

www.phoronix-test-suite.com

2021-04-18T05:59:04+00:00

docker testing on Ubuntu 20.04.1 LTS via the Phoronix Test Suite.

Test Systems:

2021-04-18T05:59:04+00:00_baseline

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASRock X570M Pro4 (P3.40 BIOS), Memory: 64GB, Disk: 1000GB Samsung SSD 980 PRO 1TB + Samsung SSD 950 PRO 512GB + 2 x 4001GB Western Digital WD40EFRX-68W + 4 x 4001GB Western Digital WD40EFRX-68N, Graphics: EFI VGA, Monitor: DELL U2720Q + DELL U2718Q

OS: Ubuntu 20.04.1 LTS, Kernel: 5.11.14-200.fc33.x86_64 (x86_64), Display Driver: NVIDIA, Compiler: GCC 9.3.0, File-System: fuseblk, Screen Resolution: 3840x2160, System Layer: docker

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 schedutil (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

	2021-04-18T05:59:04+00:00_baseline
libgav1 - Chimera 1080p (FPS)	54.14
Standard Deviation	1%
libgav1 - Summer Nature 4K (FPS)	27.62
Standard Deviation	0.6%
libgav1 - S.N.1 (FPS)	90.13
Standard Deviation	2.5%
libgav1 - C.1.1.b (FPS)	25.18
Standard Deviation	1%
dav1d - Chimera 1080p (FPS)	909.09
Standard Deviation	2.3%
dav1d - Summer Nature 4K (FPS)	300.83
Standard Deviation	0.3%
dav1d - S.N.1 (FPS)	905.63
Standard Deviation	2.4%
dav1d - C.1.1.b (FPS)	163.54
Standard Deviation	0.4%
AOM AV1 - Speed 0 Two-Pass - Bosphorus 4K (FPS)	0.21
Standard Deviation	0%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 4K (FPS)	5.30
Standard Deviation	0.7%
AOM AV1 - Speed 6 Realtime - Bosphorus 4K (FPS)	20.14
Standard Deviation	0.7%
AOM AV1 - Speed 6 Two-Pass - Bosphorus 4K (FPS)	10.20
Standard Deviation	2.4%
AOM AV1 - Speed 8 Realtime - Bosphorus 4K (FPS)	42.03
Standard Deviation	0.4%
AOM AV1 - Speed 9 Realtime - Bosphorus 4K (FPS)	50.56
Standard Deviation	1.1%
AOM AV1 - Speed 0 Two-Pass - Bosphorus 1080p (FPS)	0.61
Standard Deviation	0.9%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 1080p (FPS)	8.48
Standard Deviation	1.8%
AOM AV1 - Speed 6 Realtime - Bosphorus 1080p (FPS)	35.06
Standard Deviation	1.2%
AOM AV1 - Speed 6 Two-Pass - Bosphorus 1080p (FPS)	27.02
Standard Deviation	1.9%
AOM AV1 - Speed 8 Realtime - Bosphorus 1080p (FPS)	108.49
Standard Deviation	3.5%
AOM AV1 - Speed 9 Realtime - Bosphorus 1080p (FPS)	133.10
Standard Deviation	3.6%
rav1e - 1 (FPS)	0.565
Standard Deviation	1.9%
rav1e - 5 (FPS)	1.689

Standard Deviation	1.6%
rav1e - 6 (FPS)	2.299
Standard Deviation	0.4%
rav1e - 10 (FPS)	5.136
Standard Deviation	0.8%
SVT-AV1 - Enc Mode 0 - 1080p (FPS)	0.163
Standard Deviation	2.5%
SVT-AV1 - Enc Mode 4 - 1080p (FPS)	6.294
Standard Deviation	1.1%
SVT-AV1 - Enc Mode 8 - 1080p (FPS)	51.308
Standard Deviation	1.1%
SVT-HEVC - 1 - Bosphorus 1080p (FPS)	16.69
Standard Deviation	0.3%
SVT-HEVC - 7 - Bosphorus 1080p (FPS)	221.73
Standard Deviation	0.5%
SVT-HEVC - 10 - Bosphorus 1080p (FPS)	397.71
Standard Deviation	0.5%
SVT-VP9 - VMAF Optimized - Bosphorus 1080p (FPS)	280.63
Standard Deviation	2.7%
SVT-VP9 - P.S.O - Bosphorus 1080p (FPS)	287.69
Standard Deviation	0.3%
SVT-VP9 - V.Q.O - Bosphorus 1080p (FPS)	255.27
Standard Deviation	0.7%
VP9 libvpx Encoding - Speed 0 (FPS)	9.91
Standard Deviation	0.7%
VP9 libvpx Encoding - Speed 5 (FPS)	35.30
Standard Deviation	0.5%
x264 - H.2.V.E (FPS)	202.48
Standard Deviation	5.2%
x265 - Bosphorus 4K (FPS)	27.55
Standard Deviation	0.7%
x265 - Bosphorus 1080p (FPS)	82.83
Standard Deviation	0.6%
libavif avifenc - 0 (sec)	44.747
Standard Deviation	0.7%
libavif avifenc - 2 (sec)	24.165
Standard Deviation	0.3%
libavif avifenc - 6 (sec)	9.409
Standard Deviation	0.2%
libavif avifenc - 10 (sec)	3.239
Standard Deviation	1.2%
libavif avifenc - 6, Lossless (sec)	31.585
Standard Deviation	0.2%
libavif avifenc - 10, Lossless (sec)	5.188
Standard Deviation	1.6%
Monkey Audio Encoding - WAV To APE (sec)	10.140
Standard Deviation	1.7%
FLAC Audio Encoding - WAV To FLAC (sec)	7.136
Standard Deviation	0.7%
LAME MP3 Encoding - WAV To MP3 (sec)	5.740
Standard Deviation	0.2%
Opus Codec Encoding - WAV To Opus Encode (sec)	6.234
Standard Deviation	2.1%

