

www.phoronix-test-suite.com

Linux 3.12 Intel Core i7 Benchmarks

Intel Core i7-3960X testing with a Intel DX79SI and AMD Radeon HD 4850 512MB on Ubuntu 13.10 via the Phoronix Test Suite.

Automated Executive Summary

Linux 3.12 Git had the most wins, coming in first place for 71% of the tests.

Based on the geometric mean of all complete results, the fastest (Linux 3.12 Git) was 1.029x the speed of the slowest (Linux 3.11).

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

Reaction Quake 3 (Resolution: 1920 x 1080 - Total Frame Time) at 16x
OpenArena (Resolution: 1920 x 1080 - Total Frame Time) at 2.667x
PostMark (Disk Transaction Performance) at 1.198x
Timed MAFFT Alignment (Multiple Sequence Alignment) at 1.042x
Apache Benchmark (Static Web Page Serving) at 1.037x
OpenArena (Resolution: 1920 x 1080) at 1.018x
Timed Linux Kernel Compilation (Time To Compile) at 1.011x
FFmpeg (H.264 HD To NTSC DV) at 1.009x
Prey (Resolution: 1920 x 1080) at 1.005x

Warsow (Resolution: 1920 x 1080) at 1.005x.

Test Systems:

Linux 3.11

Processor: Intel Core i7-3960X @ 1.95GHz (12 Cores), Motherboard: Intel DX79SI, Chipset: Intel Xeon E5/Core, Memory: 8192MB, Disk: 64GB OCZ VERTEX, Graphics: AMD Radeon HD 4850 512MB, Audio: Realtek ALC892, Monitor: DELL S2409W, Network: Intel 82579LM Gigabit Connection

OS: Ubuntu 13.10, Kernel: 3.11.0-031100-generic (x86_64), Desktop: Unity 7.1.2, Display Server: X Server 1.14.3, Display Driver: radeon 7.2.0, OpenGL: 3.1 Mesa 9.2.1 Gallium 0.4, Compiler: GCC 4.8, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --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,c++,java,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --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-ecj-jar=/usr/share/java/eclipse-ecj.jar --with-java-home=/usr/lib/jvm/java-1.5.0-gcj-4.8-amd64/jre --with-jvm-jar-dir=/usr/lib/jvm-exports/java-1.5.0-gcj-4.8-amd64 --with-jvm-root-dir=/usr/lib/jvm/java-1.5.0-gcj-4.8-amd64 --with-multilib-list=m32,m64,mx32 --with-tune=generic -v
Disk Notes: DEADLINE / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Graphics Notes: EXA
System Notes: Disk Scheduler: DEADLINE. Python 2.7.5+.

Linux 3.12 Git

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Motherboard: Intel DX79SI, Chipset: Intel Xeon E5/Core, Memory: 8192MB, Disk: 64GB OCZ VERTEX, Graphics: AMD Radeon HD 4850 512MB, Audio: Realtek ALC892, Monitor: DELL S2409W, Network: Intel 82579LM Gigabit Connection

OS: Ubuntu 13.10, Kernel: 3.12.0-999-generic (x86_64), Desktop: Unity 7.1.2, Display Server: X Server 1.14.3, Display Driver: radeon 7.2.0, OpenGL: 3.1 Mesa 9.2.1 Gallium 0.4, Compiler: GCC 4.8, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --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,c++,java,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --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-ecj-jar=/usr/share/java/eclipse-ecj.jar --with-java-home=/usr/lib/jvm/java-1.5.0-gcj-4.8-amd64/jre --with-jvm-jar-dir=/usr/lib/jvm-exports/java-1.5.0-gcj-4.8-amd64 --with-jvm-root-dir=/usr/lib/jvm/java-1.5.0-gcj-4.8-amd64 --with-multilib-list=m32,m64,mx32 --with-tune=generic -v
Disk Notes: DEADLINE / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Graphics Notes: EXA
System Notes: Disk Scheduler: DEADLINE. Python 2.7.5+.

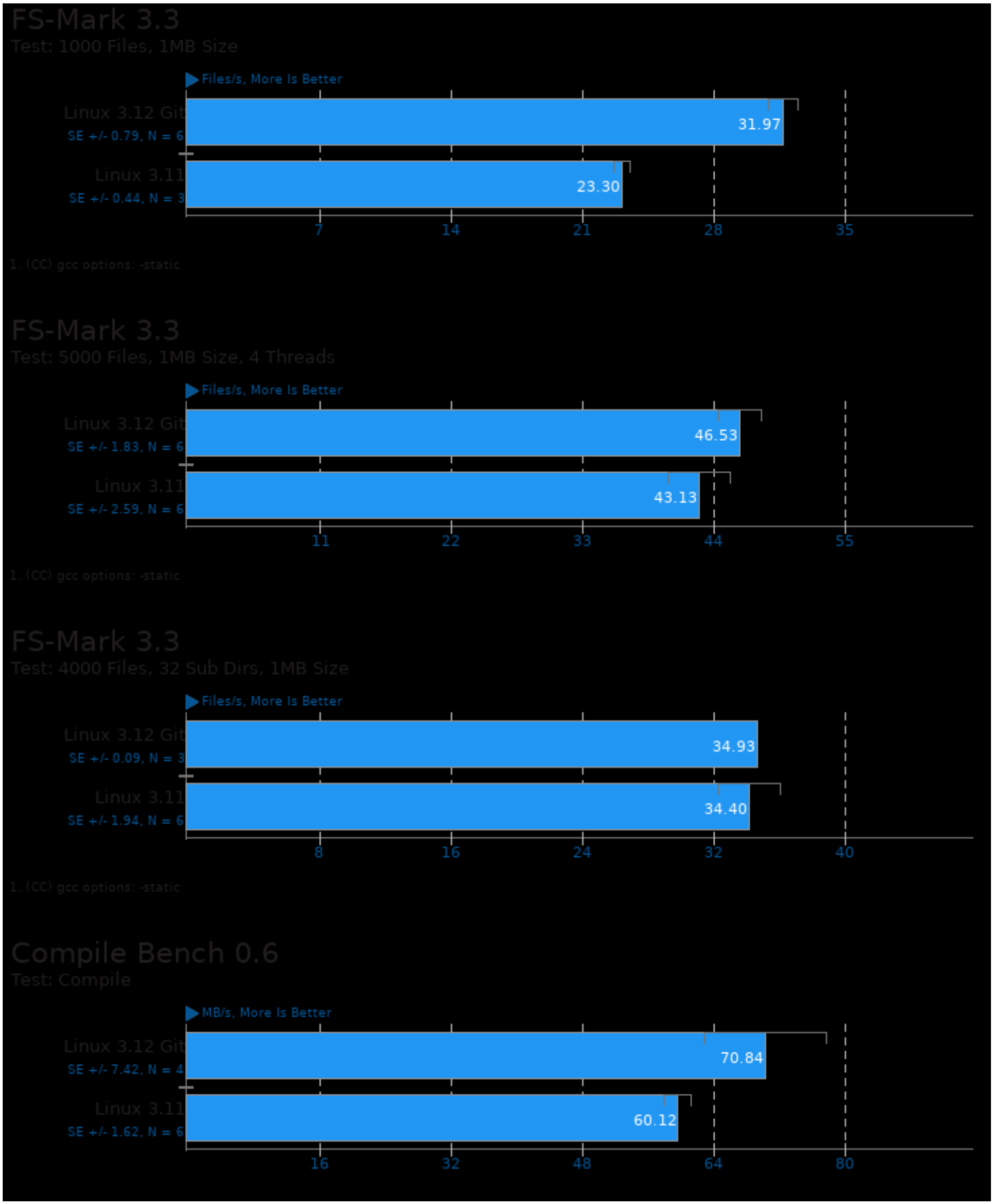
	Linux 3.11	Linux 3.12 Git
FS-Mark - 1.F.1.S (Files/s)	23.30	31.97
Normalized	72.88%	100%

