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xpti-vs-xptilight-various

Xen 4.11 Staging, openSUSE Leap15 PV guest, XPTI xpti=true

Automated Executive Summary

XPTI-Light xpti=false came in first place for 66% of the tests.

Based on the geometric mean of all complete results, the fastest (XPTI-Light xpti=false) was 1.402x the speed of the slowest (XPYI xpti=true). XPTI-Light xpti=true was 0.863x the speed of XPTI-Light xpti=false and XPYI xpti=true was 0.826x the speed of XPTI-Light xpti=true.

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

Hackbench (Count: 16 - Type: Thread) at 7.544x
Hackbench (Count: 4 - Type: Thread) at 6.658x
Hackbench (Count: 1 - Type: Thread) at 5.59x
Stress-NG (Test: Socket Activity) at 2.979x
Stress-NG (Test: Context Switching) at 2.934x
Stress-NG (Test: Semaphores) at 2.505x
IOzone (Record Size: 4Kb - File Size: 4GB - Disk Test: Read Performance) at 1.875x
NGINX Benchmark (Static Web Page Serving) at 1.559x
Stress-NG (Test: Forking) at 1.386x

Timed Linux Kernel Compilation (Time To Compile) at 1.144x.

Test Systems:

XPTI-Light xpti=false

XPTI-Light xpti=true

XPYI xpti=true

Processor: Intel Xeon E5620 @ 2.39GHz (1 Core / 16 Threads), Memory: 10240MB, Disk: 160GB, Graphics: xen

OS: openSUSE 15.0, Kernel: 4.12.14-lp150.4-default (x86_64), Desktop: GNOME Shell 3.26.2, Display Driver: modesetting 1.19.6, Compiler: GCC 7.2.1 20180116 [gcc-7-branch revision 256737], File-System: xfs, Screen Resolution: 800x600, System Layer: Xen 4.11.-unstable Hypervisor

Environment Notes: LIBGL_DEBUG=quiet
Compiler Notes: --build=x86_64-suse-linux --disable-libcc1 --disable-libssp --disable-libstdcxx-pch --disable-libvtv --disable-plugin --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-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 / data=ordered,relatime,rw

	XPTI-Light xpti=false	XPTI-Light xpti=true	XPYI xpti=true
AIO-Stress - Rand Write (MB/s)	**1877**	1884	**1897**
Normalized	100%	100.33%	101.04%
Standard Deviation	3.4%	1.6%	2.6%
Flexible IO Tester - Rand Read - Libaio - No - No - 4KB (MB/s)	**1.65**	**1.60**	**1.60**
Normalized	100%	96.97%	96.97%
Standard Deviation	3.1%	3.3%	2.8%
Flexible IO Tester - Rand Read - Libaio - No - No - 4KB (IOPS)	**408**	398	**395**
Normalized	100%	97.55%	96.81%
Standard Deviation	3.1%	3.2%	2.8%
Flexible IO Tester - Rand Read - Libaio - No - Yes - 4KB (MB/s)	1.62	**1.66**	**1.61**
Normalized	100%	102.47%	99.38%
Standard Deviation	3.3%	2.3%	7.3%
Flexible IO Tester - Rand Read - Libaio - No - Yes - 4KB (IOPS)	**400**	**411**	**400**
Normalized	100%	102.75%	100%
Standard Deviation	3.3%	2.3%	7.4%

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Flexible IO Tester - Rand Write - Libaio - No - Yes - 4KB (MB/s)	**1.19**	1.20	**1.25**
Normalized	100%	100.84%	105.04%
Standard Deviation	3.7%	6.4%	2.2%
Flexible IO Tester - Rand Write - Libaio - No - Yes - 4KB (IOPS)	**294**	296	**308**
Normalized	100%	100.68%	104.76%
Standard Deviation	3.8%	6.4%	2.2%
IOzone - 4Kb - 4GB - Read Performance	**1785**	**951.77**	986.13
Normalized	100%	53.32%	55.24%
Standard Deviation	1.7%	0.3%	1.6%
IOzone - 4Kb - 4GB - Write Performance	**65.29**	**64.98**	65.22
Normalized	100%	99.53%	99.89%
Standard Deviation	0.3%	0.6%	0.5%
Unpacking The Linux Kernel - linux-4.15.tar.xz (sec)	**10.22**	**10.91**	10.70
Normalized	100%	93.68%	95.51%
Standard Deviation	2%	2.4%	2.8%
Timed Linux Kernel Compilation - Time To Compile (sec)	**155.55**	**177.92**	177.40
Normalized	100%	87.43%	87.68%
Standard Deviation	3.3%	3.5%	3.3%
Timed MPlayer Compilation - Time To Compile (sec)	**45.51**	49.35	**49.84**
Normalized	100%	92.22%	91.31%
Standard Deviation	2.6%	3%	3.2%
Timed PHP Compilation - Time To Compile (sec)	**119.76**	**135.67**	133.75
Normalized	100%	88.27%	89.54%
Standard Deviation	0.7%	1.6%	0.3%
Parallel BZIP2 Compression - 2.F.C (sec)	**9.35**	9.54	**9.83**
Normalized	100%	98.01%	95.12%
Standard Deviation	32.6%	21.8%	29.6%
Gzip Compression - 2.F.C (sec)	**13.90**	14.22	**14.28**
Normalized	100%	97.75%	97.34%
Standard Deviation	0.8%	1%	0.6%
Hackbench - 1 - Thread (sec)	**10.89**	17.13	**60.88**
Normalized	100%	63.57%	17.89%
Standard Deviation	0.3%	0.3%	1.6%
Hackbench - 4 - Thread (sec)	**36.61**	61.11	**243.75**
Normalized	100%	59.91%	15.02%
Standard Deviation	0.1%	0.4%	1.3%
Hackbench - 16 - Thread (sec)	**133.47**	233.28	**1007**
Normalized	100%	57.21%	13.26%
Standard Deviation	0.2%	0.3%	0.6%
PostgreSQL pgbench - On-Disk - Heavy Contention - Read Write (TPS)	47.99	**48.60**	**47.56**
Normalized	100%	101.27%	99.1%
Standard Deviation	1.8%	0.8%	2.4%
Stress-NG - Crypto (Bogo Ops/s)	**689.73**	688.61	**688.27**
Normalized	100%	99.84%	99.79%
Standard Deviation	0.2%	0.1%	0.1%
Stress-NG - Bsearch (Bogo Ops/s)	**3944**	3937	**3930**
Normalized	100%	99.82%	99.64%

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Standard Deviation	0%	0.1%	0.2%
Stress-NG - Forking (Bogo Ops/s)	**6588**	4914	**4752**
Normalized	100%	74.59%	72.14%
Standard Deviation	0.1%	1.4%	2.4%
Stress-NG - Hsearch (Bogo Ops/s)	**26499**	26450	**26358**
Normalized	100%	99.82%	99.47%
Standard Deviation	0.2%	0.1%	0.4%
Stress-NG - Lsearch (Bogo Ops/s)	**60.27**	**56.54**	60.24
Normalized	100%	93.81%	99.95%
Standard Deviation	0%	16.2%	0%
Stress-NG - Tsearch (Bogo Ops/s)	**125.67**	**125.23**	125.49
Normalized	100%	99.65%	99.86%
Standard Deviation	0.1%	0.1%	0.1%
Stress-NG - CPU Stress (Bogo Ops/s)	**1717**	**1749**	1727
Normalized	100%	101.86%	100.57%
Standard Deviation	3%	0.8%	2.8%
Stress-NG - Semaphores (Bogo Ops/s)	**2141555**	2051596	**855074**
Normalized	100%	95.8%	39.93%
Standard Deviation	3.4%	1.2%	0.9%
Stress-NG - Matrix Math (Bogo Ops/s)	**20297**	20274	**20274**
Normalized	100%	99.89%	99.88%
Standard Deviation	0.1%	0.1%	0.1%
Stress-NG - Vector Math (Bogo Ops/s)	**10517**	10498	**10489**
Normalized	100%	99.82%	99.73%
Standard Deviation	0.1%	0%	0%
Stress-NG - Memory Copying (Bogo Ops/s)	1260	**1250**	**1261**
Normalized	100%	99.19%	100.05%
Standard Deviation	0.1%	0.3%	0.2%
Stress-NG - Socket Activity (Bogo Ops/s)	**1714**	971.55	**575.28**
Normalized	100%	56.69%	33.57%
Standard Deviation	1.5%	0.4%	1.7%
Stress-NG - Context Switching (Bogo Ops/s)	**726734**	269814	**247656**
Normalized	100%	37.13%	34.08%
Standard Deviation	2.3%	2.3%	2.3%
Stress-NG - G.C.S.F (Bogo Ops/s)	**270192**	**263161**	268275
Normalized	100%	97.4%	99.29%
Standard Deviation	3.2%	5.8%	3.3%
Stress-NG - G.Q.D.S (Bogo Ops/s)	**57.20**	57.81	**58.12**
Normalized	100%	101.07%	101.61%
Standard Deviation	3%	0.3%	0.3%
Stress-NG - S.V.M.P (Bogo Ops/s)	**3877363**	1618719	**266550**
Normalized	100%	41.75%	6.87%
Standard Deviation	5.8%	10.7%	0.8%
NGINX Benchmark - S.W.P.S (Reqs/sec)	**17388**	**11156**	11281
Normalized	100%	64.16%	64.88%
Standard Deviation	0.3%	0.2%	0.3%
Schbench - 2 - 16 (usec, 99.9th Latency Percentile)	18400	**17936**	**19211**
Normalized	100%	102.59%	95.78%
Standard Deviation	10.3%	3.4%	15.5%
Schbench - 4 - 16 (usec, 99.9th Latency Percentile)	85803	**85632**	**87083**
Normalized	100%	100.2%	98.53%
Standard Deviation	2.7%	2.4%	4%

