www.phoronix-test-suite.com

server-orig-merge

Intel Core i7-6820HQ testing with a Dell 0RJHDG (1.16.3 BIOS) and Intel HD 530 SKL GT2 4GB on Arch rolling via the Phoronix Test Suite.

Test Systems:

laptop #1

Processor: Intel Core i7-6820HQ @ 3.60GHz (4 Cores / 8 Threads), Motherboard: Dell 0RJHDG (1.16.3 BIOS), Chipset: Intel Xeon E3-1200 v5/E3-1500, Memory: 32GB, Disk: 1000GB Western Digital WDS100T2B0C-00PXH0, Graphics: Intel HD 530 SKL GT2 4GB, Audio: Realtek ALC3235, Network: Intel I219-LM + Intel 8260

OS: Arch rolling, Kernel: 5.10.69-1-lts (x86_64), Desktop: KDE Frameworks 5.86.0, Display Server: X Server 1.20.13, Display Driver: NVIDIA, OpenGL: 4.6.0, Compiler: GCC 11.1.0 + Clang 12.0.1 + CUDA 11.4, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: __GLX_VENDOR_LIBRARY_NAME=nvidia
Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release

--enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0xea
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + 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 generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Mitigation of Clear buffers; SMT vulnerable

server-orig #1

Processor: AMD Ryzen 5 5600X 6-Core @ 3.70GHz (6 Cores / 12 Threads), Motherboard: ASRockRack X470D4U (P4.20 BIOS), Memory: 32GB, Disk: 1000GB Western Digital WDS100T2B0C-00PXH0, Graphics: astdrmfb

OS: Ubuntu 20.04.1 LTS, Kernel: 5.10.0-0.bpo.8-amd64 (x86_64), Display Driver: astdrmfb, Compiler: GCC 9.3.0, File-System: overlayfs, Screen Resolution: 1024x768, System Layer: Docker

Kernel Notes: Transparent Huge Pages: always
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++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/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-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 conservative (Boost: Enabled) - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

dockervm #1

Processor: Intel Core i7-6700K (4 Cores), Motherboard: Oracle VirtualBox v1.2, Memory: 8GB, Disk: 55GB VBOX HDD, Graphics: svgadrmfb

OS: Ubuntu 20.04.3 LTS, Kernel: 5.10.0-8-amd64 (x86_64), Display Driver: svgadrmfb, Compiler: GCC 9.3.0, File-System: overlayfs, Screen Resolution: 2048x2048, System Layer: VirtualBox

Kernel Notes: Transparent Huge Pages: always
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++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/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-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
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: EPT disabled + mds: Mitigation of Clear buffers; SMT Host state unknown + meltdown: Mitigation of PTI + spec_store_bypass: Vulnerable + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline STIBP: disabled RSB filling + srbds: Unknown: Dependent on hypervisor status + tsx_async_abort: Not affected

laptop #2

Processor: Intel Core i7-6820HQ @ 3.60GHz (4 Cores / 8 Threads), Motherboard: Dell 0RJHDG (1.16.3 BIOS), Chipset: Intel Xeon E3-1200 v5/E3-1500, Memory: 32GB, Disk: 1000GB Western Digital WDS100T2B0C-00PXH0, Graphics: Intel HD 530 SKL GT2 4GB, Audio: Realtek ALC3235, Network: Intel I219-LM + Intel 8260

OS: Arch rolling, Kernel: 5.10.69-1-lts (x86_64), Desktop: KDE Frameworks 5.86.0, Display Server: X Server 1.20.13, Display Driver: NVIDIA, OpenGL: 4.6.0, Compiler: GCC 11.1.0 + Clang 12.0.1 + CUDA 11.4, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: __GLX_VENDOR_LIBRARY_NAME=nvidia
Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0xea
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear

buffers; SMT vulnerable + meltdown: Mitigation of PTI + 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 generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Mitigation of Clear buffers; SMT vulnerable

server-orig #2

Processor: AMD Ryzen 5 5600X 6-Core @ 3.70GHz (6 Cores / 12 Threads), Motherboard: ASRockRack X470D4U (P4.20 BIOS), Memory: 32GB, Disk: 1000GB Western Digital WDS100T2B0C-00PXH0, Graphics: astdrmfb