2021-04-18T05:59:04+00:00

FFmpeg - H.2.H.T.N.D (sec) 6.789

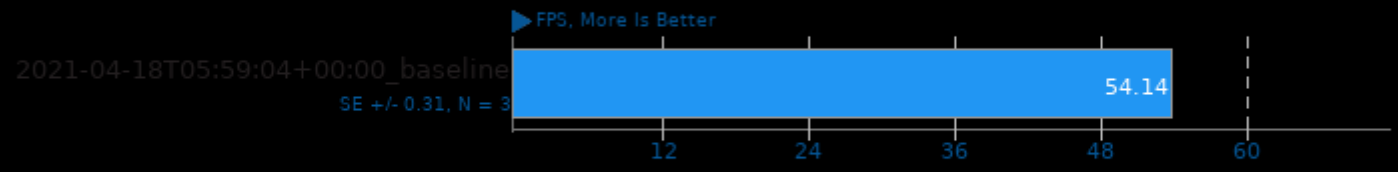
Standard Deviation 0.9%

WavPack Audio Encoding - WAV To WavPack (sec) 11.197

Standard Deviation 1.7%

libgav1 2019-10-05

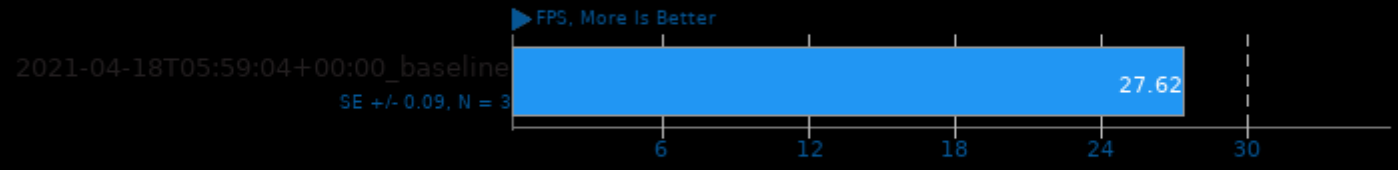
Video Input: Chimera 1080p



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

libgav1 2019-10-05

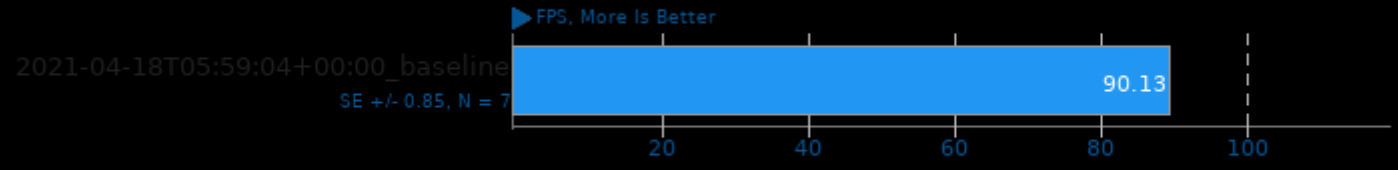
Video Input: Summer Nature 4K



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

libgav1 2019-10-05

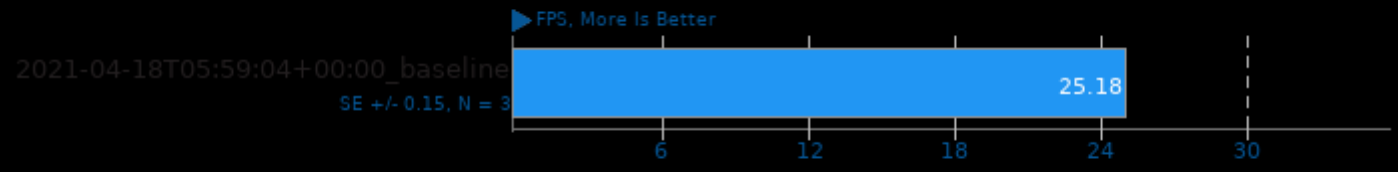
Video Input: Summer Nature 1080p



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

libgav1 2019-10-05

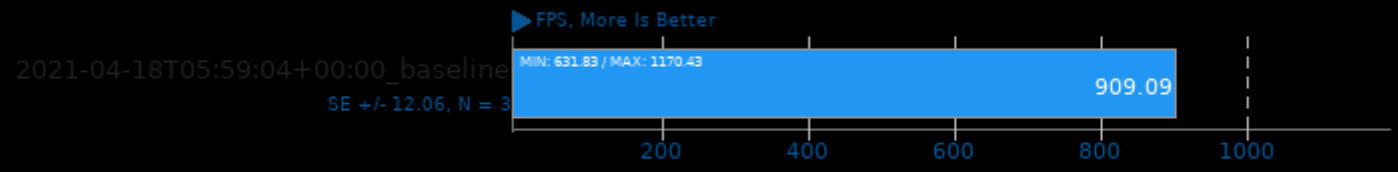
Video Input: Chimera 1080p 10-bit



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

dav1d 0.8.2

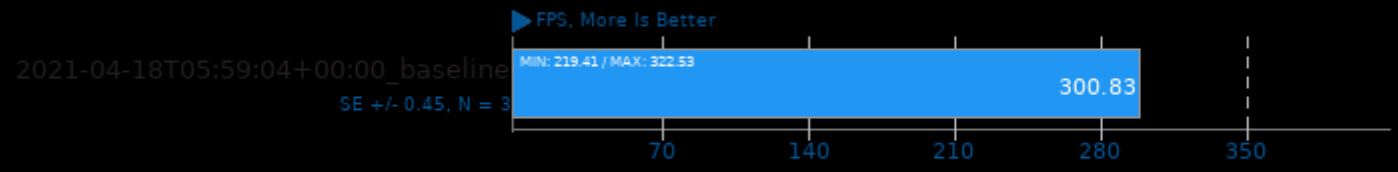
Video Input: Chimera 1080p



1. (CC) gcc options: -pthread -lm

dav1d 0.8.2

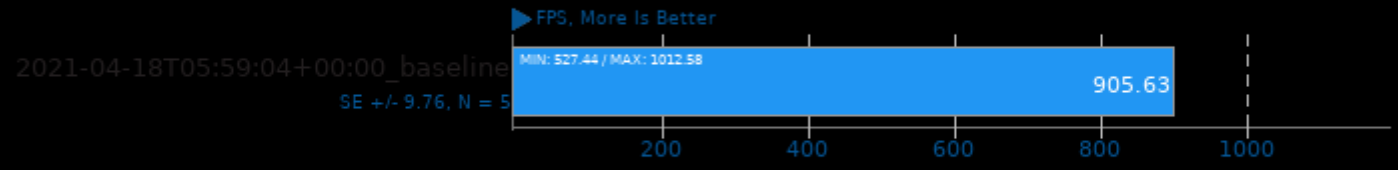