Linux 3.12 Intel Core i7 Benchmarks

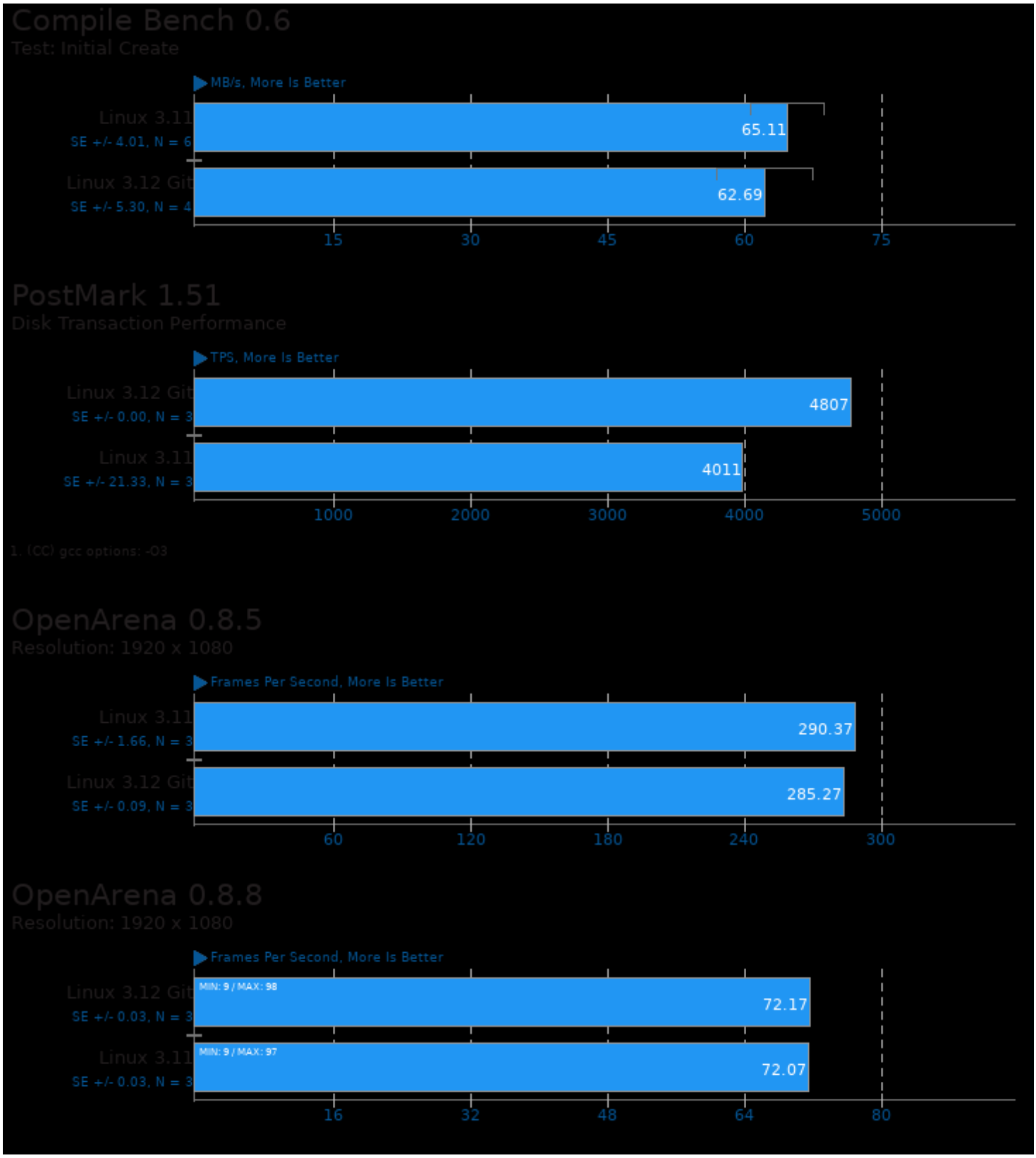
Standard Deviation	3.2%	6.1%
FS-Mark - 5.F.1.S.4.T (Files/s)	**43.13**	**46.53**
Normalized	92.69%	100%
Standard Deviation	14.7%	9.7%
FS-Mark - 4.F.3.S.D.1.S (Files/s)	**34.40**	**34.93**
Normalized	98.48%	100%
Standard Deviation	13.8%	0.4%
Compile Bench - Compile (MB/s)	**60.12**	**70.84**
Normalized	84.87%	100%
Standard Deviation	6.6%	20.9%
Compile Bench - Initial Create (MB/s)	**65.11**	**62.69**
Normalized	100%	96.28%
Standard Deviation	15.1%	16.9%
PostMark - D.T.P (TPS)	**4011**	**4807**
Normalized	83.44%	100%
Standard Deviation	0.9%	0%
OpenArena - 1920 x 1080 (FPS)	**290.37**	**285.27**
Normalized	100%	98.24%
Standard Deviation	1%	0.1%
OpenArena - 1920 x 1080 (FPS)	**72.07**	**72.17**
Normalized	99.86%	100%
Standard Deviation	0.1%	0.1%
Prey - 1920 x 1080 (FPS)	**80.10**	**80.50**
Normalized	99.5%	100%
Standard Deviation	0.9%	0.2%
Reaction Quake 3 - 1920 x 1080 (FPS)	**122.53**	**122.50**
Normalized	100%	99.98%
Standard Deviation	0%	0%
Unigine Sanctuary - 1920 x 1080 (FPS)	**20.40**	**20.39**
Normalized	100%	99.95%
Standard Deviation	0%	0%
Unigine Tropics - 1920 x 1080 (FPS)	22.74	22.74
Standard Deviation	0%	0%
Warsow - 1920 x 1080 (FPS)	**80.67**	**80.27**
Normalized	100%	99.5%
Standard Deviation	0.4%	0.3%
Xonotic - 1920 x 1080 - Low (FPS)	**270.82**	**271.78**
Normalized	99.65%	100%
Standard Deviation	0.4%	0.1%
Xonotic - 1920 x 1080 - High (FPS)	**119.68**	**119.78**
Normalized	99.92%	100%
Standard Deviation	0.1%	0.2%
Xonotic - 1920 x 1080 - Ultra (FPS)	**81.53**	**81.60**
Normalized	99.91%	100%
Standard Deviation	0.1%	0.1%
Xonotic - 1920 x 1080 - Ultimate (FPS)	**54.56**	**54.57**
Normalized	99.98%	100%
Standard Deviation	0%	0.1%
Timed HMMer Search - P.D.S (sec)	**15.34**	**15.33**
Normalized	99.93%	100%
Standard Deviation	0.1%	0.6%
Timed MAFFT Alignment - M.S.A (sec)	**5.94**	**5.70**
Normalized	95.96%	100%
Standard Deviation	5.9%	4.7%
x264 - H.2.V.E (FPS)	**211.73**	**212.11**