OS: Ubuntu 20.04.1 LTS, Kernel: 5.10.0-0.bpo.8-amd64 (x86_64), Display Driver: astdrmfb, Compiler: GCC 9.3.0, File-System: overlayfs, Screen Resolution: 1024x768, System Layer: Docker

Kernel Notes: Transparent Huge Pages: always
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++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/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-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 conservative (Boost: Enabled) - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

dockervm #2

Processor: Intel Core i7-6700K (4 Cores), Motherboard: Oracle VirtualBox v1.2, Memory: 8GB, Disk: 55GB VBOX HDD, Graphics: svgadrmfb

OS: Ubuntu 20.04.3 LTS, Kernel: 5.10.0-8-amd64 (x86_64), Display Driver: svgadrmfb, Compiler: GCC 9.3.0, File-System: overlayfs, Screen Resolution: 2048x2048, System Layer: VirtualBox

Kernel Notes: Transparent Huge Pages: always
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++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/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-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
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: EPT disabled + mds: Mitigation of Clear buffers; SMT Host state unknown + meltdown: Mitigation of PTI + spec_store_bypass: Vulnerable + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline STIBP: disabled RSB filling + srbds: Unknown: Dependent on hypervisor status + tsx_async_abort: Not affected

laptop #3

Processor: Intel Core i7-6820HQ @ 3.60GHz (4 Cores / 8 Threads), Motherboard: Dell 0RJHDG (1.16.3 BIOS), Chipset: Intel Xeon E3-1200 v5/E3-1500, Memory: 32GB, Disk: 1000GB Western Digital WDS100T2B0C-00PXH0, Graphics: Intel HD 530 SKL GT2 4GB, Audio: Realtek ALC3235, Network: Intel I219-LM + Intel 8260

OS: Arch rolling, Kernel: 5.10.69-1-lts (x86_64), Desktop: KDE Frameworks 5.86.0, Display Server: X Server 1.20.13, Display Driver: NVIDIA, OpenGL: 4.6.0, Compiler: GCC 11.1.0 + Clang 12.0.1 + CUDA 11.4, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Environment Notes: __GLX_VENDOR_LIBRARY_NAME=nvidia
Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0xea
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + 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 generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Mitigation of Clear buffers; SMT vulnerable