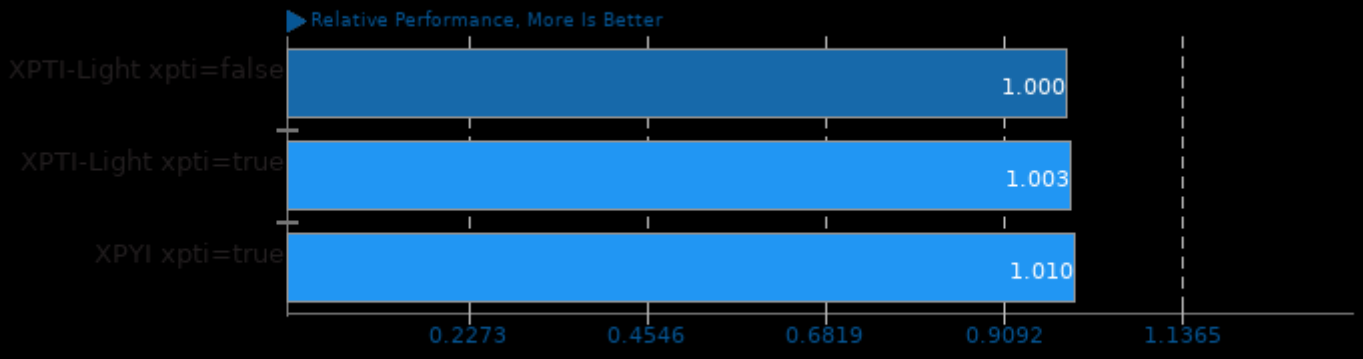
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Schbench - 6 - 16 (usec, 99.9th Latency Percentile)	**130560**	130517	**128939**
Normalized	100%	100.03%	101.26%
Standard Deviation	2%	1.8%	2.5%
Schbench - 8 - 16 (usec, 99.9th Latency Percentile)	**176555**	**166997**	172459
Normalized	100%	105.72%	102.38%
Standard Deviation	0.7%	1.5%	0.7%
Schbench - 16 - 16 (usec, 99.9th Latency Percentile)	**347307**	336043	**334677**
Normalized	100%	103.35%	103.77%
Standard Deviation	0.7%	1.2%	2.8%
Schbench - 32 - 16 (usec, 99.9th Latency Percentile)	**635904**	**620203**	633173
Normalized	100%	102.53%	100.43%
Standard Deviation	3%	1.3%	3.2%

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AIO-Stress 0.21

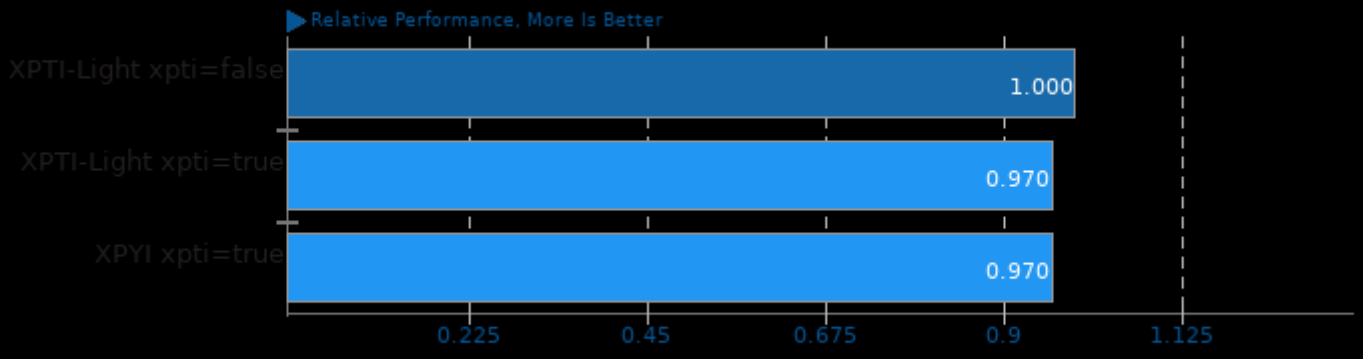
Test: Random Write



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

Flexible IO Tester 2.1.13

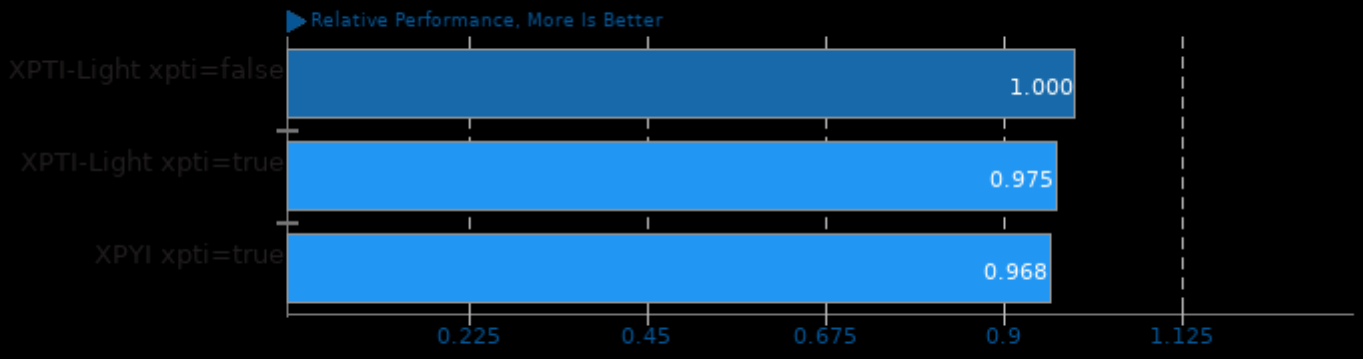
Type: Random Read - IO Engine: Libaio - Buffered: No - Direct: No - Block Size: 4KB - Disk Target: Default Test Directory



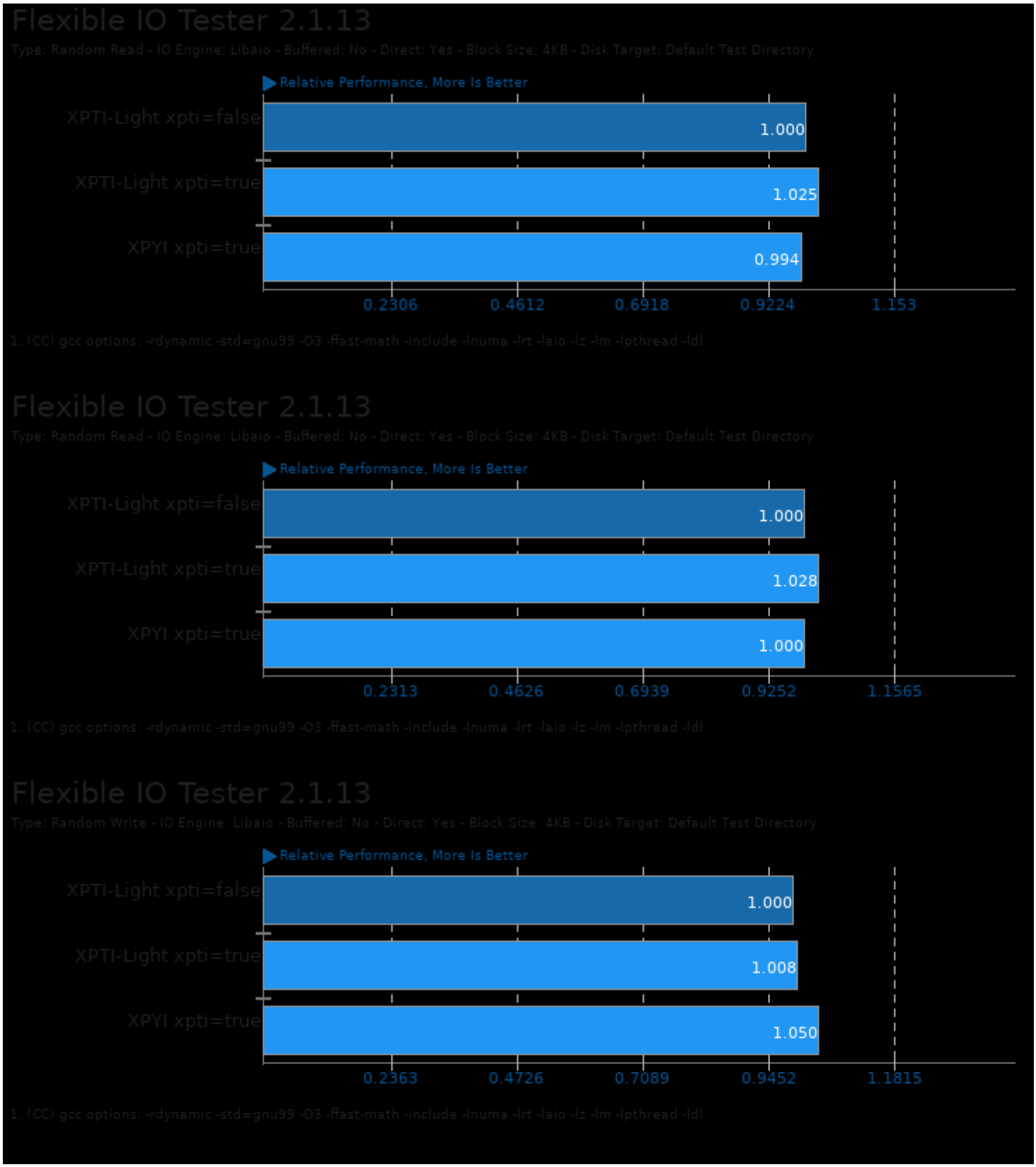
1. (CC) gcc options: -rdynamic -std=gnu99 -O3 -ffast-math -include -lnuma -lrt -laio -lz -lm -lpthread -ldl