Video Input: Summer Nature 4K



1. (CC) gcc options: -pthread -lm

dav1d 0.8.2

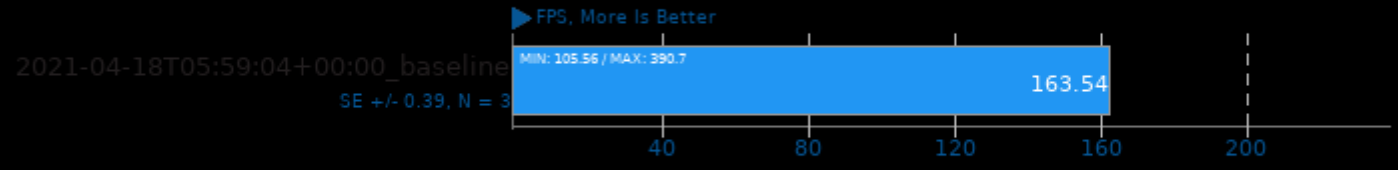
Video Input: Summer Nature 1080p



1. (CC) gcc options: -pthread -lm

dav1d 0.8.2

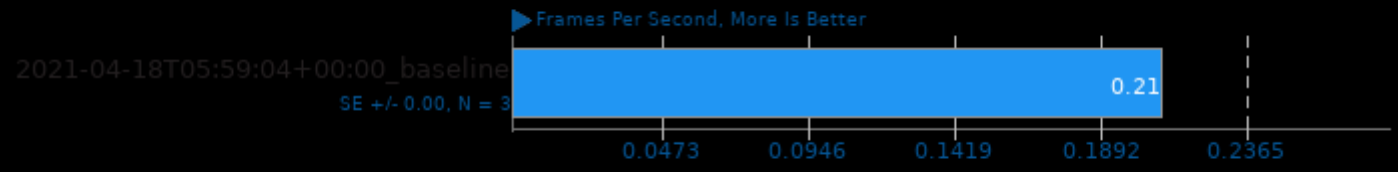
Video Input: Chimera 1080p 10-bit



1. (CC) gcc options: -pthread -lm

AOM AV1 3.0

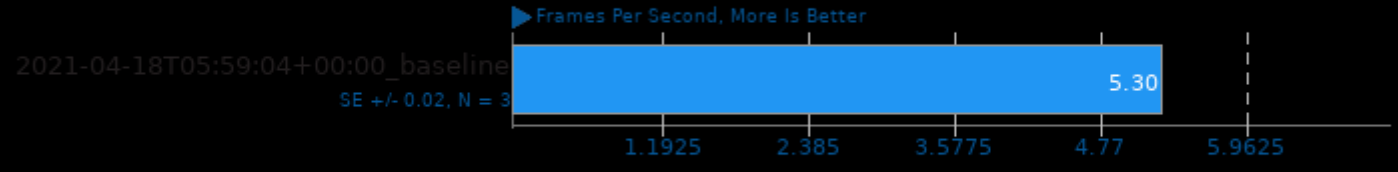
Encoder Mode: Speed 0 Two-Pass - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.0

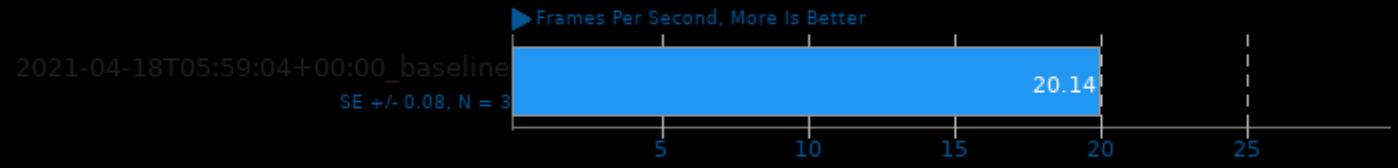
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.0

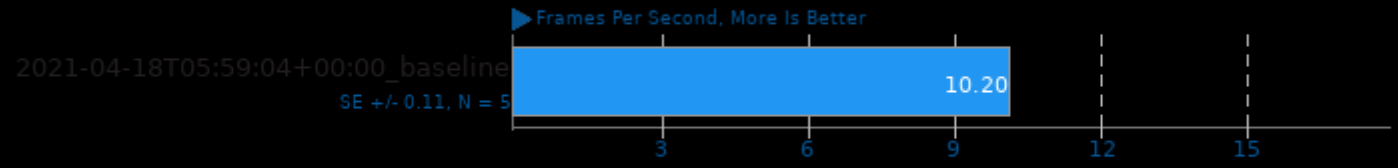
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.0

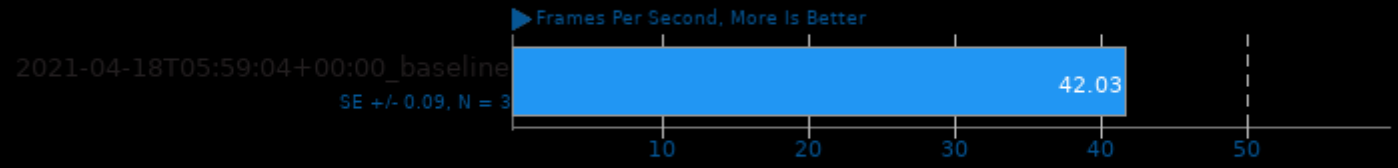
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.0

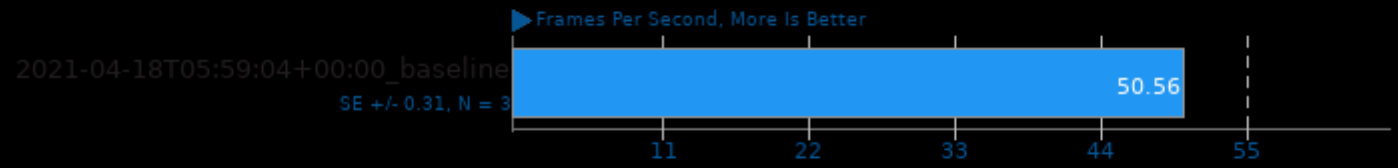
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.0

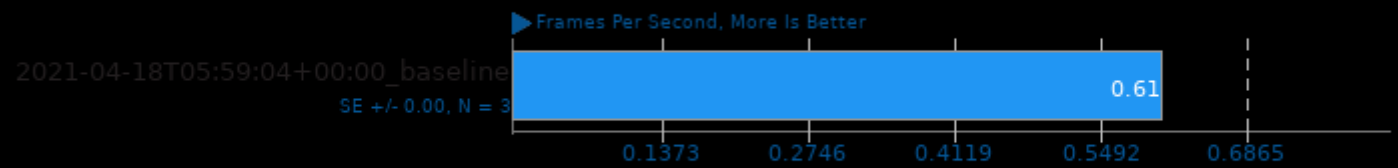
Encoder Mode: Speed 9 Realtime - Input: Bosphorus 4K