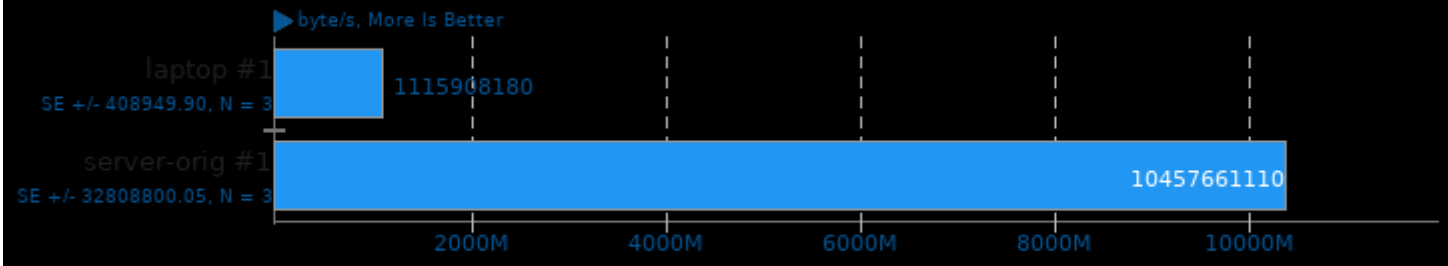
server-orig-merge

	laptop #1	server-orig #1	dockervm #1	laptop #2	server-orig #2	dockervm #2	laptop #3
OpenSSL - SHA256 (byte/s)	**1115908180**	**10457661110**					
Normalized	10.67%	100%					
Standard Deviation	0.1%	0.5%					
Timed Linux Kernel Compilation - Time To Compile (sec)	**290.557**	**113.179**					
Normalized	38.95%	100%					
Standard Deviation	0.6%	0.5%					
x264 - H.2.V.E (FPS)	**35.82**	**89.31**					
Normalized	40.11%	100%					
Standard Deviation	0.9%	1.2%					
x265 - Bosphorus 4K	**6.08**	**13.85**					
Normalized	43.9%	100%					
Standard Deviation	1.5%	1.5%					
FFmpeg - H.2.H.T.N.D	7.419	**3.796**	**8.307**				
Normalized	51.17%	100%	45.7%				
Standard Deviation	2.7%	0.7%	0.9%				
x265 - Bosphorus 1080p (FPS)	**27.31**	**58.79**					
Normalized	46.45%	100%					
Standard Deviation	1.3%	0.7%					
OpenSSL - RSA4096 (sign/s)	**954.5**	**1897**					
Normalized	50.31%	100%					
Standard Deviation	0.8%	0%					
OpenSSL - RSA4096 (verify/s)	**62484**	**123772**					
Normalized	50.48%	100%					
Standard Deviation	2.1%	0%					

