, Memory: 32768MB, Disk: 256GB Samsung SSD 850 + 2 x 4001GB Western Digital WD40EZRZ-00G + 126GB SanDisk SSD U110, Graphics: ASUS NVIDIA GeForce GTX 1080 8192MB (1670/5005MHz), Audio: NVIDIA GP104 HD Audio, Network: Intel I211 Gigabit Connection + Broadcom Limited BCM4352 802.11ac Wireless

OS: Ubuntu 17.10, Kernel: 4.13.0-25-generic (x86_64), Desktop: GNOME Shell 3.26.2, Display Driver: NVIDIA 384.111, OpenGL: 4.5.0, File-System: ext4, Screen Resolution: 7680x2160

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
Processor Notes: Scaling Governor: acpi-cpufreq ondemand

8700k_4.9GHz

Processor: Intel Core i7-8700K @ 4.90GHz (12 Cores), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF, Chipset: Intel Device 3ec2, Memory: 16384MB, Disk: 2 x VisionTek 120GB + 2000GB Seagate ST2000DM001-1CH1 + 512GB SAMSUNG MZHPV512, Graphics: NVIDIA GeForce GTX 1080 8192MB (1607/5005MHz), Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-12-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Driver: NVIDIA 375.82, File-System: ext4, Screen Resolution: 3840x1080

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
Processor Notes: Scaling Governor: intel_pstate powersave
OpenCL Notes: GPU Compute Cores: 2560
System Notes: GPU Compute Cores: 2560.

8700k_stock #1

Processor: Intel Core i7-8700K @ 4.70GHz (12 Cores), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF, Chipset: Intel Device 3ec2, Memory: 16384MB, Disk: 2 x VisionTek 120GB + 2000GB Seagate ST2000DM001-1CH1 + 512GB SAMSUNG MZHPV512, Graphics: NVIDIA GeForce GTX 1080 8192MB (139/405MHz), Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-12-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Driver: NVIDIA 375.82, File-System: ext4, Screen Resolution: 3840x1080

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
Processor Notes: Scaling Governor: intel_pstate powersave
OpenCL Notes: GPU Compute Cores: 2560
System Notes: GPU Compute Cores: 2560.

8400_stock

Processor: Intel Core i5-8400 @ 4.00GHz (6 Cores), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF, Chipset: Intel Device 3ec2, Memory: 16384MB, Disk: 2 x VisionTek 120GB + 2000GB Seagate ST2000DM001-1CH1 + 512GB SAMSUNG MZHPV512, Graphics: NVIDIA GeForce GTX 1080 8192MB (1607/5005MHz), Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-12-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Driver: NVIDIA 375.82, File-System: ext4, Screen Resolution: 3840x1080

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
Processor Notes: Scaling Governor: intel_pstate powersave
OpenCL Notes: GPU Compute Cores: 2560
System Notes: GPU Compute Cores: 2560.

1700X_Stock

Processor: AMD Ryzen 7 1700X Eight-Core @ 3.40GHz (16 Cores), Motherboard: ASUS CROSSHAIR VI HERO, Chipset: AMD Device 1450, Memory: 32768MB, Disk: 234GB, Graphics: NVIDIA GeForce GTX 1080 Ti 11264MB, Audio: NVIDIA GP102 HDMI Audio, Network: Intel I211 Gigabit Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-16-generic (x86_64), Desktop: GNOME Shell 3.26.1, Display Driver: nouveau 1.0.15, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: acpi-cpufreq ondemand

8700k_stock #2

Processor: Intel 0000 @ 4.30GHz (12 Cores), Motherboard: MSI Z370 SLI PLUS (MS-7B46) v2.0, Chipset: Intel Device 3ec2, Memory: 32768MB, Disk: 234GB, Graphics: NVIDIA GeForce GTX 1080 Ti 11264MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-16-generic (x86_64), Desktop: GNOME Shell 3.26.1, Display Driver: nouveau 1.0.15, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: intel_pstate powersave

1300xStock

Processor: AMD Ryzen 3 1300X @ 3.50GHz (4 Cores), Motherboard: Gigabyte AX370-Gaming 5, Chipset: AMD Device 1450, Memory: 16384MB, Disk: 220GB, Graphics: Sapphire Radeon RX 580 (AMD POLARIS10 / DRM 3.10.0 / 4.11.0-13-generic LLVM 5.0.0) 8192MB, Audio: AMD Device aaf0, Network: Intel I211 Gigabit Connection

OS: Ubuntu 17.10, Kernel: 4.11.0-13-generic (x86_64), Desktop: GNOME Shell 3.24.3, OpenGL: 4.5 Mesa 17.2.2, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: acpi-cpufreq ondemand

1500xStock

Processor: AMD Ryzen 5 1500X @ 3.50GHz (8 Cores), Motherboard: Gigabyte AX370-Gaming 5, Chipset: AMD Device 1450, Memory: 16384MB, Disk: 220GB, Graphics: Sapphire Radeon RX 580 (AMD POLARIS10 / DRM 3.10.0 /

4.11.0-13-generic LLVM 5.0.0) 8192MB, Audio: AMD Device aaf0, Network: Intel I211 Gigabit Connection

OS: Ubuntu 17.10, Kernel: 4.11.0-13-generic (x86_64), Desktop: GNOME Shell 3.24.3, OpenGL: 4.5 Mesa 17.2.2, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: acpi-cpufreq ondemand