Flexible IO Tester 2.1.13

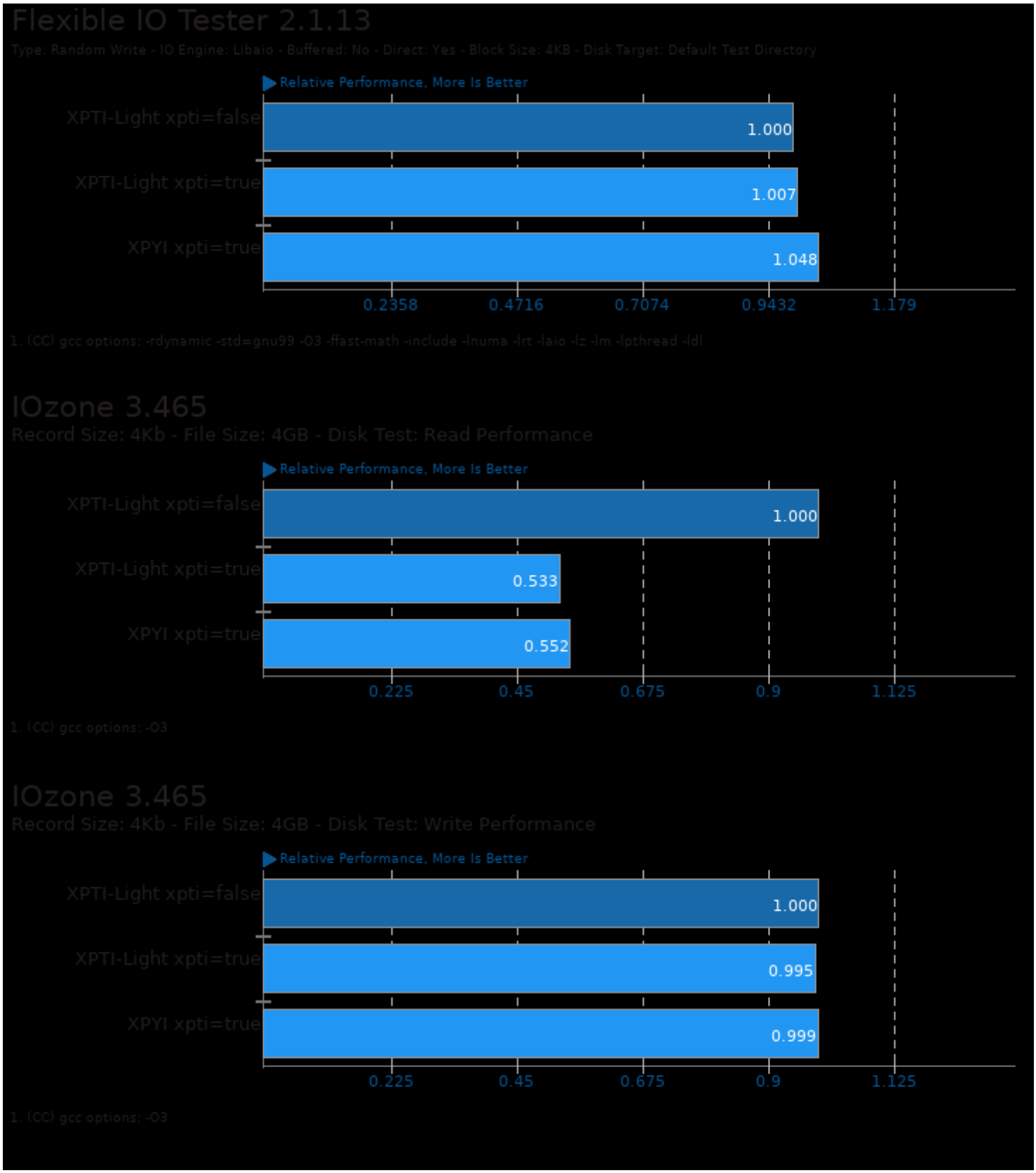
Type: Random Read - IO Engine: Libaio - Buffered: No - Direct: No - Block Size: 4KB - Disk Target: Default Test Directory



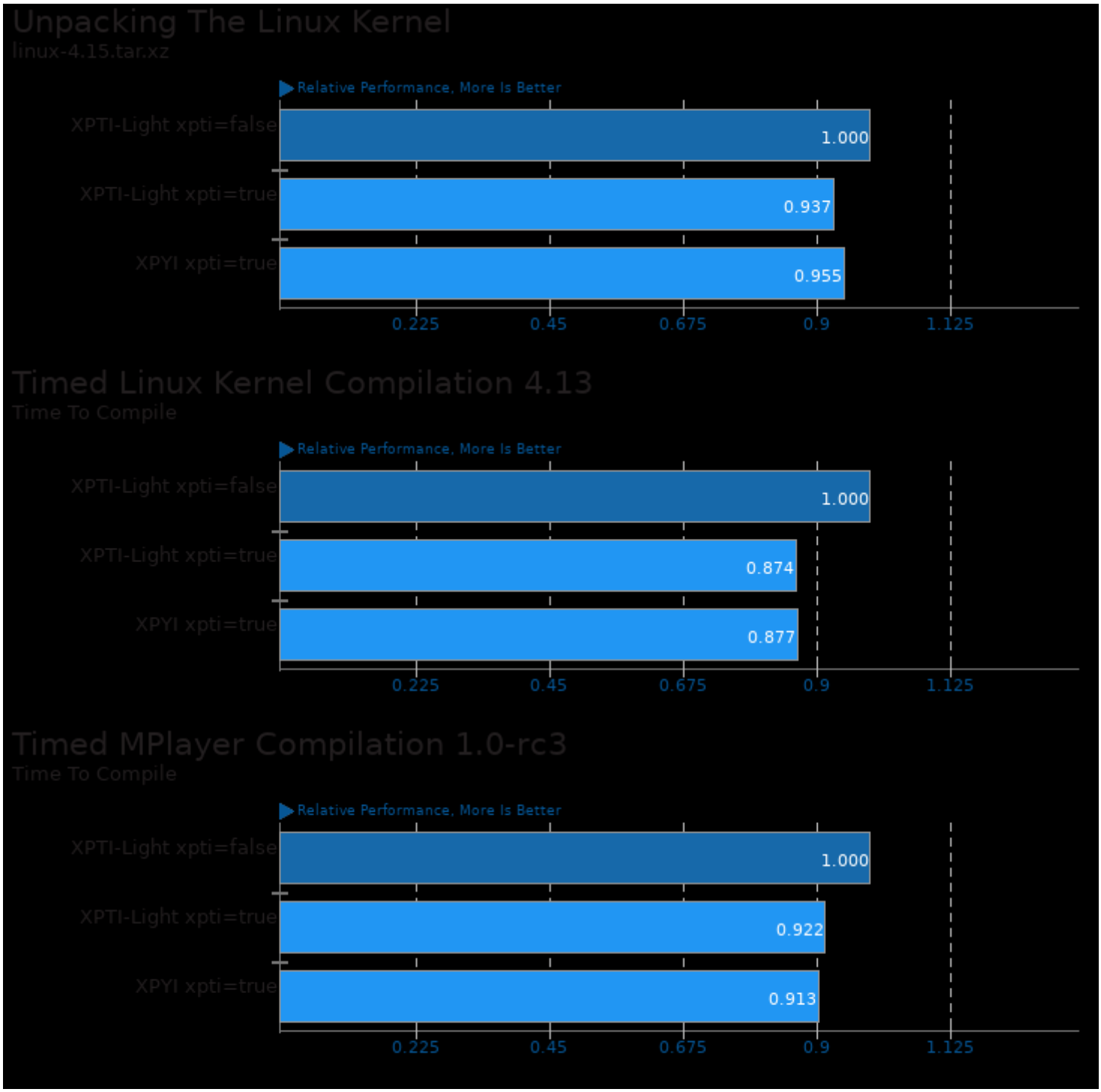
1. (CC) gcc options: -rdynamic -std=gnu99 -O3 -ffast-math -include -lnuma -lrt -laio -lz -lm -lpthread -ldl


Flexible IO Tester 2.1.13
Type: Random Read - IO Engine: Libaio - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
Relative Performance, More Is Better
XPTI-Light xpti=false
XPTI-Light xpti=true
XPYI xpti=true
1.000
1.025
0.994
0.2306
0.4612
0.6918
0.9224
1.153
1. (CC) gcc options: -rdynamic -std=gnu99 -O3 -ffast-math -include -lnuma -lrt -laio -lz -lm -lpthread -ldl
Flexible IO Tester 2.1.13
Type: Random Read - IO Engine: Libaio - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
Relative Performance, More Is Better
XPTI-Light xpti=false
XPTI-Light xpti=true
XPYI xpti=true
1.000
1.028
1.000
0.2313
0.4626
0.6939
0.9252
1.1565
1. (CC) gcc options: -rdynamic -std=gnu99 -O3 -ffast-math -include -lnuma -lrt -laio -lz -lm -lpthread -ldl
Flexible IO Tester 2.1.13
Type: Random Write - IO Engine: Libaio - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
Relative Performance, More Is Better
XPTI-Light xpti=false
XPTI-Light xpti=true
XPYI xpti=true
1.000
1.008
1.050
0.2363
0.4726
0.7089
0.9452
1.1815
1. (CC) gcc options: -rdynamic -std=gnu99 -O3 -ffast-math -include -lnuma -lrt -laio -lz -lm -lpthread -ldl