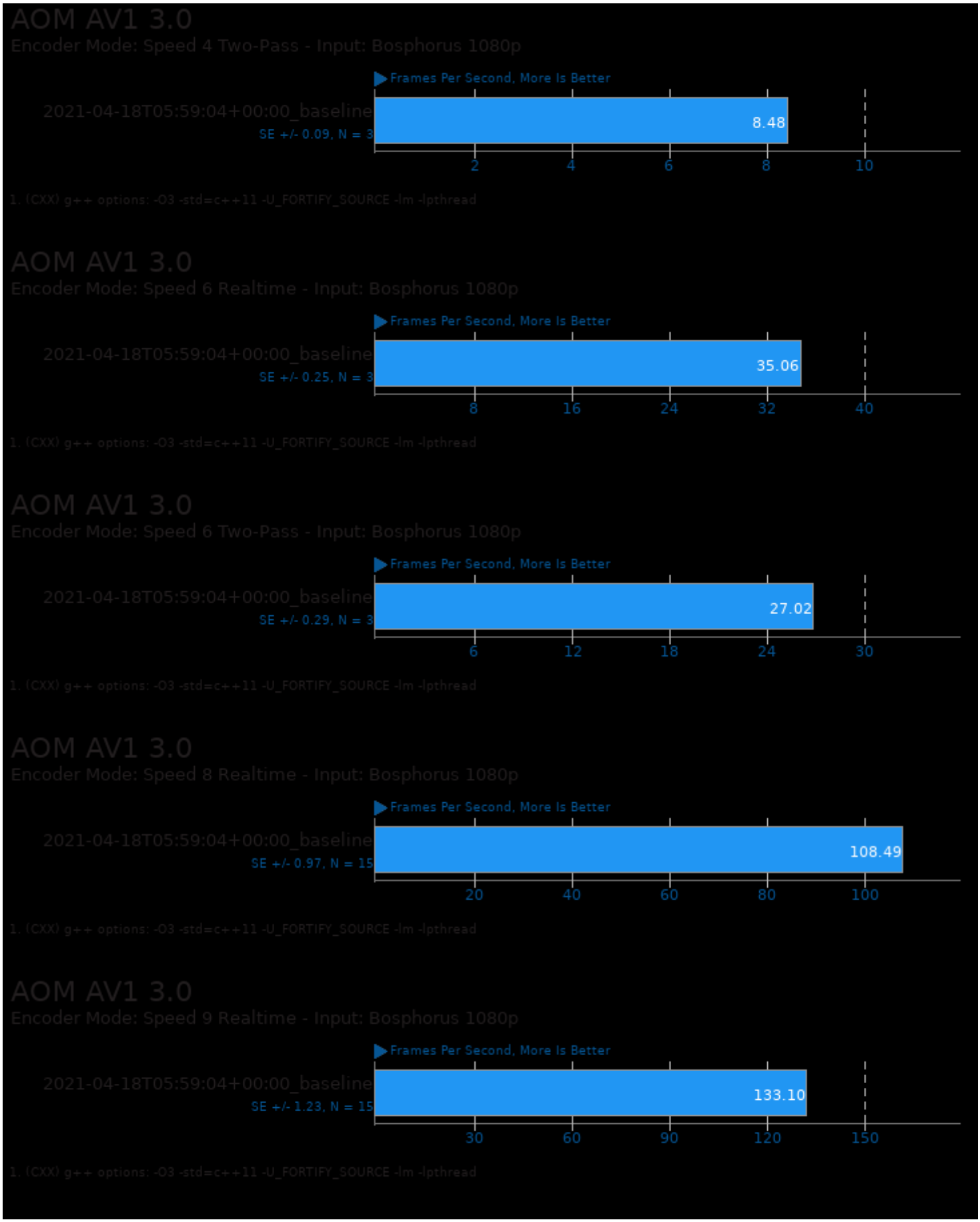
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

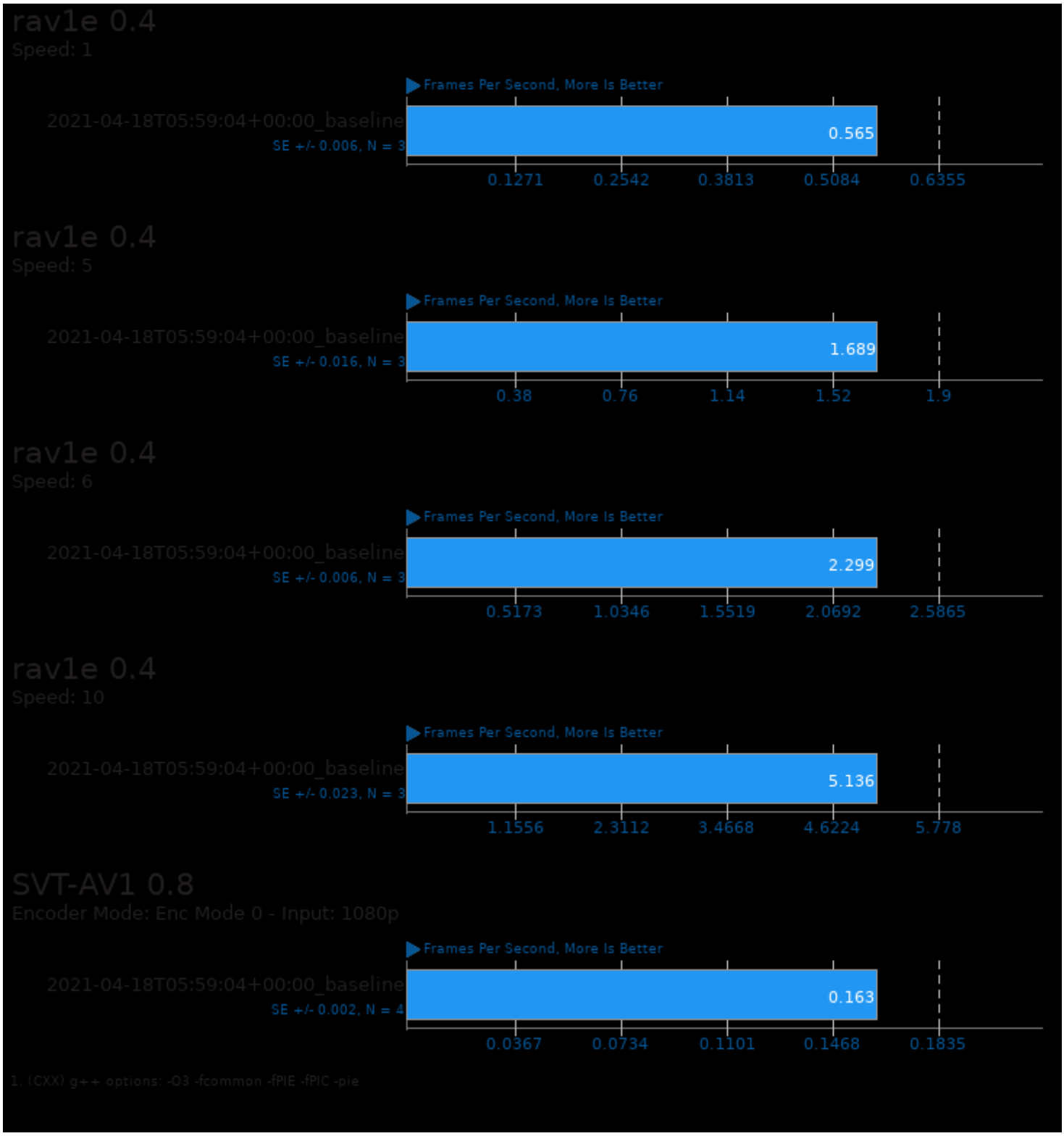
AOM AV1 3.0

Encoder Mode: Speed 0 Two-Pass - Input: Bosphorus 1080p



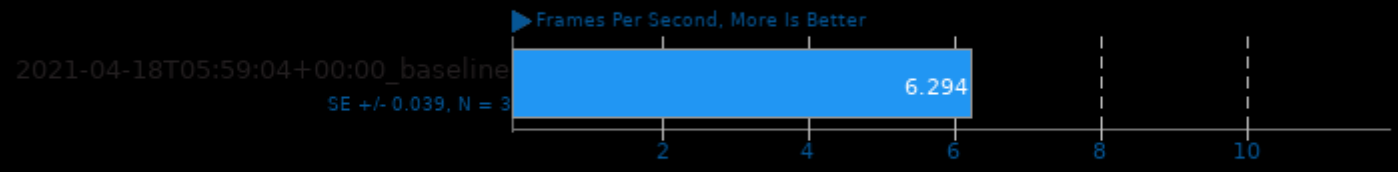
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread