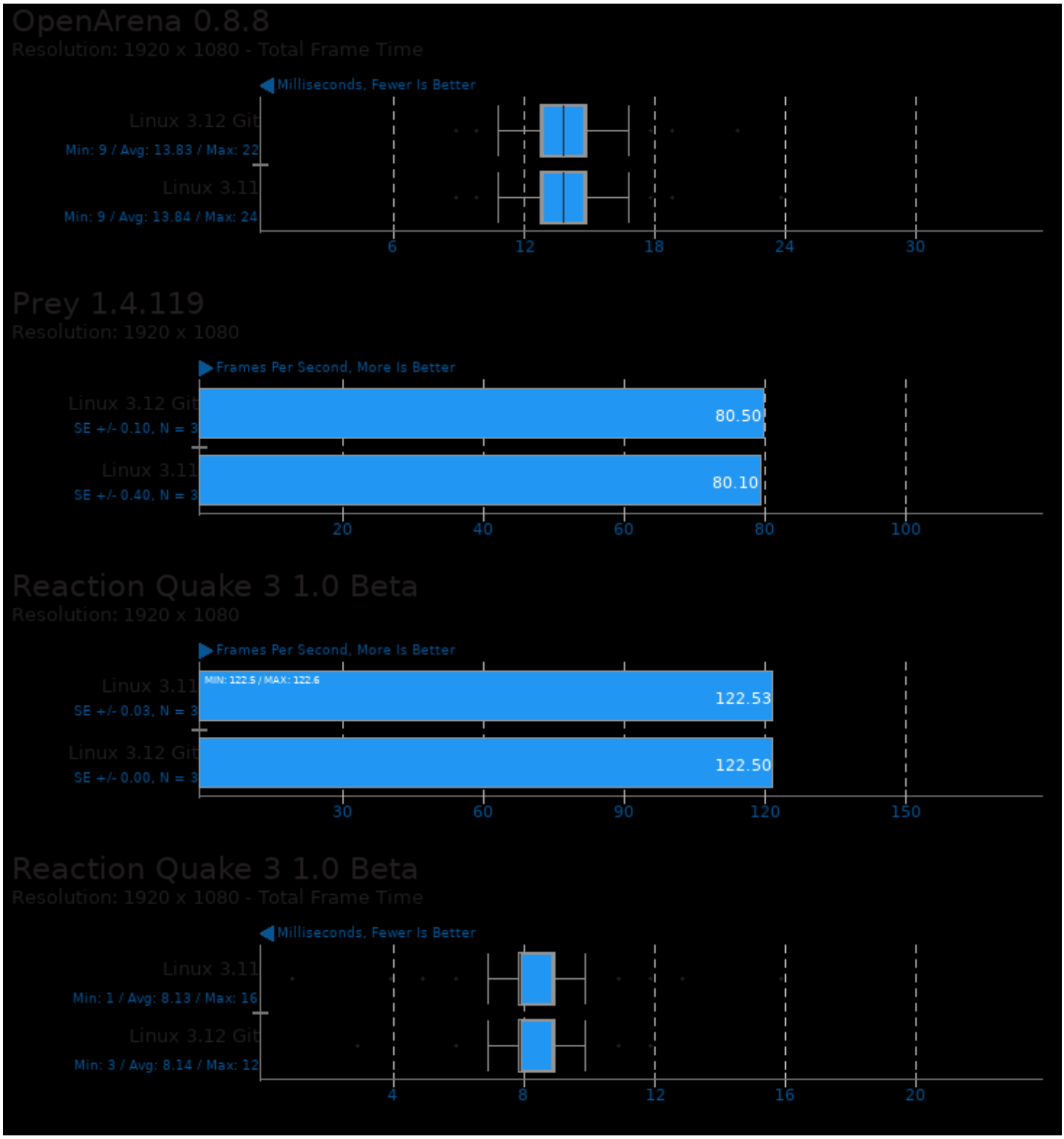
Linux 3.12 Intel Core i7 Benchmarks

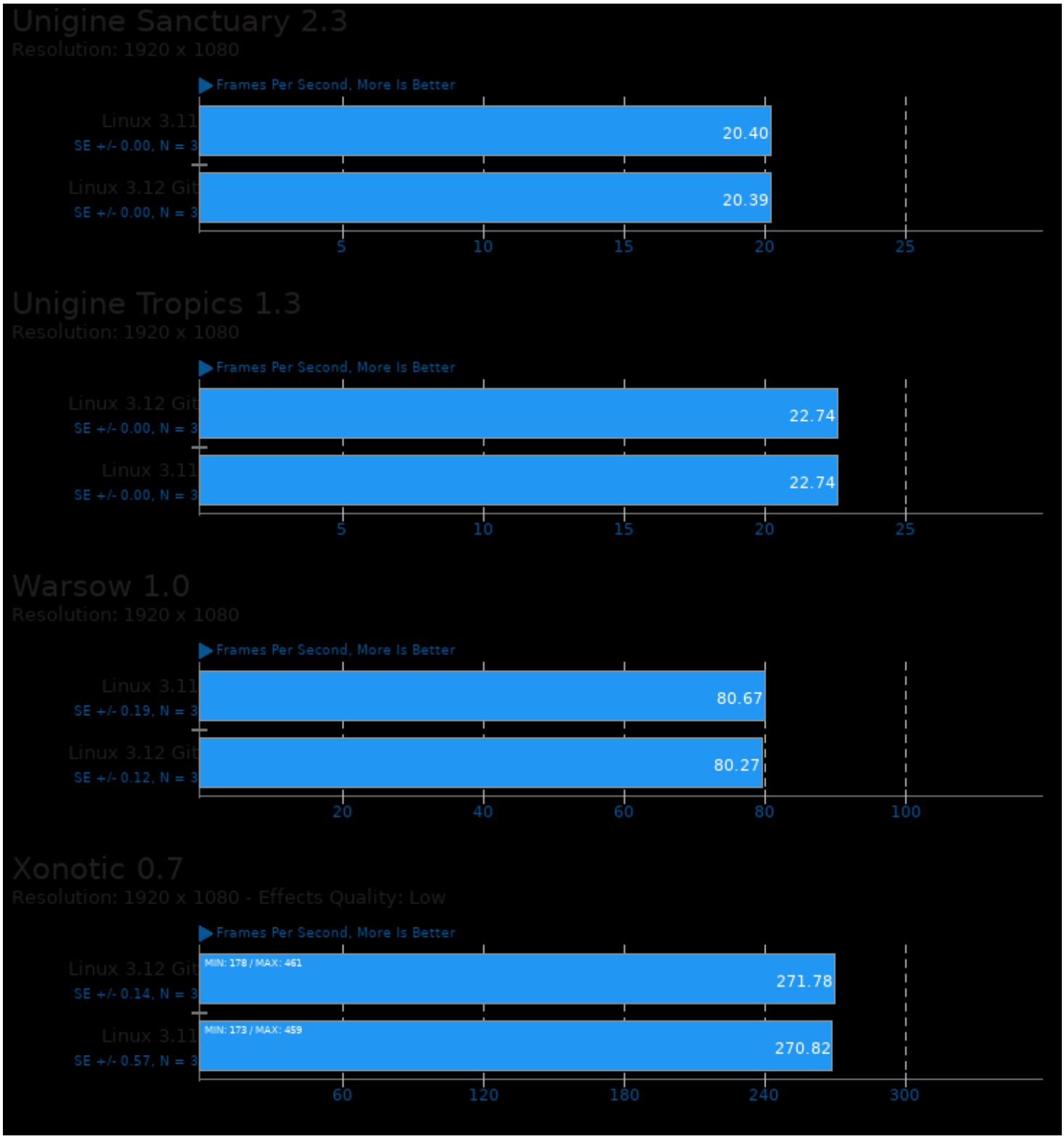
Normalized	99.82%	100%
Standard Deviation	5.5%	5.2%
Himeno Benchmark - P.P.S (MFLOPS)	**1627**	**1632**
Normalized	99.73%	100%
Standard Deviation	0.1%	0.1%
Timed Linux Kernel Compilation - Time To Compile	**63.53**	**62.85**
Normalized	98.93%	100%
Standard Deviation	3.3%	2.5%
C-Ray - Total Time (sec)	**19.34**	**19.29**
Normalized	99.74%	100%
Standard Deviation	0.1%	0%
Smallpt - G.I.R.1.S (sec)	19	19
Standard Deviation	0%	0%
LAME MP3 Encoding - WAV To MP3 (sec)	**13.62**	**13.63**
Normalized	100%	99.93%
Standard Deviation	0.2%	0.5%
Opus Codec Encoding - W.O.E.O.D (sec)	**9.37**	**9.33**
Normalized	99.57%	100%
Standard Deviation	0.1%	0.2%
FFmpeg - H.2.H.T.N.D (sec)	**11.74**	**11.63**
Normalized	99.06%	100%
Standard Deviation	2.1%	2.3%
Apache Benchmark - S.W.P.S (Reqs/sec)	**15993**	**16591**
Normalized	96.4%	100%
Standard Deviation	0.8%	1.1%

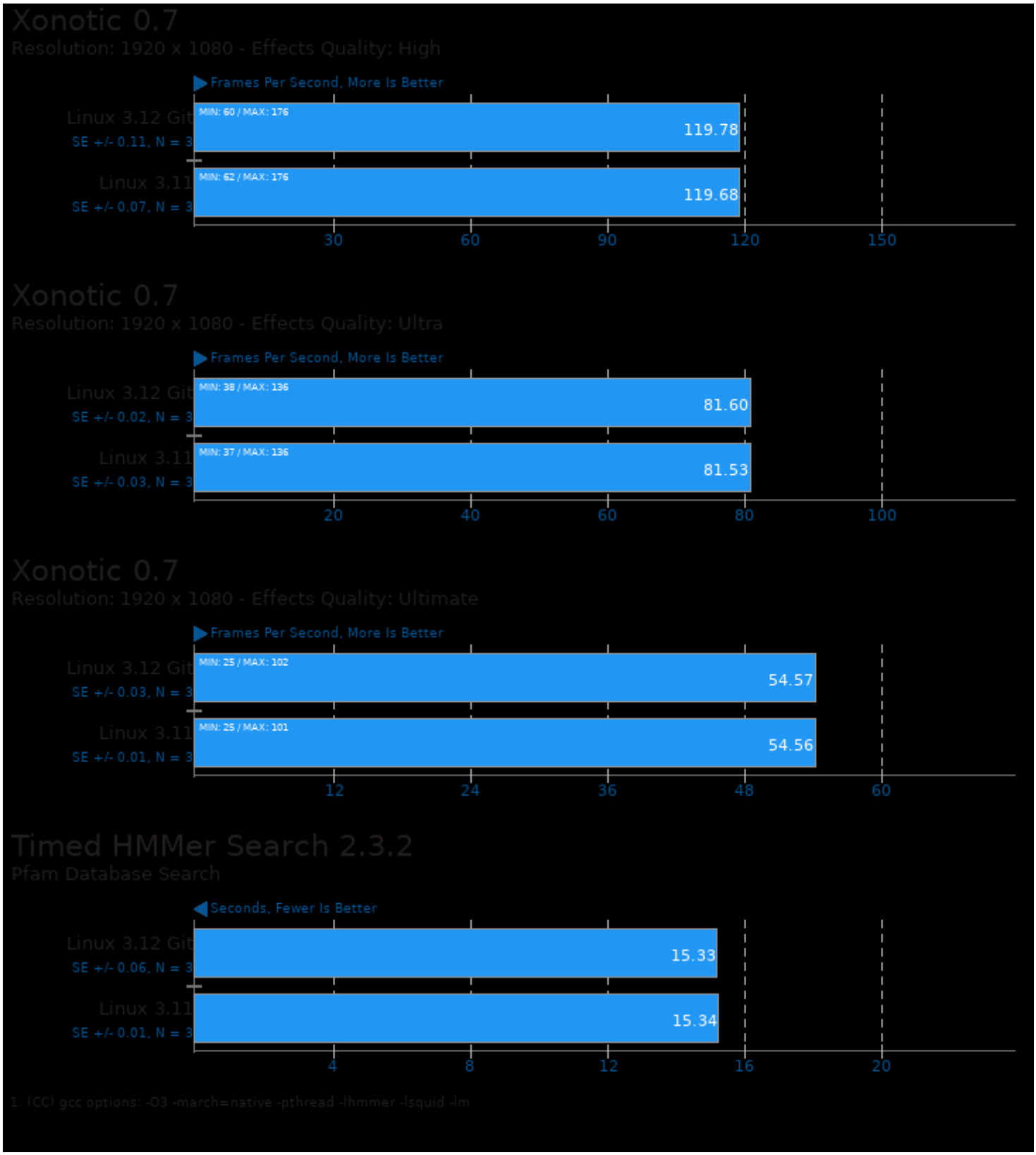

FS-Mark 3.3
Test: 1000 Files, 1MB Size
Files/s, More Is Better
Linux 3.12 Git
SE +/- 0.79, N = 6
31.97
Linux 3.11
SE +/- 0.44, N = 3
23.30
7
14
21
28
35
1. (CC) gcc options: -static
FS-Mark 3.3
Test: 5000 Files, 1MB Size, 4 Threads
Files/s, More Is Better
Linux 3.12 Git
SE +/- 1.83, N = 6
46.53
Linux 3.11
SE +/- 2.59, N = 6
43.13
11
22
33
44
55
1. (CC) gcc options: -static
FS-Mark 3.3
Test: 4000 Files, 32 Sub Dirs, 1MB Size
Files/s, More Is Better
Linux 3.12 Git
SE +/- 0.09, N = 3
34.93
Linux 3.11
SE +/- 1.94, N = 6
34.40
8
16
24
32
40
1. (CC) gcc options: -static
Compile Bench 0.6
Test: Compile
MB/s, More Is Better
Linux 3.12 Git
SE +/- 7.42, N = 4
70.84
Linux 3.11
SE +/- 1.62, N = 6
60.12
16
32
48
64
80