server-orig-merge

OpenSSL 3.0

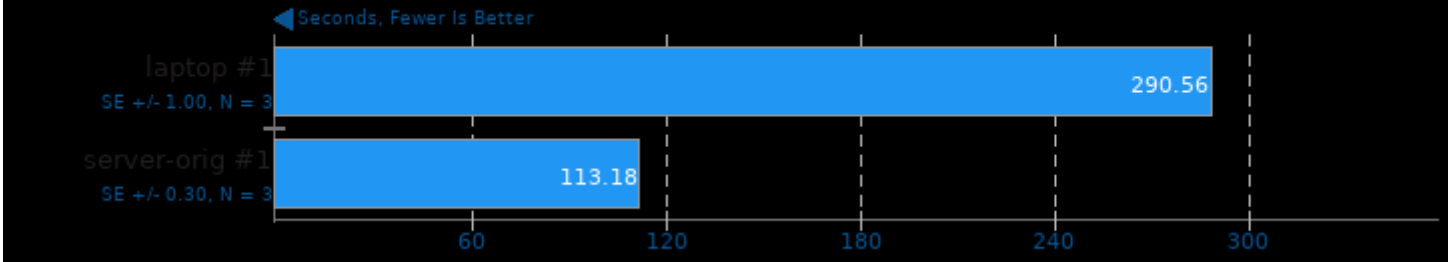
Algorithm: SHA256



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

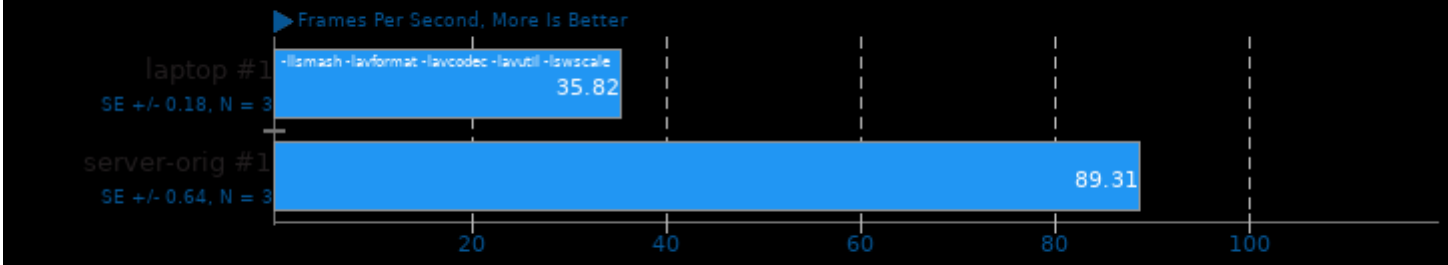
Timed Linux Kernel Compilation 5.14

Time To Compile



x264 2019-12-17

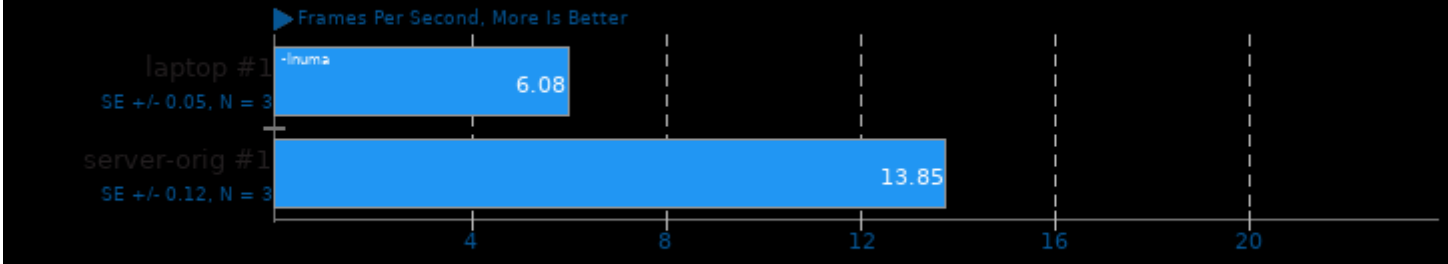
H.264 Video Encoding



1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -fPIC -fomit-frame-pointer -fno-tree-vectorize