AOM AV1 3.0
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 1080p
Frames Per Second, More Is Better
2021-04-18T05:59:04+00:00_baseline
SE +/- 0.09, N = 3
8.48
2
4
6
8
10
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.0
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
2021-04-18T05:59:04+00:00_baseline
SE +/- 0.25, N = 3
35.06
8
16
24
32
40
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.0
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 1080p
Frames Per Second, More Is Better
2021-04-18T05:59:04+00:00_baseline
SE +/- 0.29, N = 3
27.02
6
12
18
24
30
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.0
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
2021-04-18T05:59:04+00:00_baseline
SE +/- 0.97, N = 15
108.49
20
40
60
80
100
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.0
Encoder Mode: Speed 9 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
2021-04-18T05:59:04+00:00_baseline
SE +/- 1.23, N = 15
133.10
30
60
90
120
150
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread


rav1e 0.4
Speed: 1
Frames Per Second, More Is Better
2021-04-18T05:59:04+00:00_baseline
SE +/- 0.006, N = 3
0.565
0.1271
0.2542
0.3813
0.5084
0.6355
rav1e 0.4
Speed: 5
Frames Per Second, More Is Better
2021-04-18T05:59:04+00:00_baseline
SE +/- 0.016, N = 3
1.689
0.38
0.76
1.14
1.52
1.9
rav1e 0.4
Speed: 6
Frames Per Second, More Is Better
2021-04-18T05:59:04+00:00_baseline
SE +/- 0.006, N = 3
2.299
0.5173
1.0346
1.5519
2.0692
2.5865
rav1e 0.4
Speed: 10
Frames Per Second, More Is Better
2021-04-18T05:59:04+00:00_baseline
SE +/- 0.023, N = 3
5.136
1.1556
2.3112
3.4668
4.6224
5.778
SVT-AV1 0.8
Encoder Mode: Enc Mode 0 - Input: 1080p
Frames Per Second, More Is Better
2021-04-18T05:59:04+00:00_baseline
SE +/- 0.002, N = 4
0.163
0.0367
0.0734
0.1101
0.1468
0.1835
1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