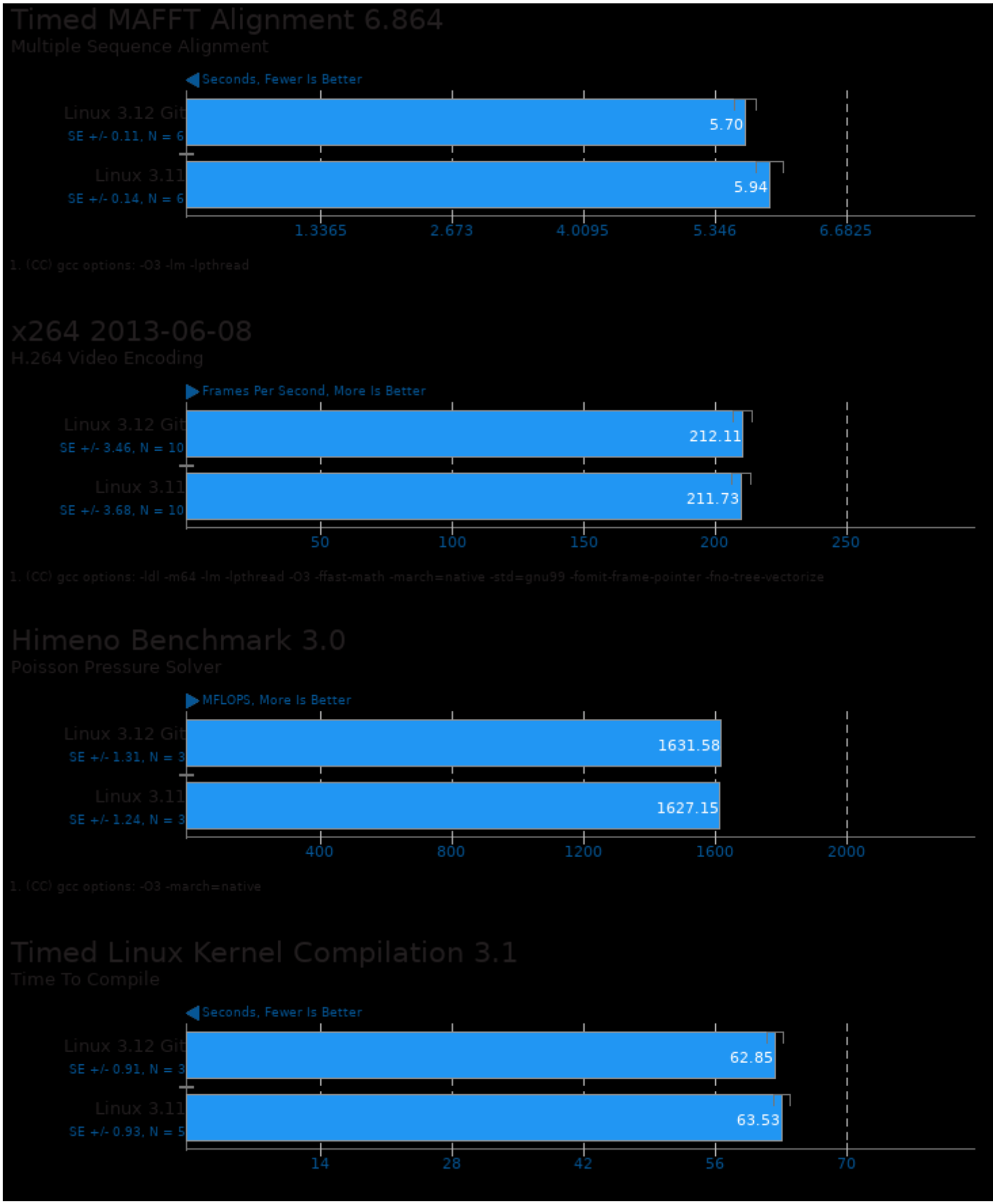
Linux 3.12 Intel Core i7 Benchmarks




OpenArena 0.8.8
Resolution: 1920 x 1080 - Total Frame Time
Milliseconds, Fewer Is Better
Linux 3.12 Git
Min: 9 / Avg: 13.83 / Max: 22
Linux 3.11
Min: 9 / Avg: 13.84 / Max: 24
6
12
18
24
30
Prey 1.4.119
Resolution: 1920 x 1080
Frames Per Second, More Is Better
Linux 3.12 Git
SE +/- 0.10, N = 3
80.50
Linux 3.11
SE +/- 0.40, N = 3
80.10
20
40
60
80
100
Reaction Quake 3 1.0 Beta
Resolution: 1920 x 1080
Frames Per Second, More Is Better
Linux 3.11
MIN: 122.5 / MAX: 122.6
SE +/- 0.03, N = 3
122.53
Linux 3.12 Git
SE +/- 0.00, N = 3
122.50
30
60
90
120
150
Reaction Quake 3 1.0 Beta
Resolution: 1920 x 1080 - Total Frame Time
Milliseconds, Fewer Is Better
Linux 3.11
Min: 1 / Avg: 8.13 / Max: 16
Linux 3.12 Git
Min: 3 / Avg: 8.14 / Max: 12
4
8
12
16
20

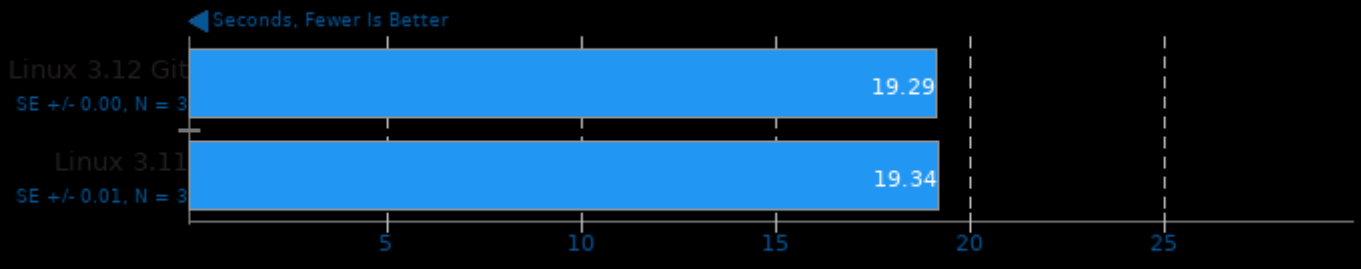

Unigine Sanctuary 2.3
Resolution: 1920 x 1080
Frames Per Second, More Is Better
Linux 3.11
SE +/- 0.00, N = 3
20.40
Linux 3.12 Git
SE +/- 0.00, N = 3
20.39
5
10
15
20
25
Unigine Tropics 1.3
Resolution: 1920 x 1080
Frames Per Second, More Is Better
Linux 3.12 Git
SE +/- 0.00, N = 3
22.74
Linux 3.11
SE +/- 0.00, N = 3
22.74
5
10
15
20
25
Warsow 1.0
Resolution: 1920 x 1080
Frames Per Second, More Is Better
Linux 3.11
SE +/- 0.19, N = 3
80.67
Linux 3.12 Git
SE +/- 0.12, N = 3
80.27
20
40
60
80
100
Xonotic 0.7
Resolution: 1920 x 1080 - Effects Quality: Low
Frames Per Second, More Is Better
Linux 3.12 Git
SE +/- 0.14, N = 3
MIN: 178 / MAX: 461
271.78
Linux 3.11
SE +/- 0.57, N = 3
MIN: 173 / MAX: 459
270.82
60
120
180
240
300


Xonotic 0.7
Resolution: 1920 x 1080 - Effects Quality: High
Frames Per Second, More Is Better
Linux 3.12 Git
SE +/- 0.11, N = 3
MIN: 60 / MAX: 176
119.78
Linux 3.11
SE +/- 0.07, N = 3
MIN: 62 / MAX: 176
119.68
30
60
90
120
150
Xonotic 0.7
Resolution: 1920 x 1080 - Effects Quality: Ultra
Frames Per Second, More Is Better
Linux 3.12 Git
SE +/- 0.02, N = 3
MIN: 38 / MAX: 136
81.60
Linux 3.11
SE +/- 0.03, N = 3
MIN: 37 / MAX: 136
81.53
20
40
60
80
100
Xonotic 0.7
Resolution: 1920 x 1080 - Effects Quality: Ultimate
Frames Per Second, More Is Better
Linux 3.12 Git
SE +/- 0.03, N = 3
MIN: 25 / MAX: 102
54.57
Linux 3.11
SE +/- 0.01, N = 3
MIN: 25 / MAX: 101
54.56
12
24
36
48
60
Timed HMMer Search 2.3.2
Pfam Database Search
Seconds, Fewer Is Better
Linux 3.12 Git
SE +/- 0.06, N = 3
15.33
Linux 3.11
SE +/- 0.01, N = 3
15.34
4
8
12
16
20
1. (CC) gcc options: -O3 -march=native -pthread -lhmmer -lsquid -lm