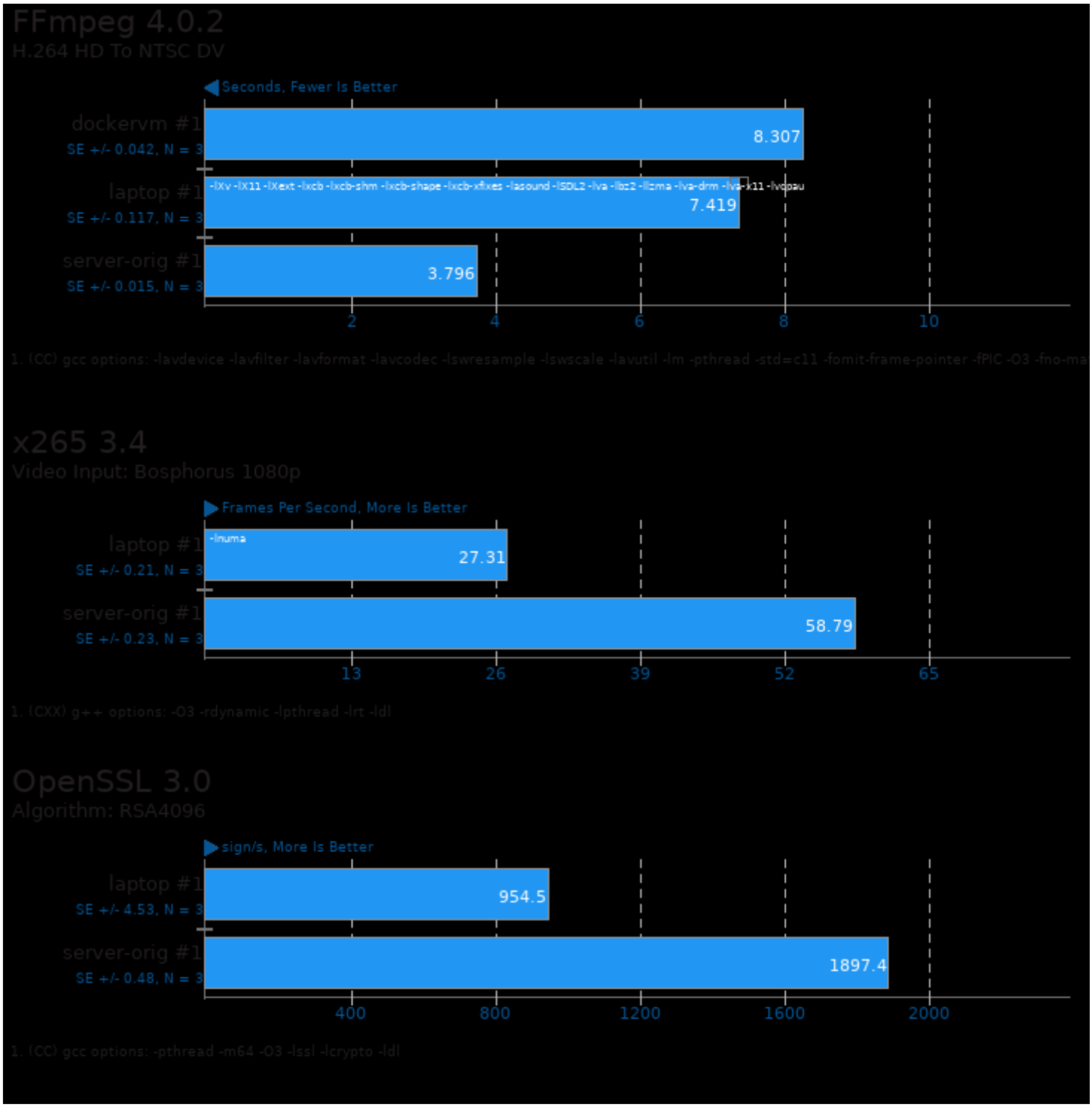
x265 3.4

Video Input: Bosphorus 4K

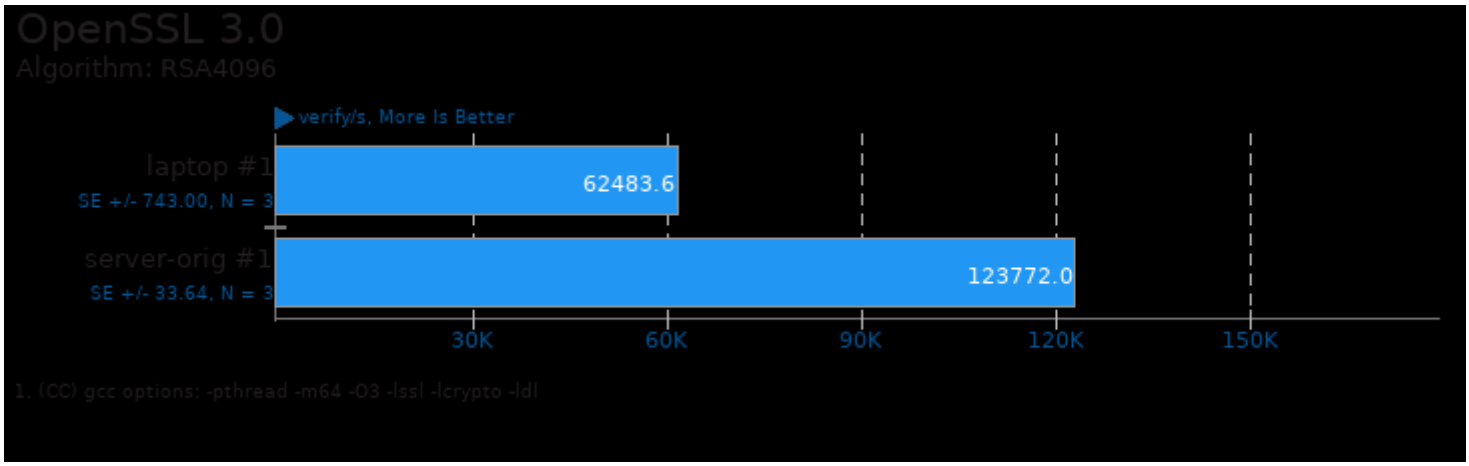


1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl

server-orig-merge



server-orig-merge



This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 03:18.