SVT-AV1 0.8

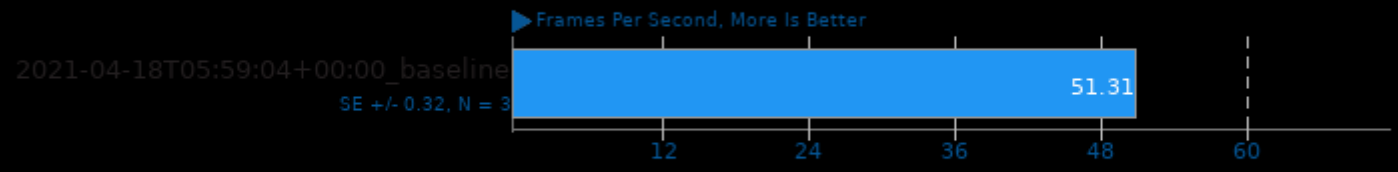
Encoder Mode: Enc Mode 4 - Input: 1080p



1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

SVT-AV1 0.8

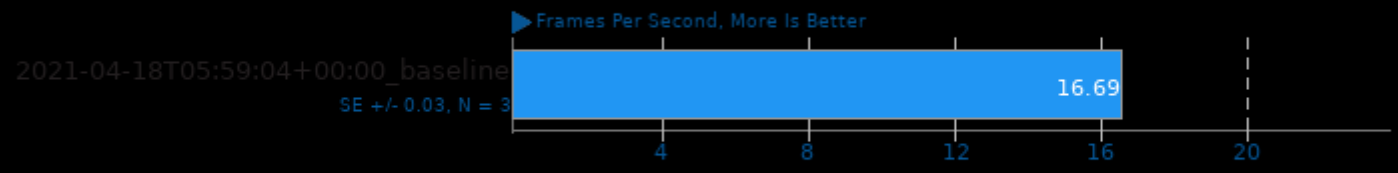
Encoder Mode: Enc Mode 8 - Input: 1080p



1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

SVT-HEVC 1.5.0

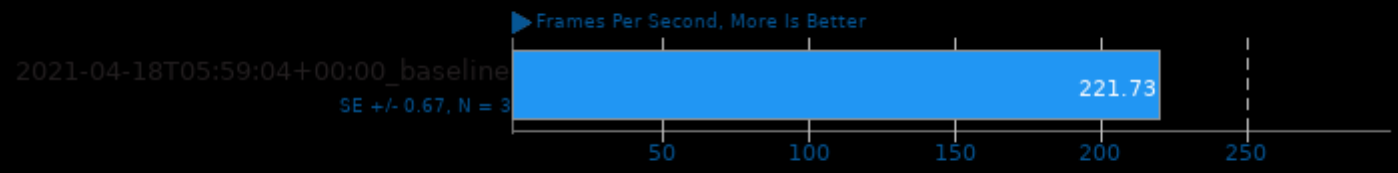
Tuning: 1 - Input: Bosphorus 1080p



1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

SVT-HEVC 1.5.0

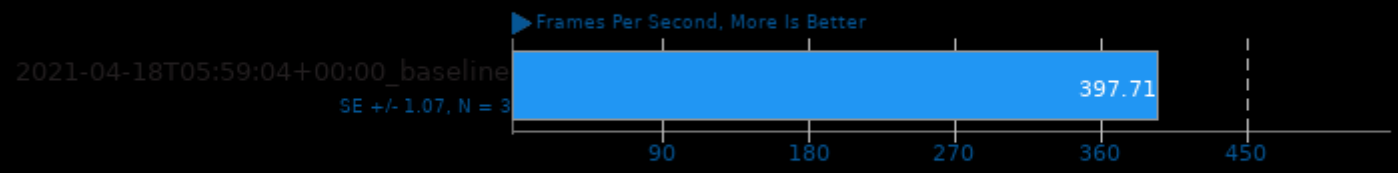
Tuning: 7 - Input: Bosphorus 1080p



1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

SVT-HEVC 1.5.0

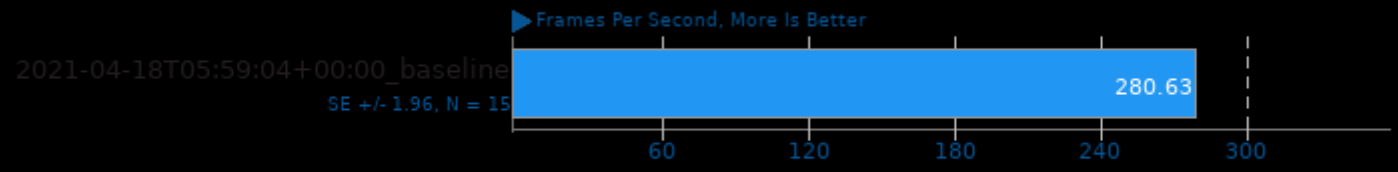
Tuning: 10 - Input: Bosphorus 1080p



1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

SVT-VP9 0.3

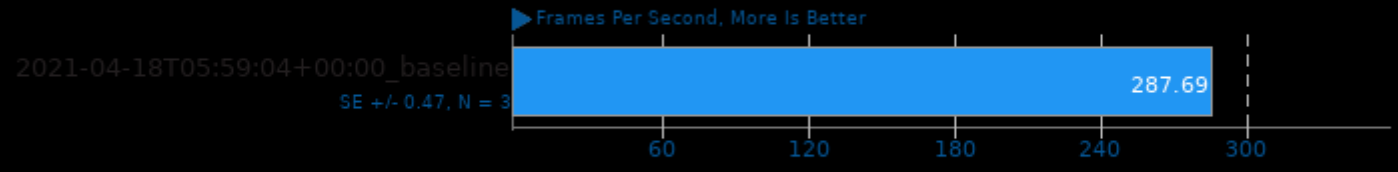
Tuning: VMAF Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-VP9 0.3

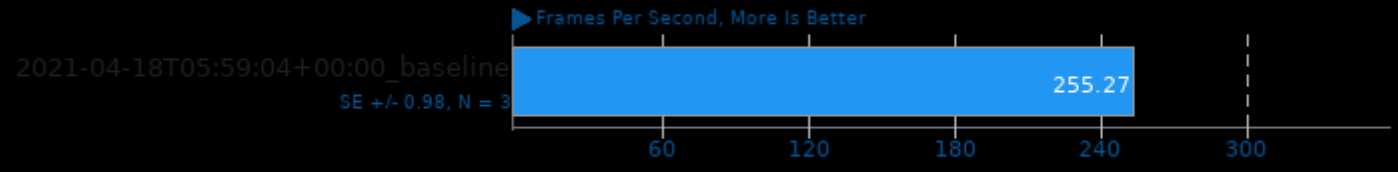
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-VP9 0.3

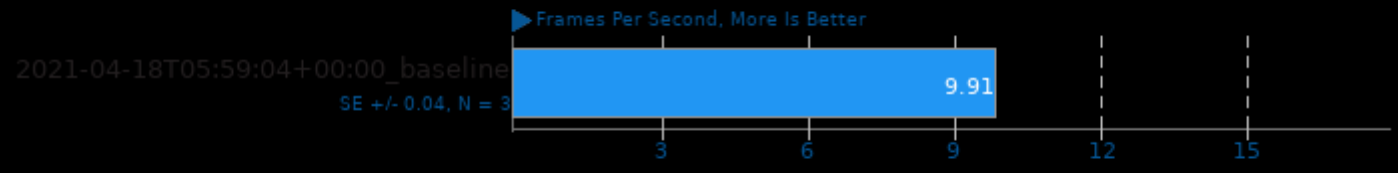
Tuning: Visual Quality Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