Timed MAFFT Alignment 6.864
Multiple Sequence Alignment
Seconds, Fewer Is Better
Linux 3.12 Git
SE +/- 0.11, N = 6
5.70
Linux 3.11
SE +/- 0.14, N = 6
5.94
1.3365
2.673
4.0095
5.346
6.6825
1. (CC) gcc options: -O3 -lm -lpthread
x264 2013-06-08
H.264 Video Encoding
Frames Per Second, More Is Better
Linux 3.12 Git
SE +/- 3.46, N = 10
212.11
Linux 3.11
SE +/- 3.68, N = 10
211.73
50
100
150
200
250
1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -ffast-math -march=native -std=gnu99 -fomit-frame-pointer -fno-tree-vectorize
Himeno Benchmark 3.0
Poisson Pressure Solver
MFLOPS, More Is Better
Linux 3.12 Git
SE +/- 1.31, N = 3
1631.58
Linux 3.11
SE +/- 1.24, N = 3
1627.15
400
800
1200
1600
2000
1. (CC) gcc options: -O3 -march=native
Timed Linux Kernel Compilation 3.1
Time To Compile
Seconds, Fewer Is Better
Linux 3.12 Git
SE +/- 0.91, N = 3
62.85
Linux 3.11
SE +/- 0.93, N = 5
63.53
14
28
42
56
70

C-Ray 1.1

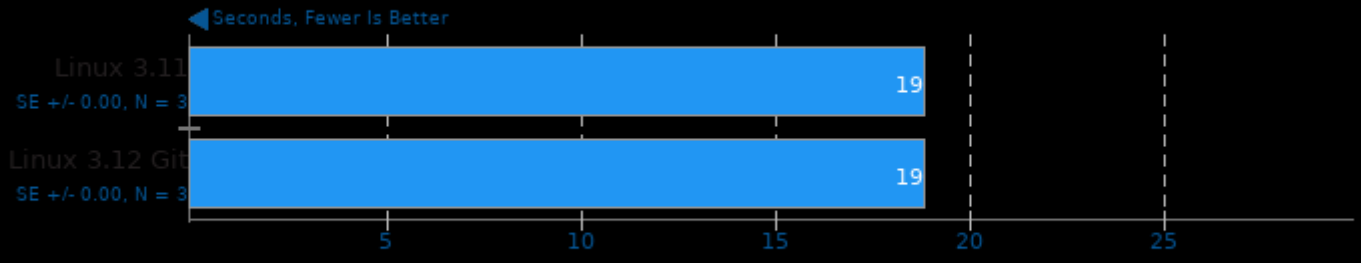
Total Time



1. (CC) gcc options: -lm -lpthread -O3

Smallpt 1.0

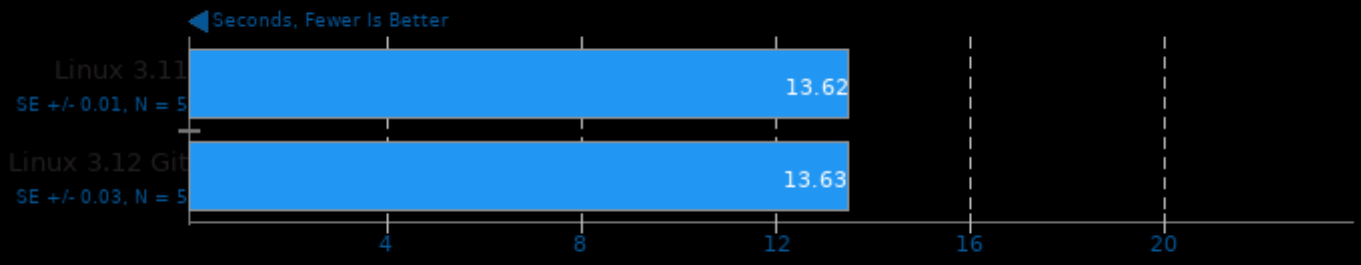
Global Illumination Renderer; 100 Samples