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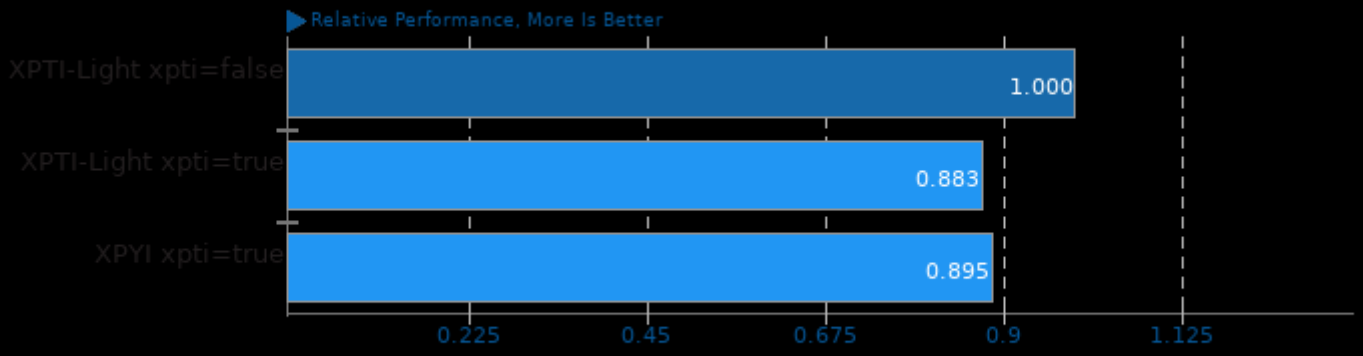


xpti-vs-xptilight-various



Timed PHP Compilation 7.1.9

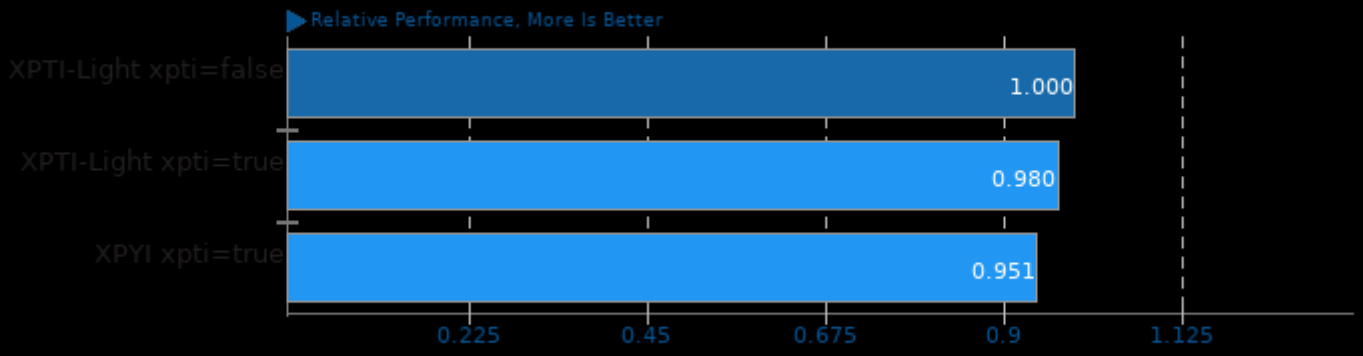
Time To Compile



1. (CC) gcc options: -O2 -pedantic -ldl -lz -lm

Parallel BZIP2 Compression 1.1.12

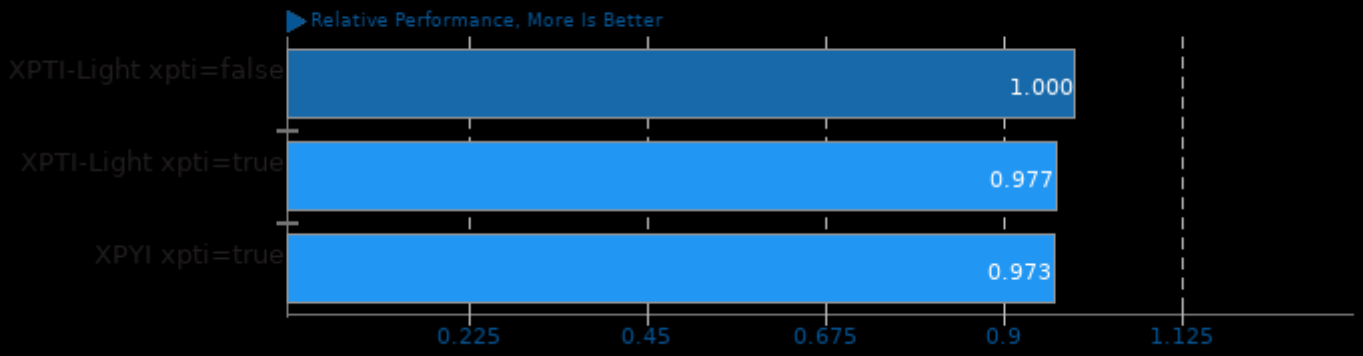
256MB File Compression



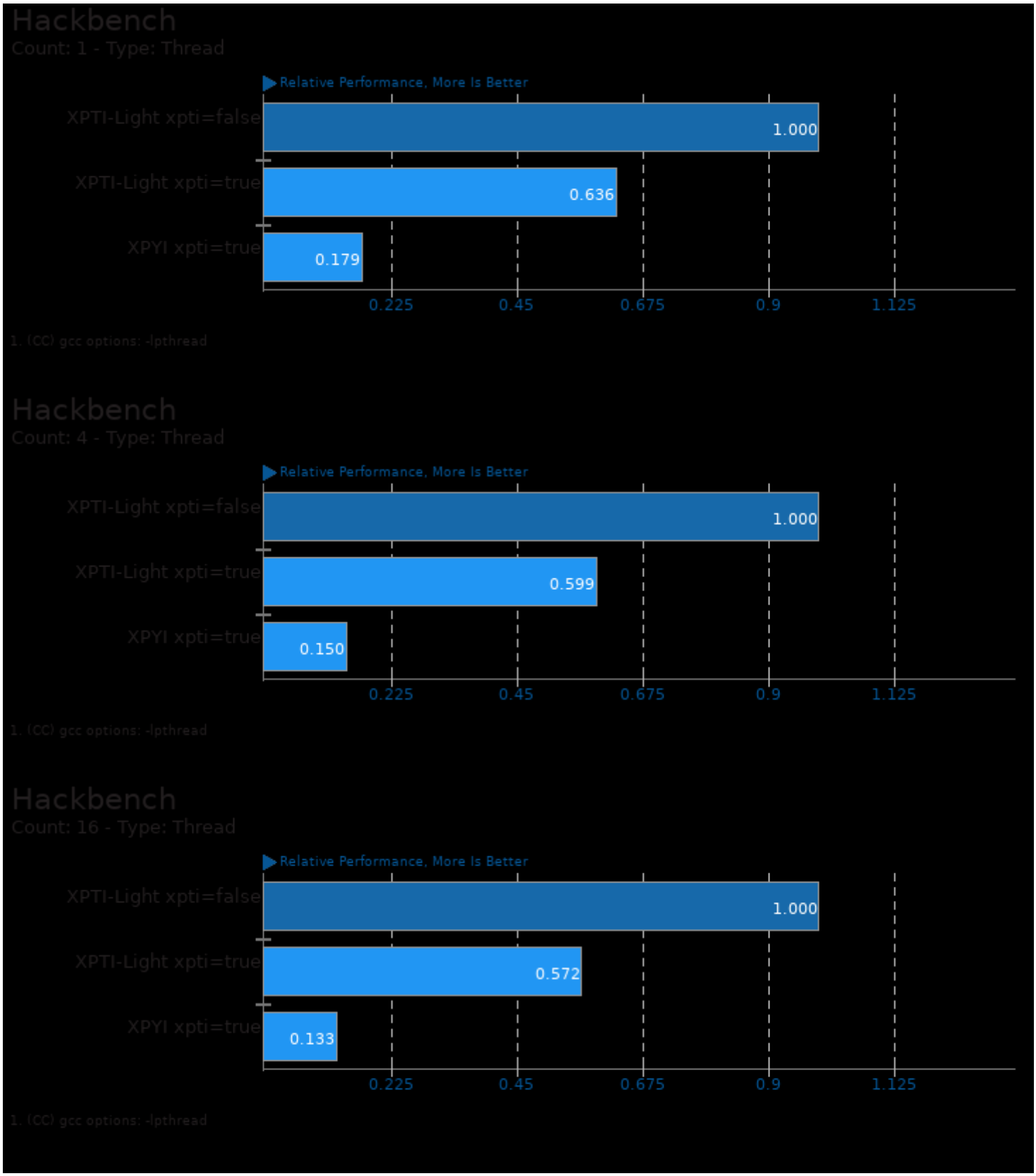
1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread

Gzip Compression

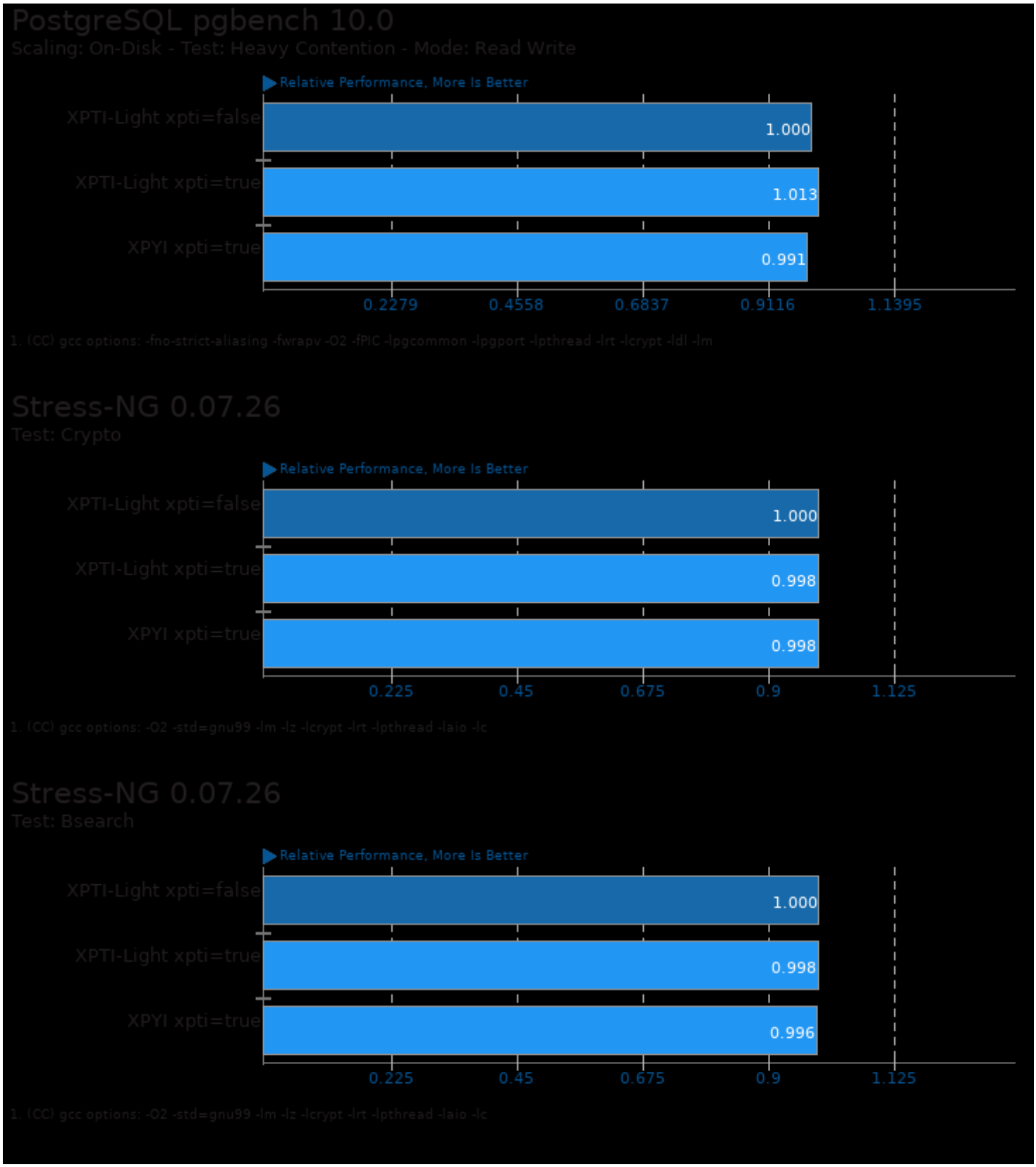
2GB File Compression



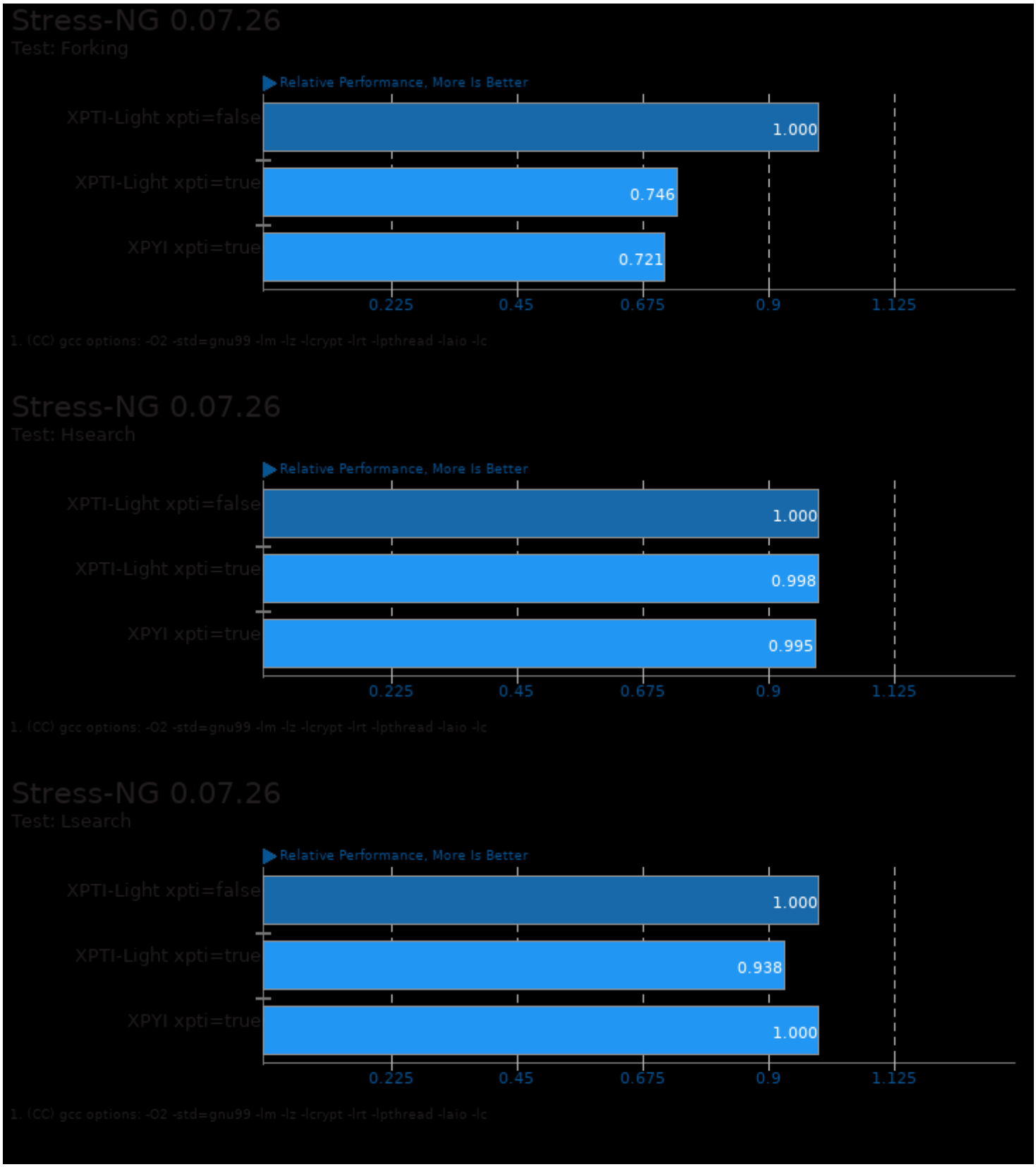
xpti-vs-xptilight-various



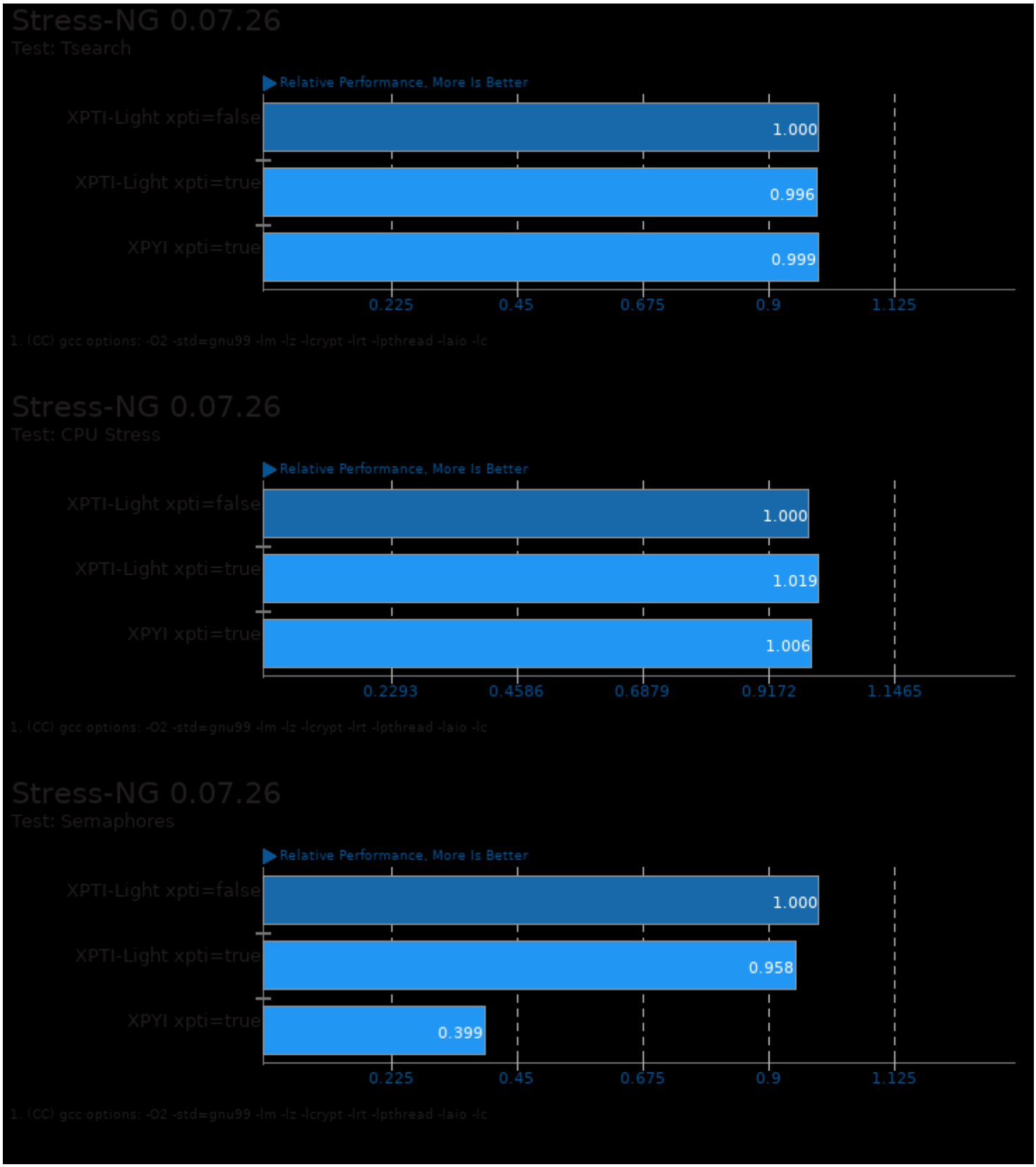
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