VP9 libvpx Encoding 1.8.2

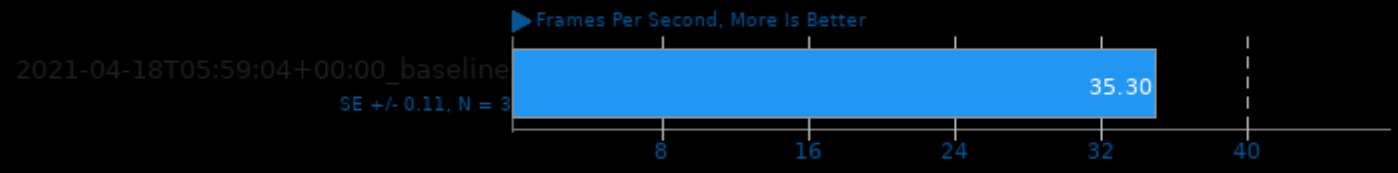
Speed: Speed 0



1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=c++11

VP9 libvpx Encoding 1.8.2

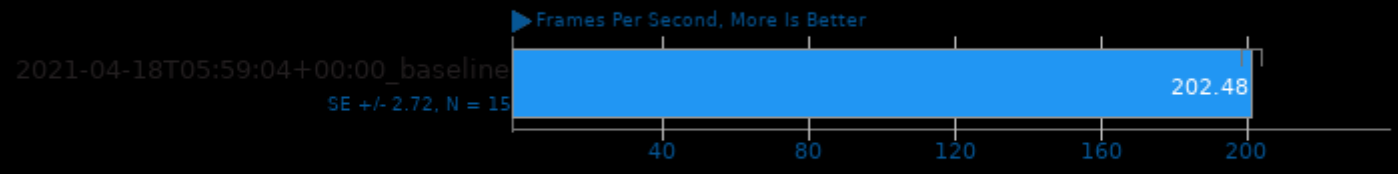
Speed: Speed 5



1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=c++11

x264 2019-12-17

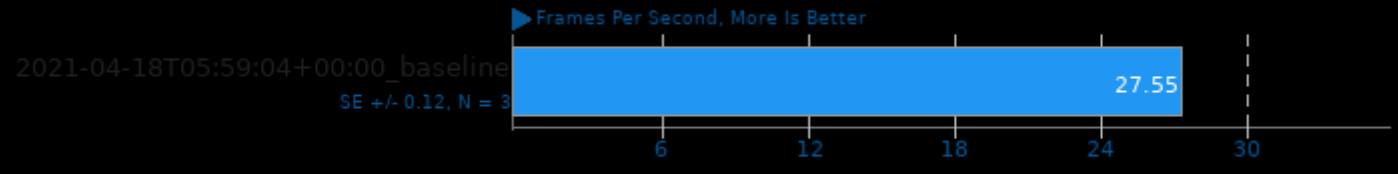
H.264 Video Encoding



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

x265 3.4

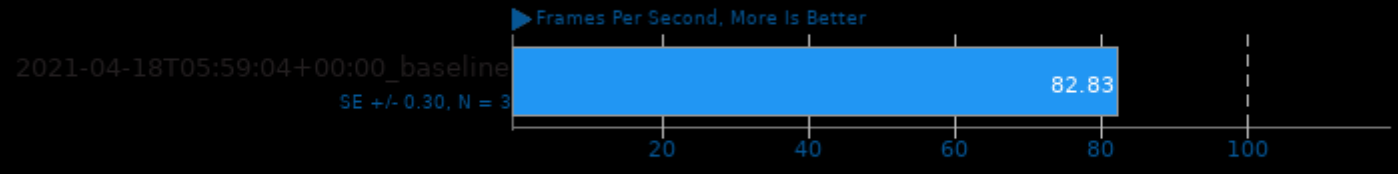
Video Input: Bosphorus 4K



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

x265 3.4

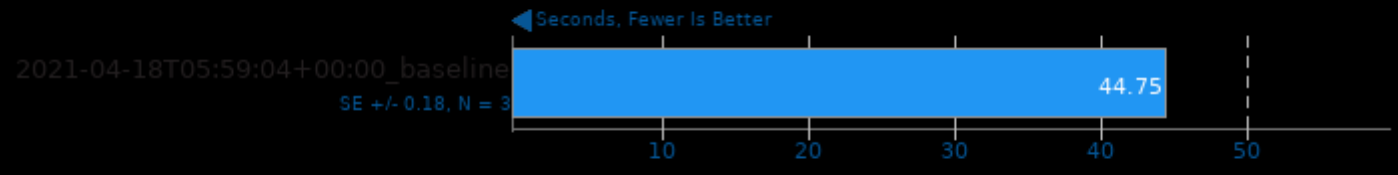
Video Input: Bosphorus 1080p



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

libavif avifenc 0.9.0

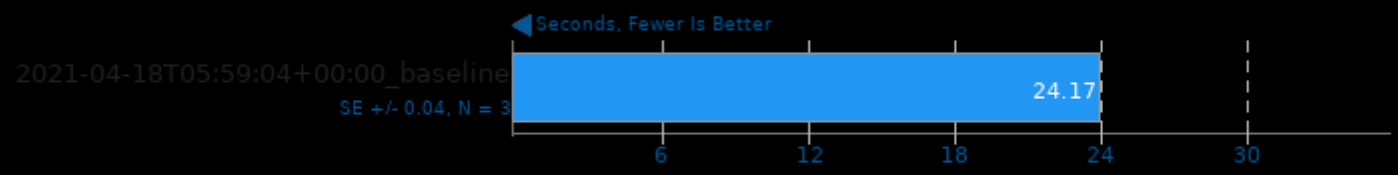
Encoder Speed: 0



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.9.0

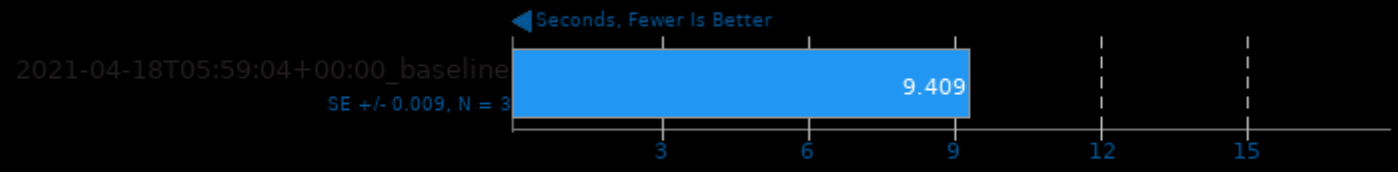
Encoder Speed: 2



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.9.0

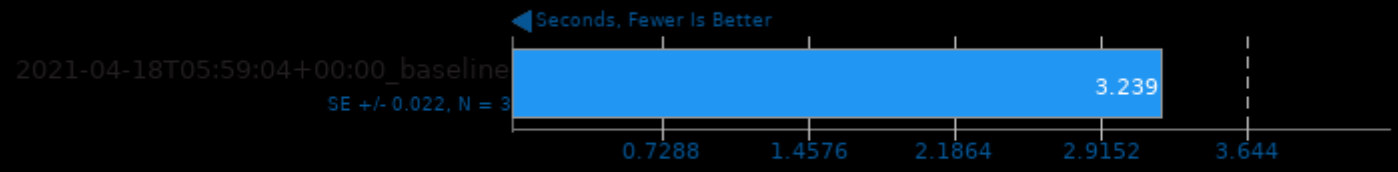
Encoder Speed: 6



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.9.0

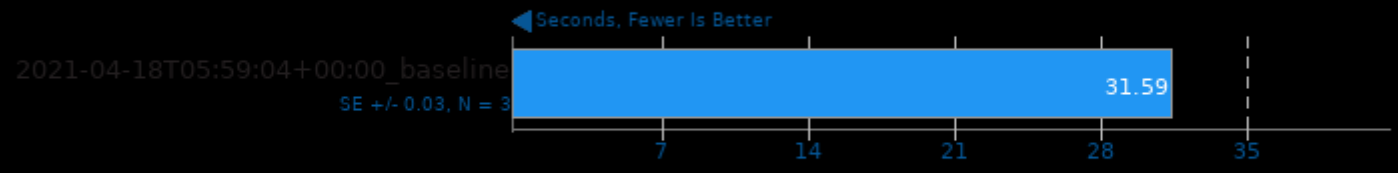
Encoder Speed: 10



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.9.0