1. (CXX) g++ options: -fopenmp -O3 -march=native

LAME MP3 Encoding 3.99.3

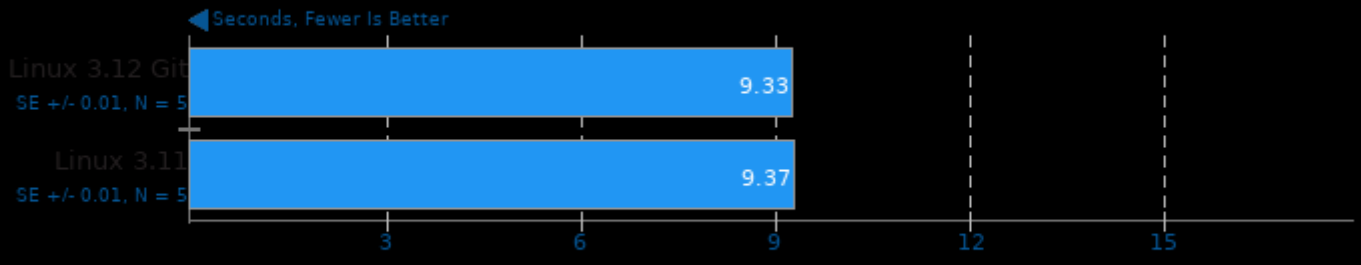
WAV To MP3



1. (CC) gcc options: -pipe -O3 -march=native -lm

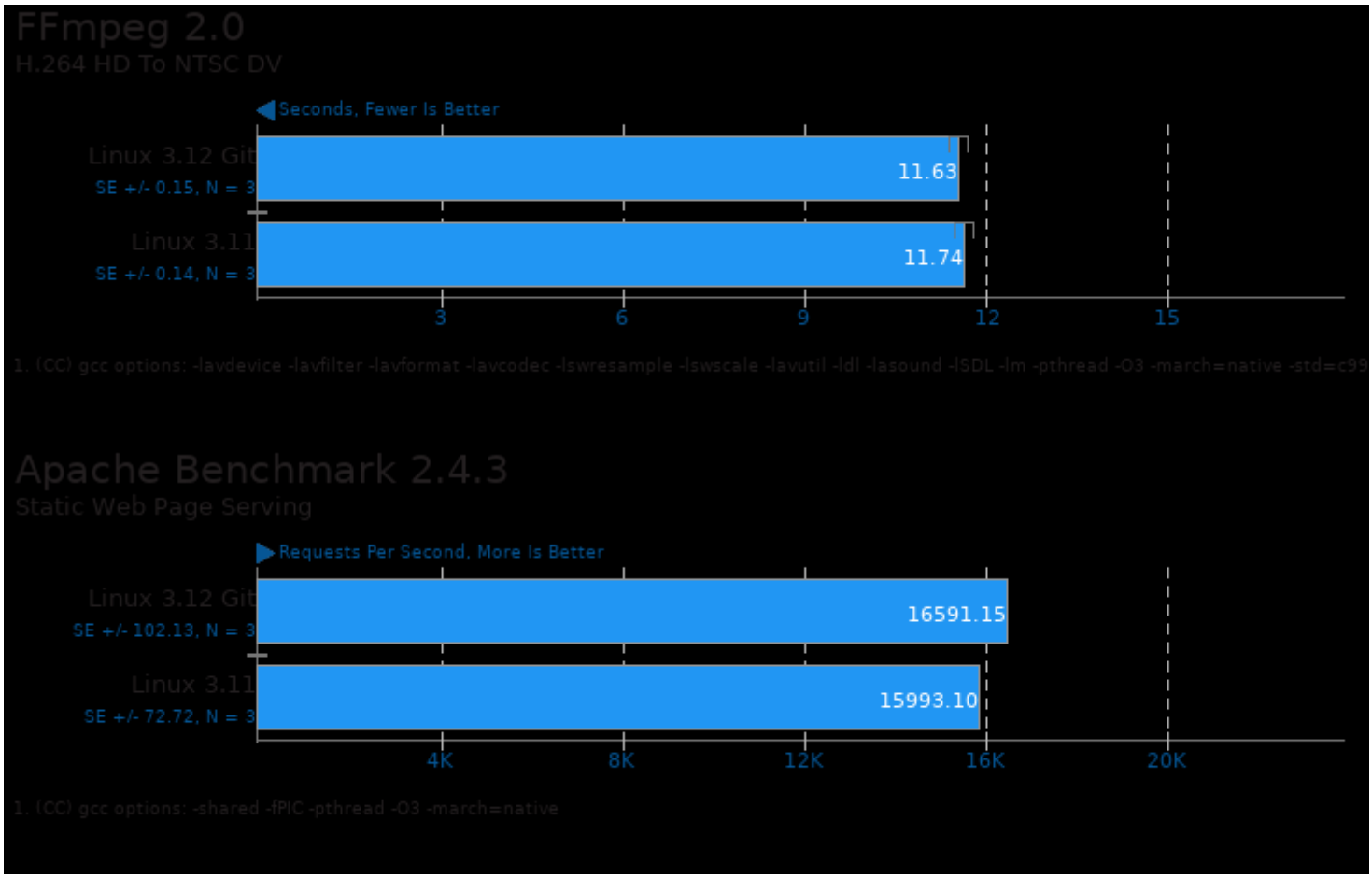
Opus Codec Encoding 1.0.1

WAV, Opus Encode, Opus Decode

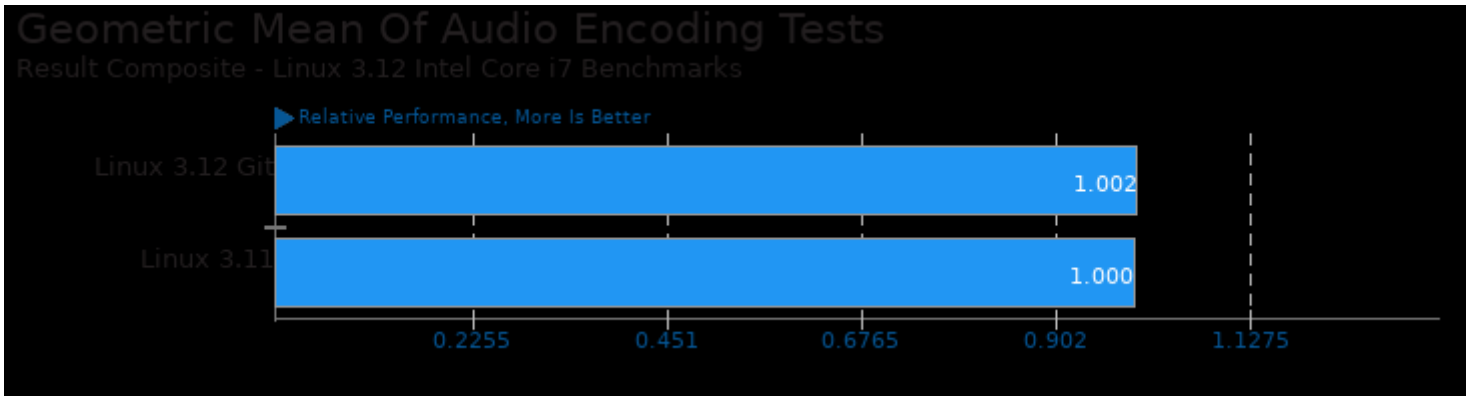


1. (CC) gcc options: -std=gnu99 -O3 -march=native -fPIE -pie -logg -lm -lopus

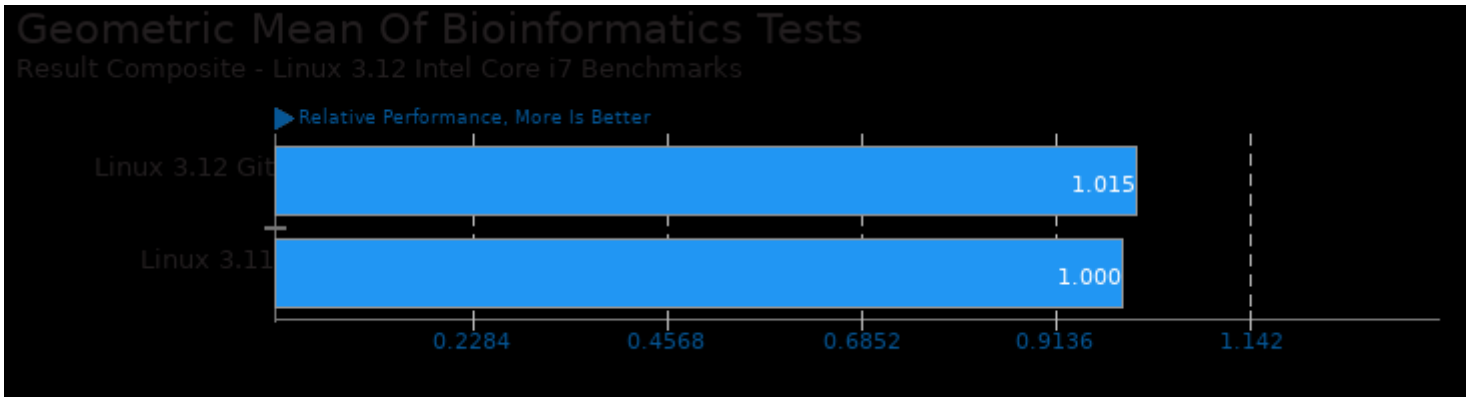
Linux 3.12 Intel Core i7 Benchmarks



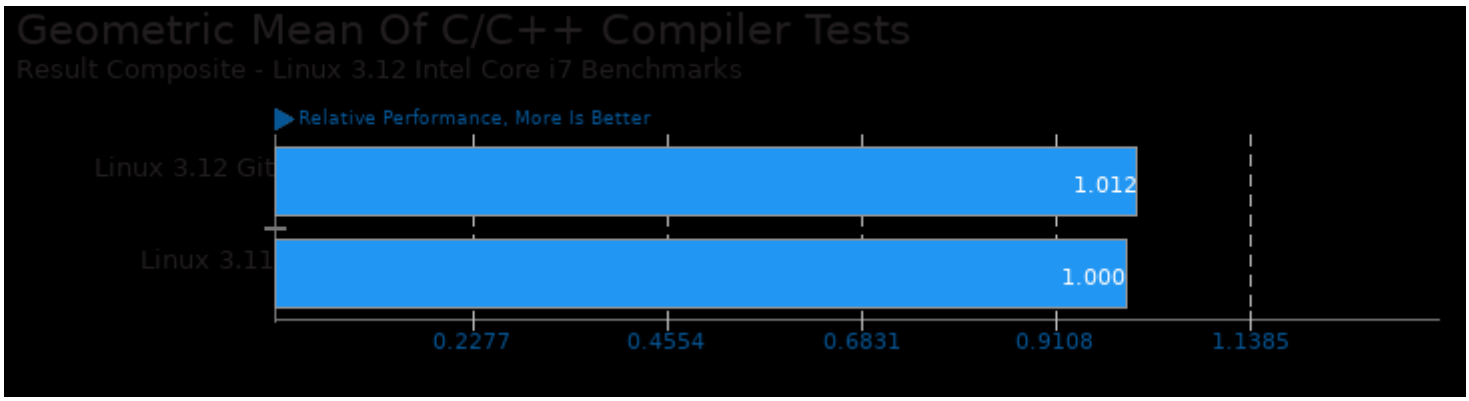
These geometric means are based upon test groupings / test suites for this result file.



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



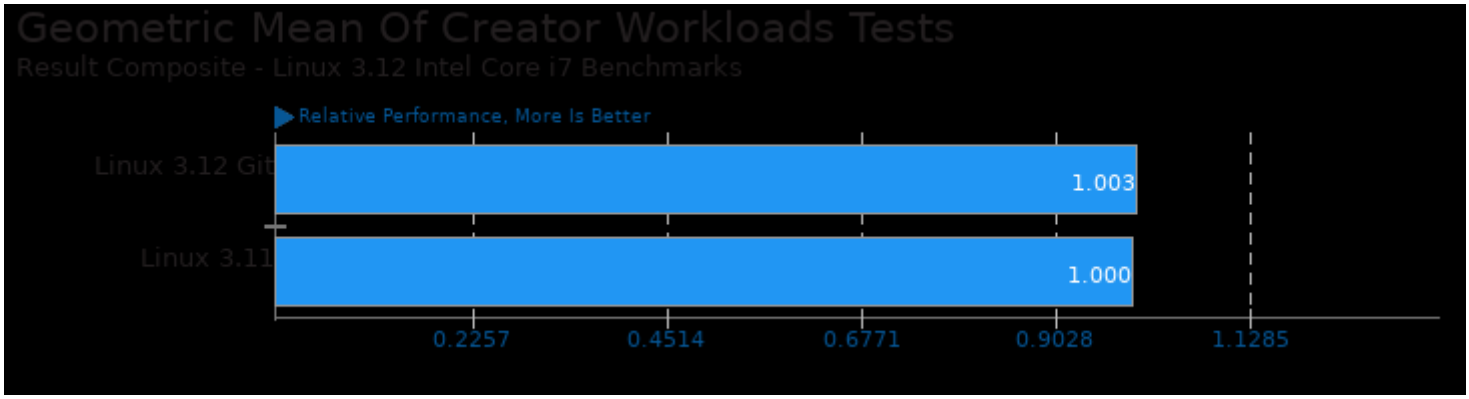
Geometric mean based upon tests: pts/himeno, pts/hmmer and pts/mafft