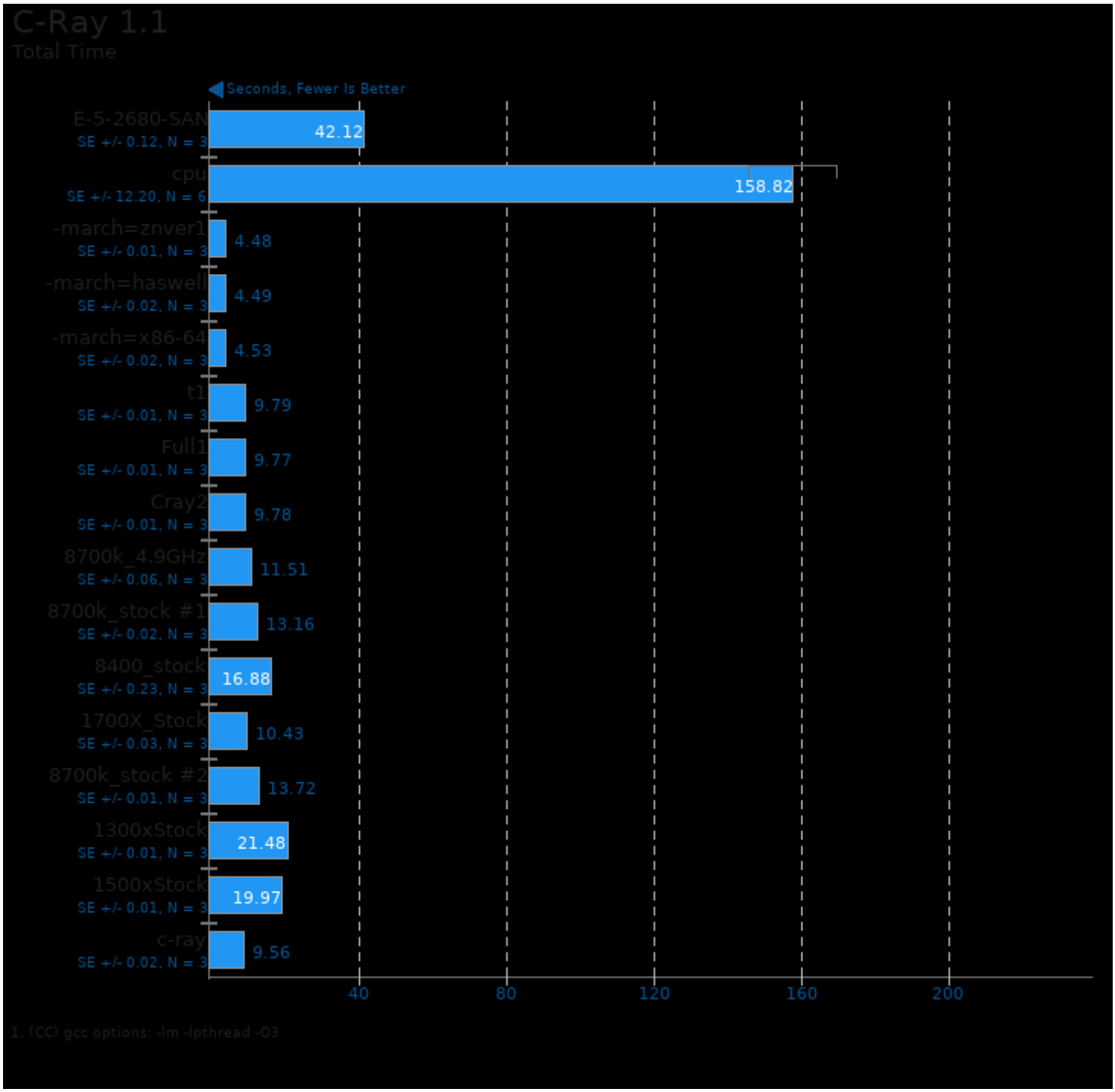
c-ray

Processor: 2 x Intel Xeon E5-2651 v2 @ 2.20GHz (48 Cores), Motherboard: Intel S2600CP v1.0, Chipset: Intel Xeon E7 v2/Xeon, Memory: 129024MB, Disk: 5 x 3001GB Western Digital WD30EFRX-68E + 3001GB Western Digital WD30EFRX-68A, Graphics: Matrox s MGA G200e [Pilot] (SEP1), Network: Intel I350 Gigabit Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-21-generic (x86_64), File-System: ext4, Screen Resolution: 1280x1024

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
Processor Notes: Scaling Governor: intel_pstate powersave

	E5-2680 SAN	E5-2680	E-5-2680-SAN	blake2	desktop-graphic	cpu	-march=znver1	-march=haswell	-march=x86-64	t1	Full 1	Cray2	8700k_4.9GHz	8700k_stock #1	8400_stock	170X_Stock	8700k_stock #2	1300xStock	1500xStock	c-ray
C-Ray - Total Time (sec)			42.12			158.82	4.48	4.49	4.53	9.79	9.77	9.78	11.51	13.16	16.88	10.43	13.72	21.48	19.97	9.52
Normalized			10.64%			2.82%	100%	99.78%	98.9%	45.76%	45.85%	45.81%	38.92%	34.04%	26.54%	42.95%	32.65%	20.86%	22.43%	47.06%
Standard Deviation			0.5%			18.8%	0.5%	0.9%	0.6%	0.2%	0.1%	0.1%	0.9%	0.2%	2.4%	0.5%	0.1%	0.1%	0.1%	0.1%



This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 05:34.