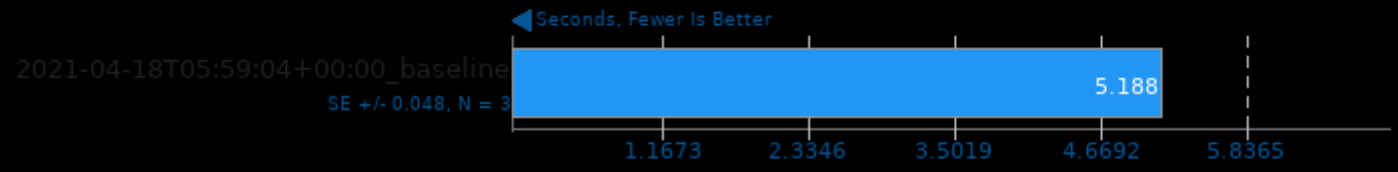
Encoder Speed: 6, Lossless



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.9.0

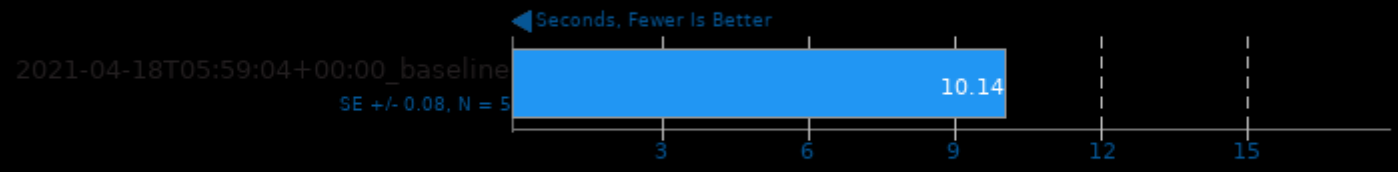
Encoder Speed: 10, Lossless



1. (CXX) g++ options: -O3 -fPIC -lm

Monkey Audio Encoding 3.99.6

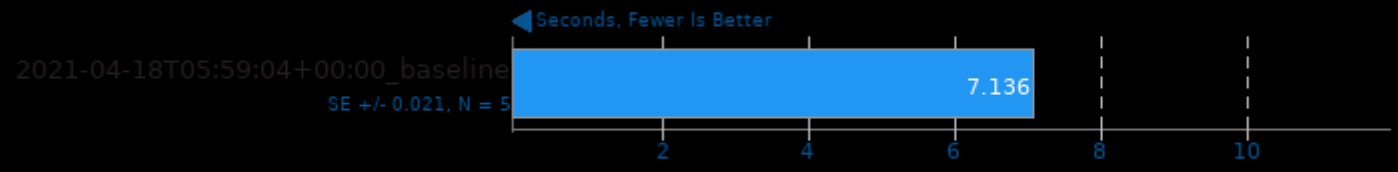
WAV To APE



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

FLAC Audio Encoding 1.3.2

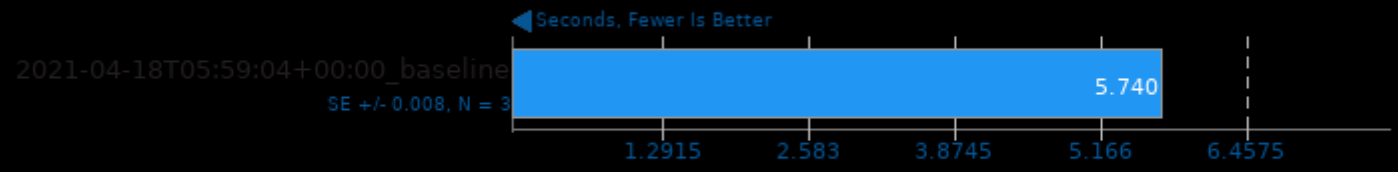
WAV To FLAC



1. (CXX) g++ options: -O2 -fvisibility=hidden -logg -lm

LAME MP3 Encoding 3.100

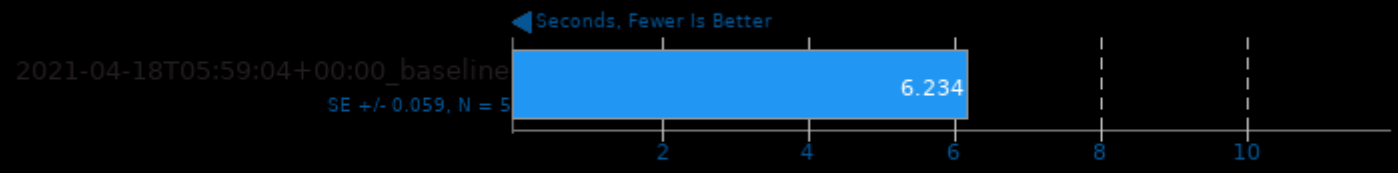
WAV To MP3



1. (CC) gcc options: -O3 -ffast-math -funroll-loops -fschedule-insns2 -fbranch-count-reg -fforce-addr -pipe -lncurses -lm

Opus Codec Encoding 1.3.1

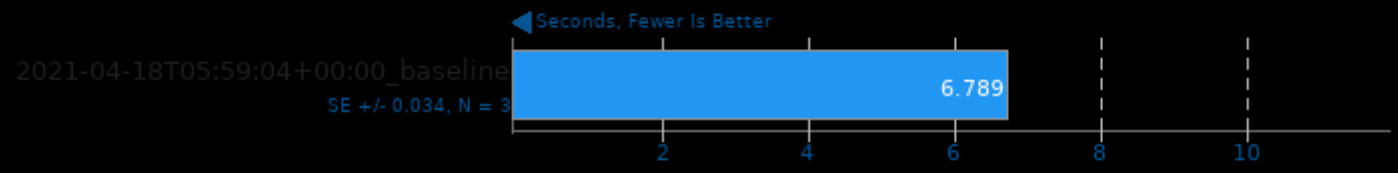
WAV To Opus Encode



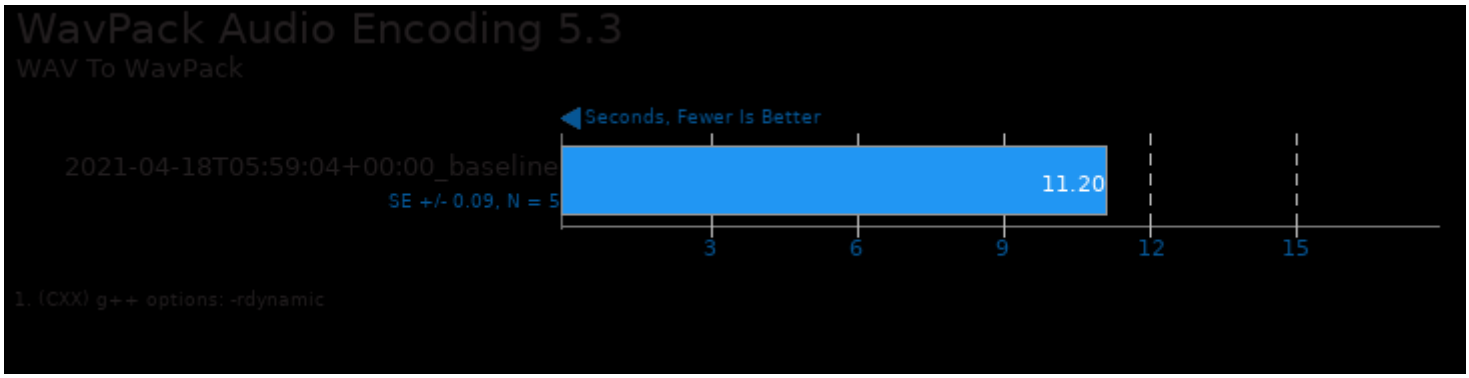
1. (CXX) g++ options: -fvisibility=hidden -logg -lm

FFmpeg 4.0.2

H.264 HD To NTSC DV



1. (CC) gcc options: -lavdevice -lavfilter -lavformat -lavcodec -lswresample -lswscale -lavutil -lXv -lX11 -lXext -lm -lxcb -pthread -lbz2 -llzma -std=c11 -fom



This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 10:43.