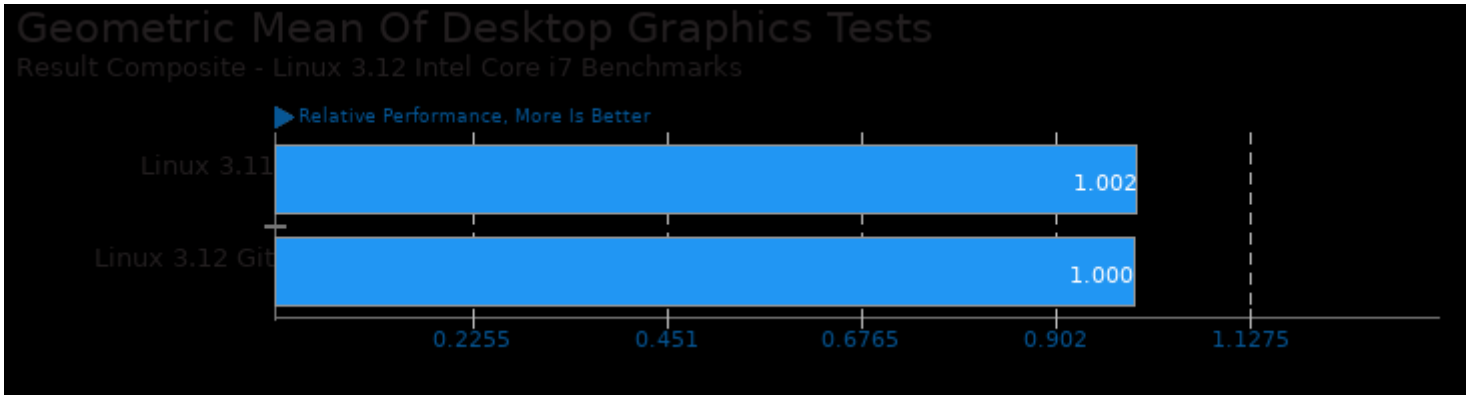
Geometric mean based upon tests: pts/mafft, pts/himeno, pts/hmmer, pts/c-ray, pts/encode-mp3, pts/apache and pts/x264



Geometric mean based upon tests: pts/apache, pts/build-linux-kernel, pts/c-ray, pts/compilebench, pts/x264, pts/encode-mp3, pts/himeno, pts/hmmer and pts/mafft



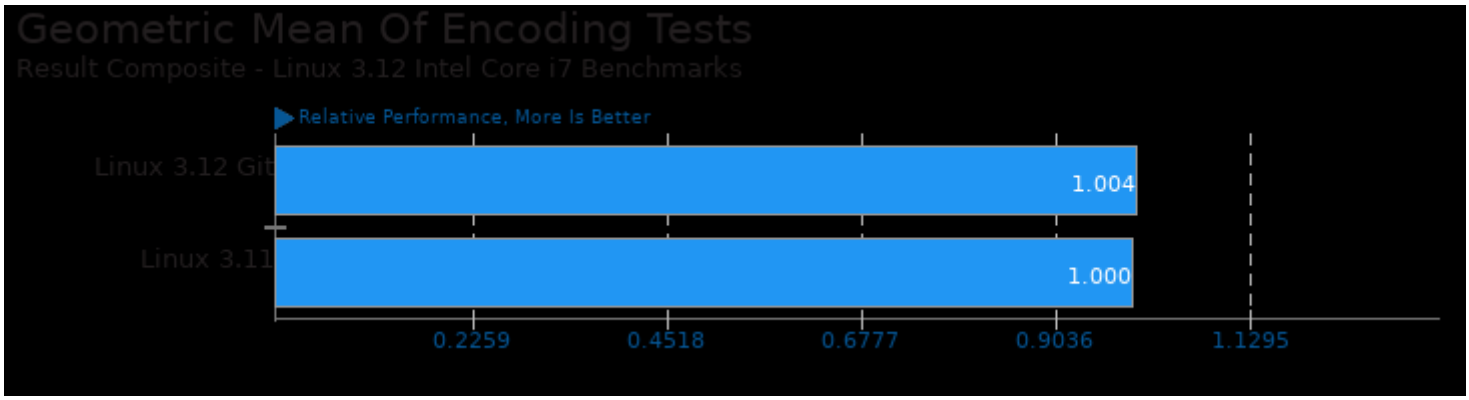
Geometric mean based upon tests: pts/c-ray, pts/smallpt, pts/x264, pts/ffmpeg, pts/encode-mp3 and pts/encode-opus



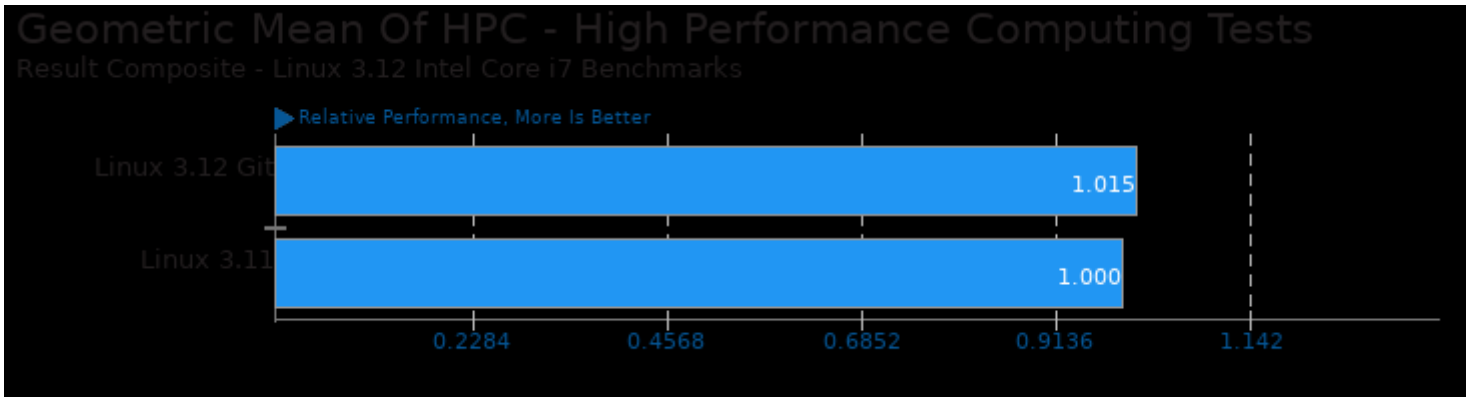
Geometric mean based upon tests: pts/xonotic and pts/openarena



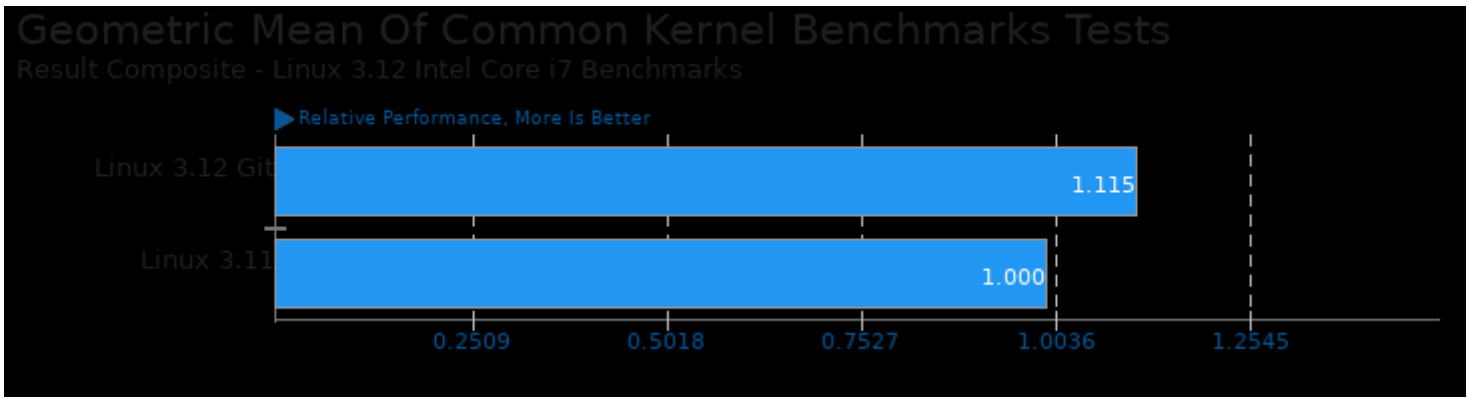
Geometric mean based upon tests: pts/fs-mark, pts/compilebench and pts/postmark



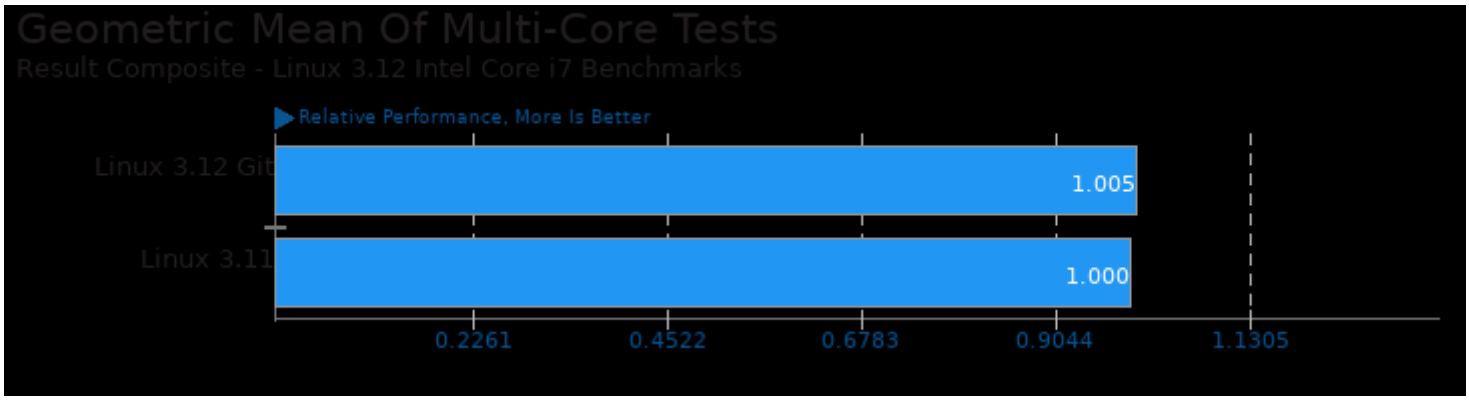
Geometric mean based upon tests: pts/encode-mp3, pts/encode-opus, pts/x264 and pts/ffmpeg