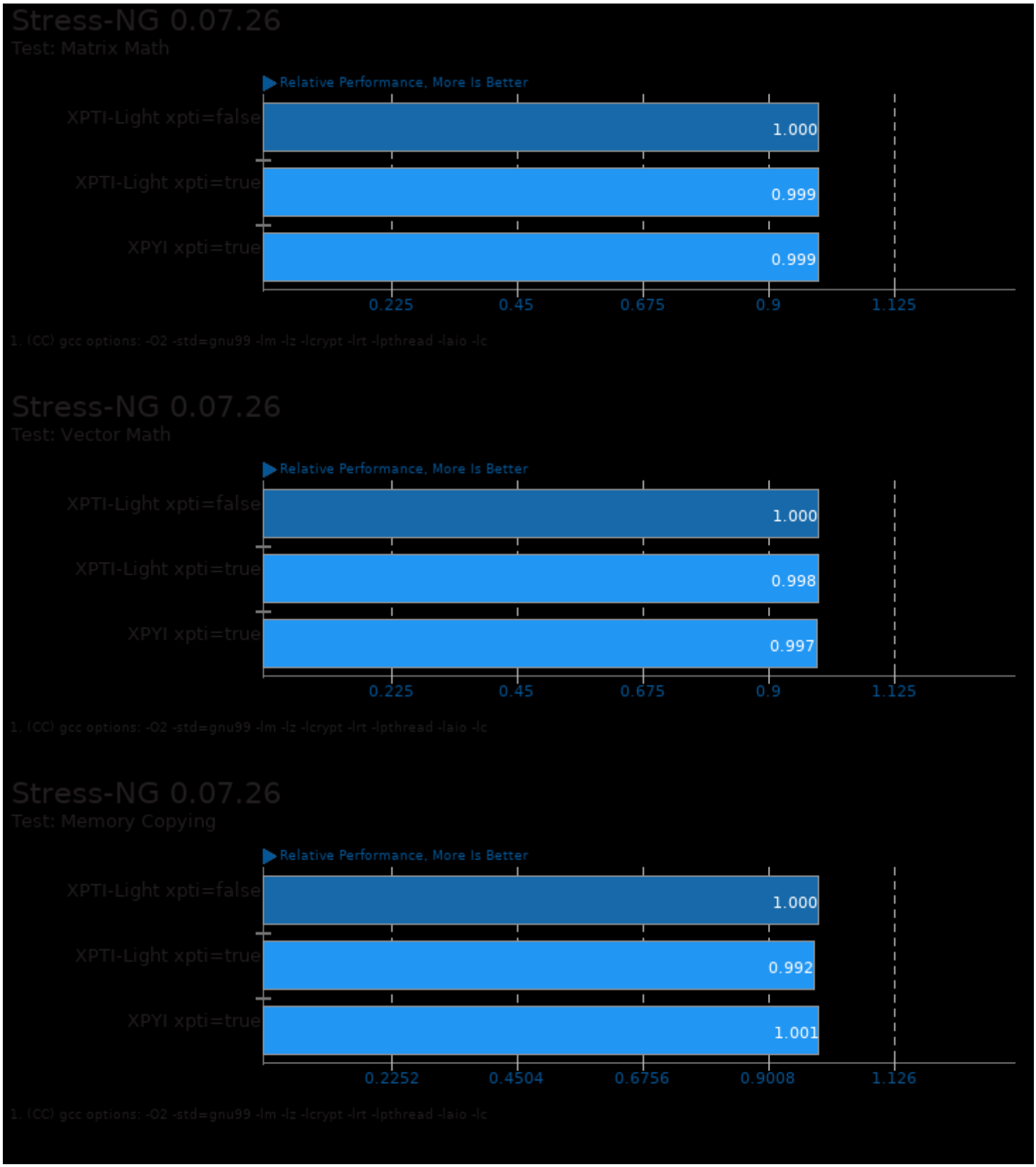
xpti-vs-xptilight-various



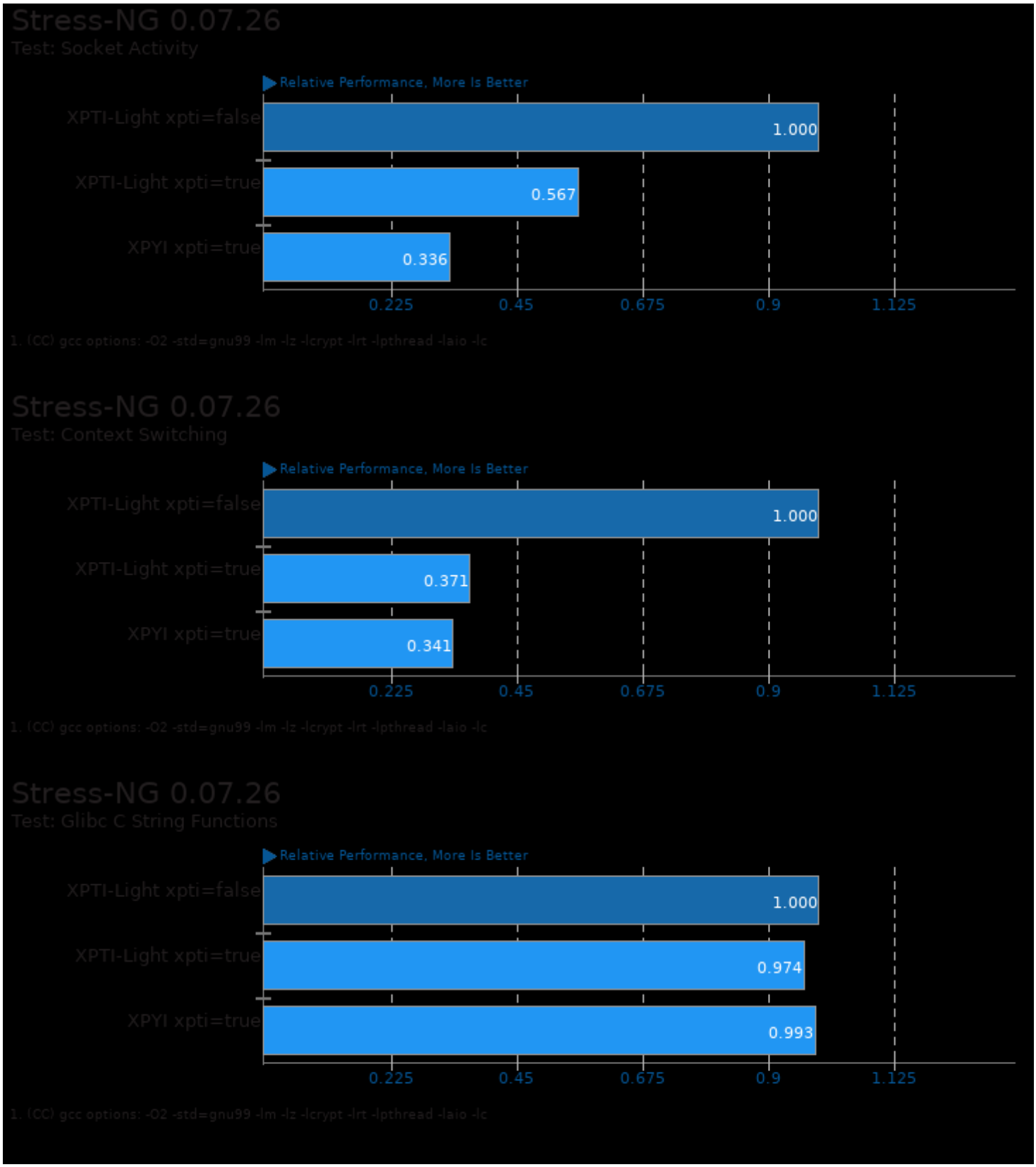
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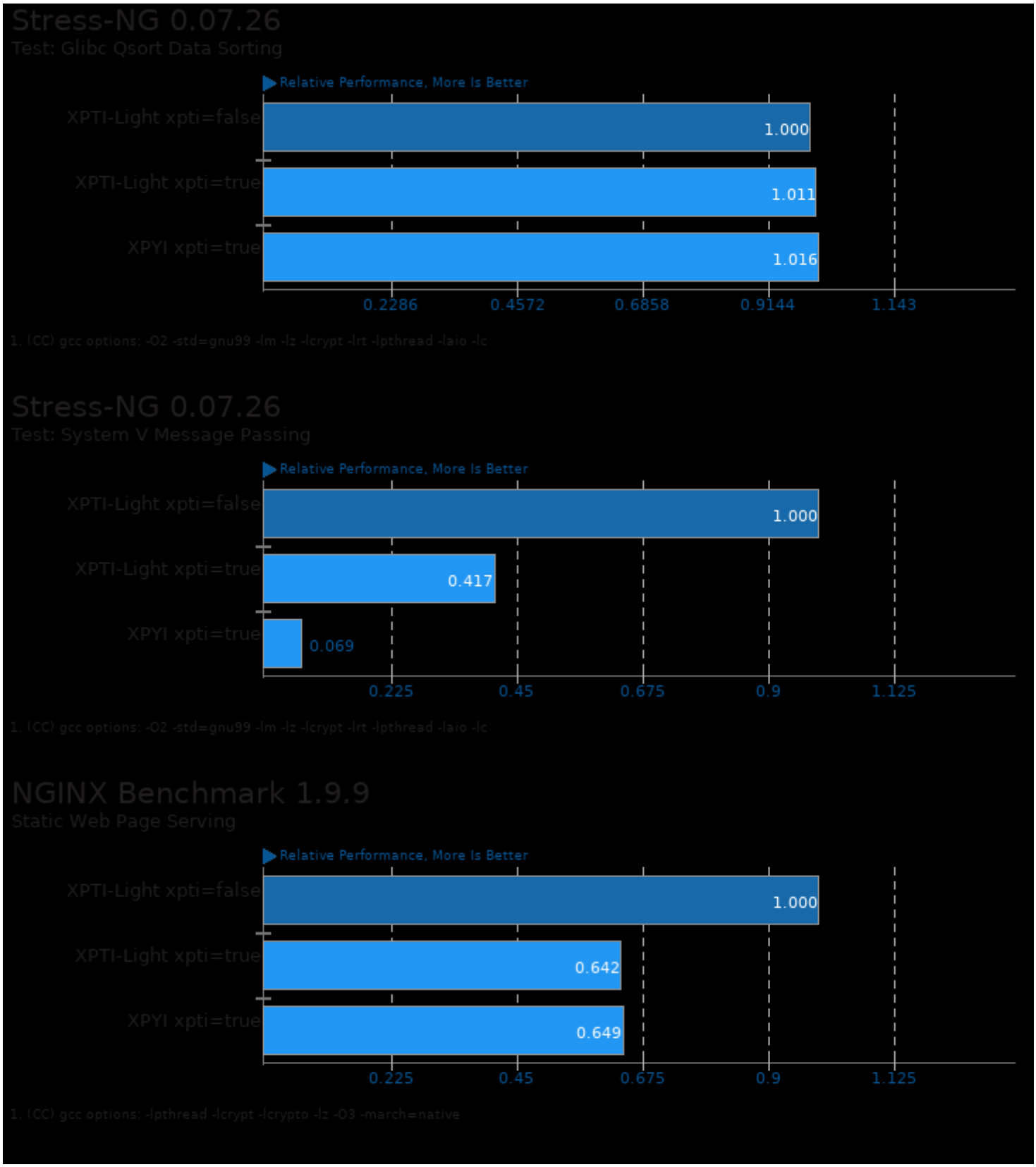
xpti-vs-xptilight-various



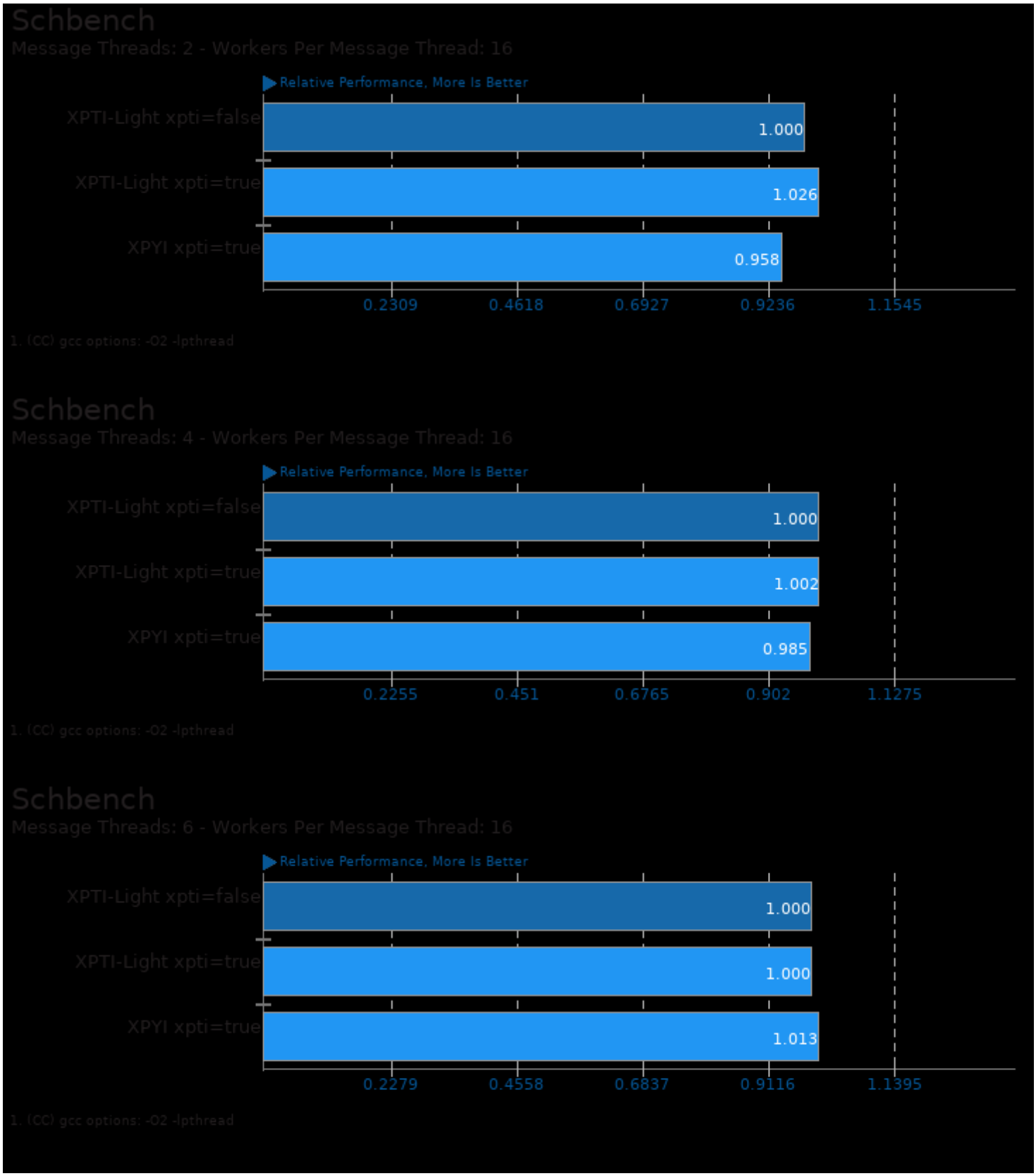
xpti-vs-xptilight-various



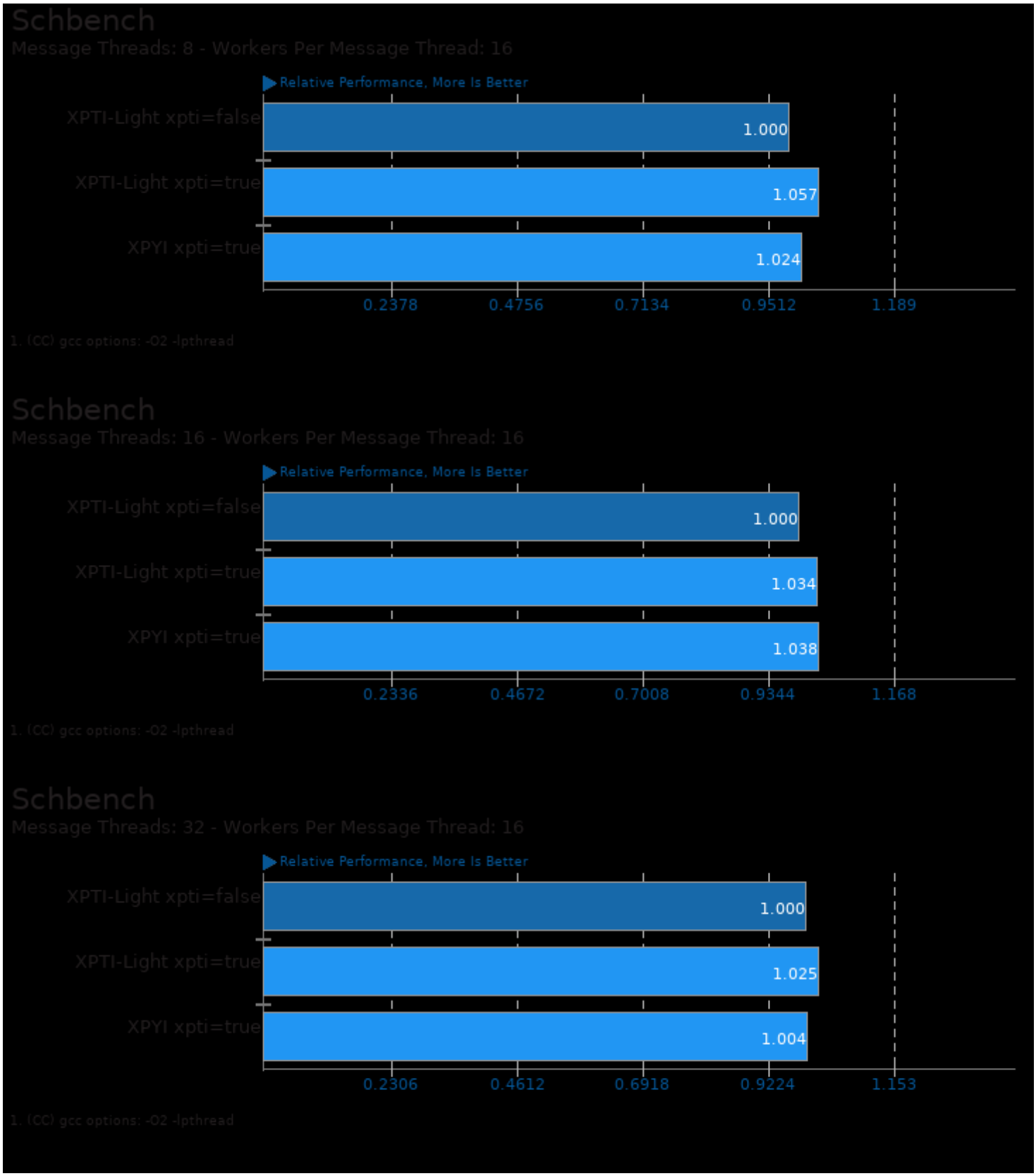
xpti-vs-xptilight-various



xpti-vs-xptilight-various

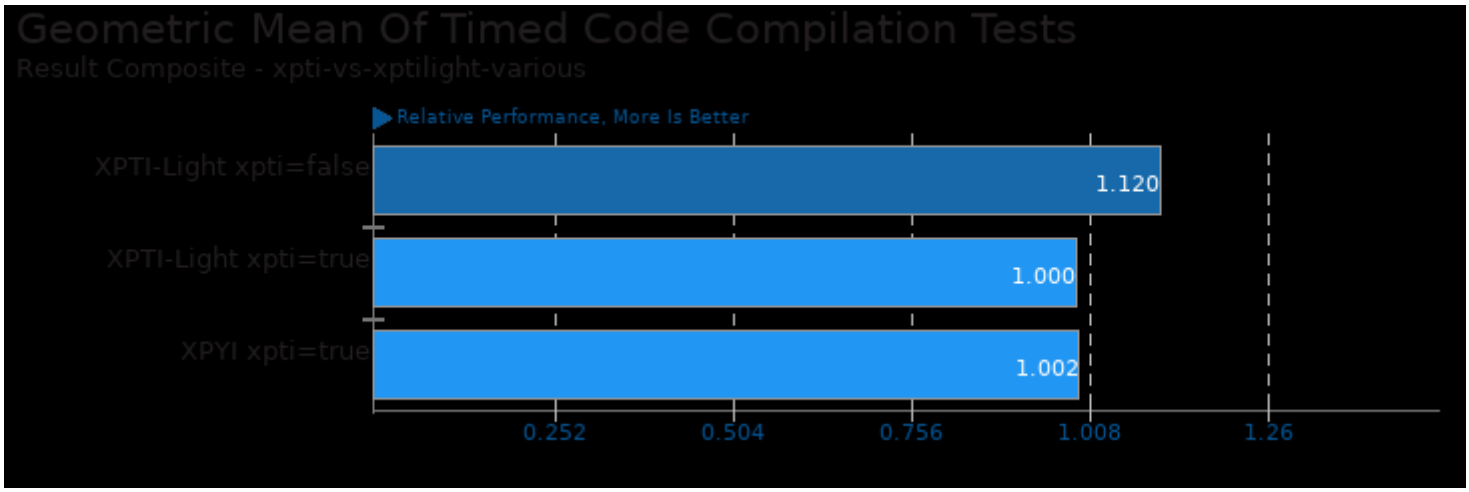


xpti-vs-xptilight-various



xpti-vs-xptilight-various

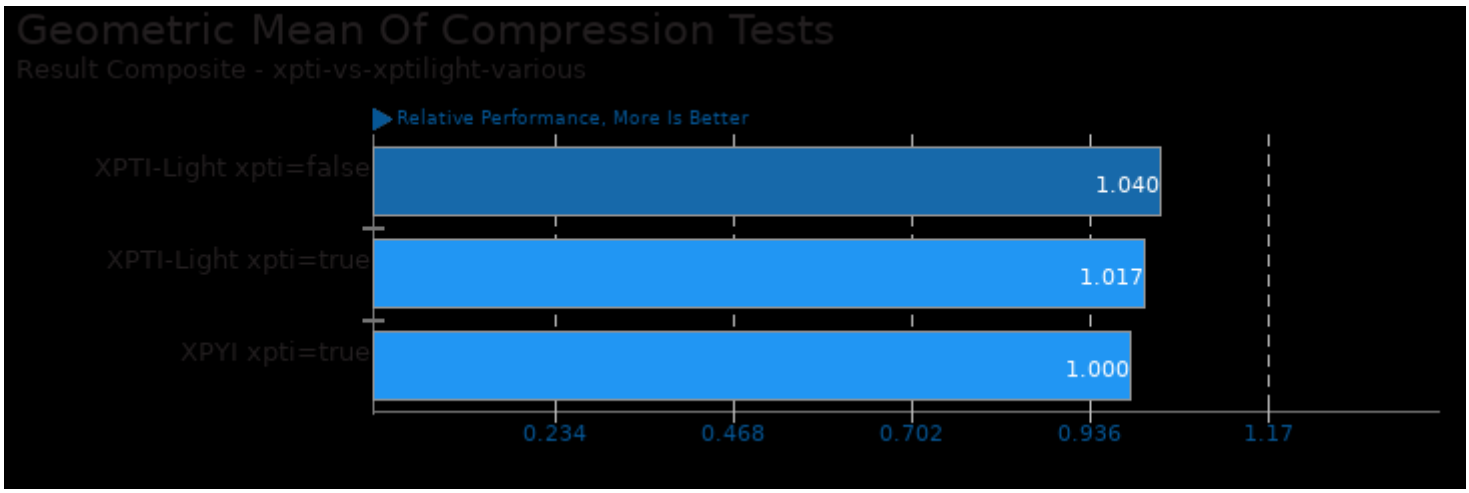
These geometric means are based upon test groupings / test suites for this result file.