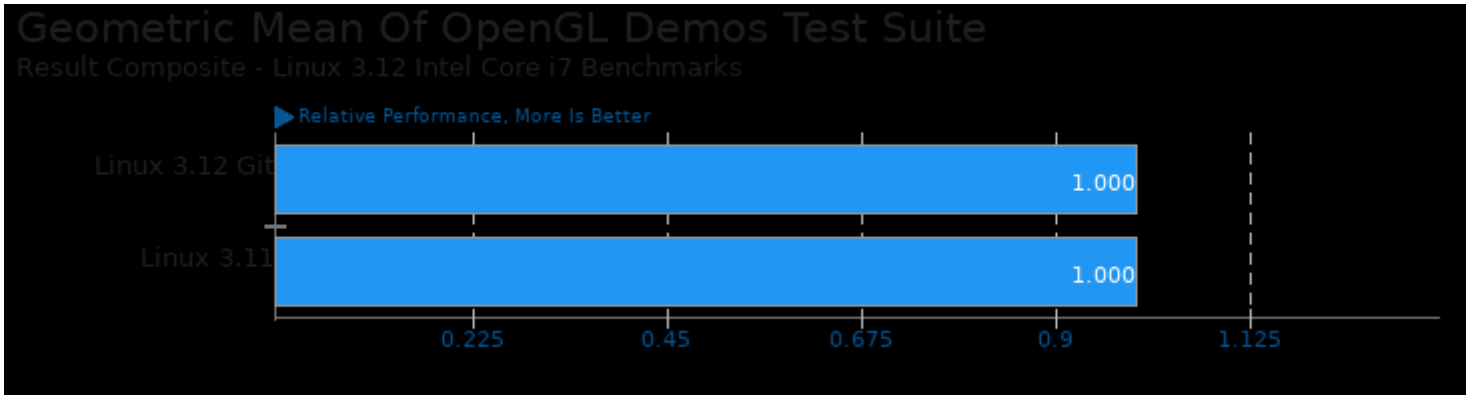
Geometric mean based upon tests: pts/himeno, pts/hmmer and pts/mafft



Geometric mean based upon tests: pts/apache and pts/postmark



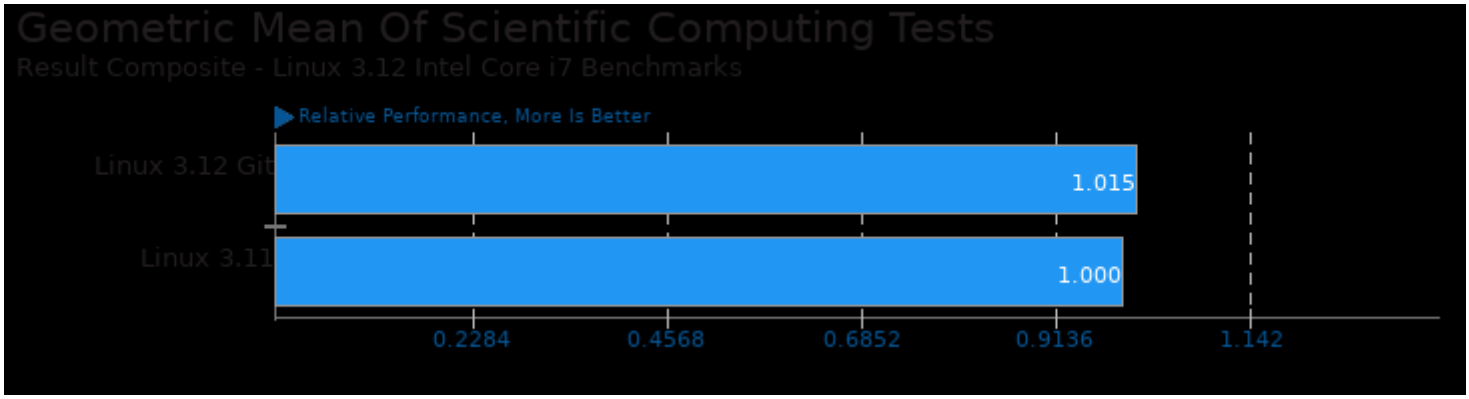
Geometric mean based upon tests: pts/c-ray, pts/x264, pts/ffmpeg, pts/smallpt and pts/build-linux-kernel



Geometric mean based upon tests: pts/unigine-sanctuary and pts/unigine-tropics

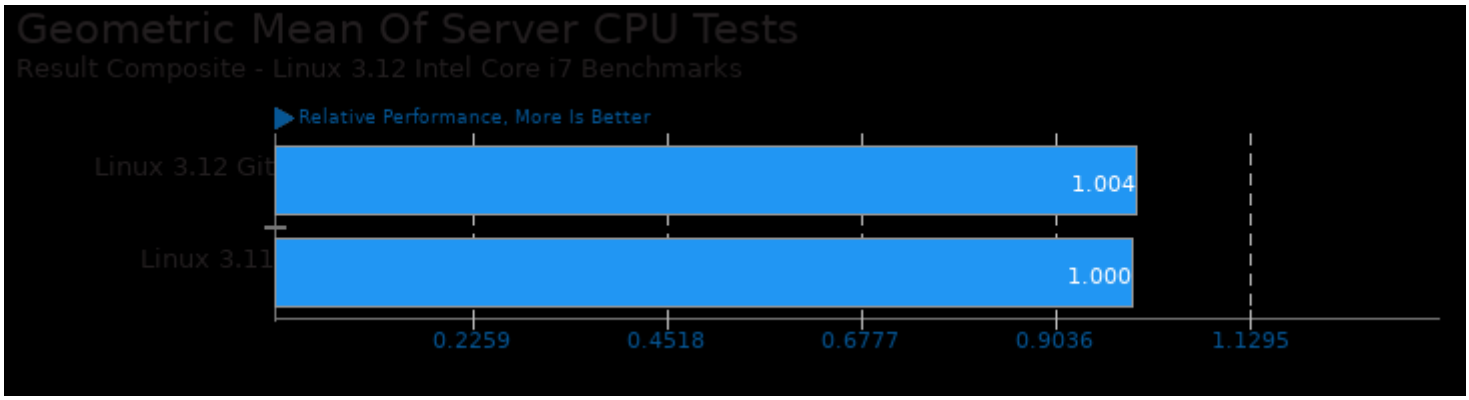


Geometric mean based upon tests: pts/c-ray and pts/smallpt

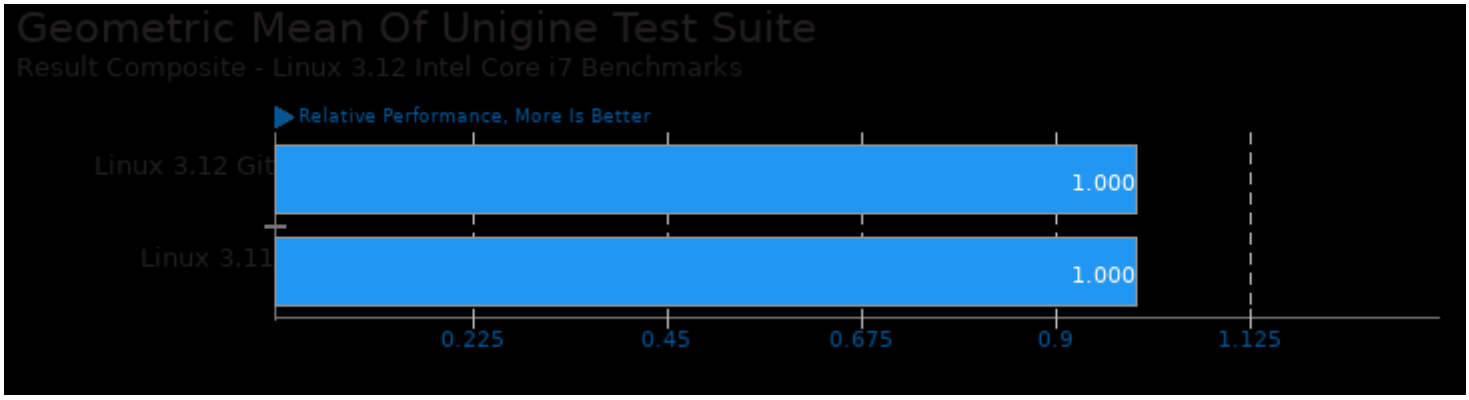


Geometric mean based upon tests: pts/himeno, pts/hmmer and pts/mafft

Linux 3.12 Intel Core i7 Benchmarks



Geometric mean based upon tests: pts/x264, pts/himeno, pts/build-linux-kernel and pts/c-ray



Geometric mean based upon tests: pts/unigine-sanctuary and pts/unigine-tropics



Geometric mean based upon tests: pts/x264 and pts/ffmpeg

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 12:57.