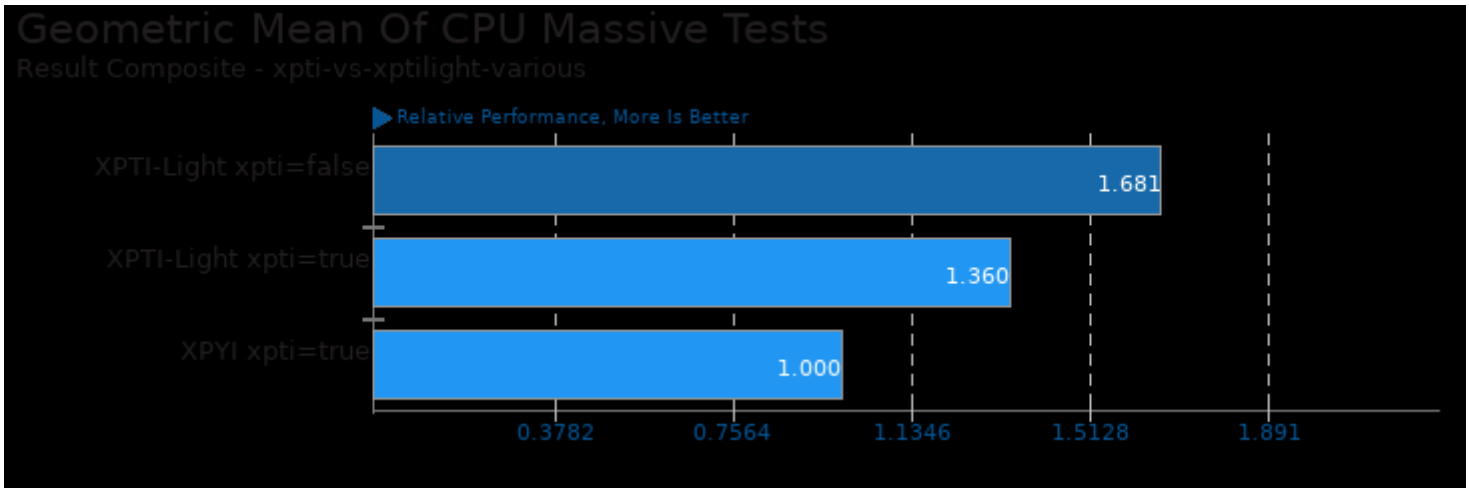
Geometric mean based upon tests: pts/build-php, pts/build-linux-kernel and pts/build-mplayer



Geometric mean based upon tests: pts/build-php, pts/pgbench, pts/nginx and pts/build-mplayer



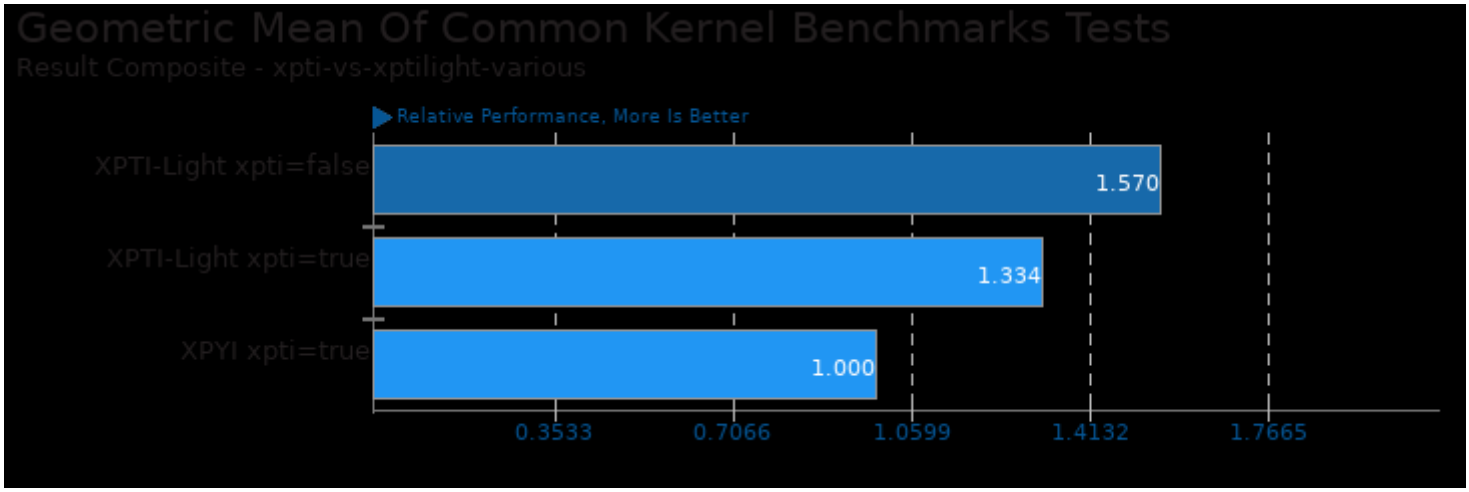
Geometric mean based upon tests: pts/compress-gzip and pts/compress-pbzip2



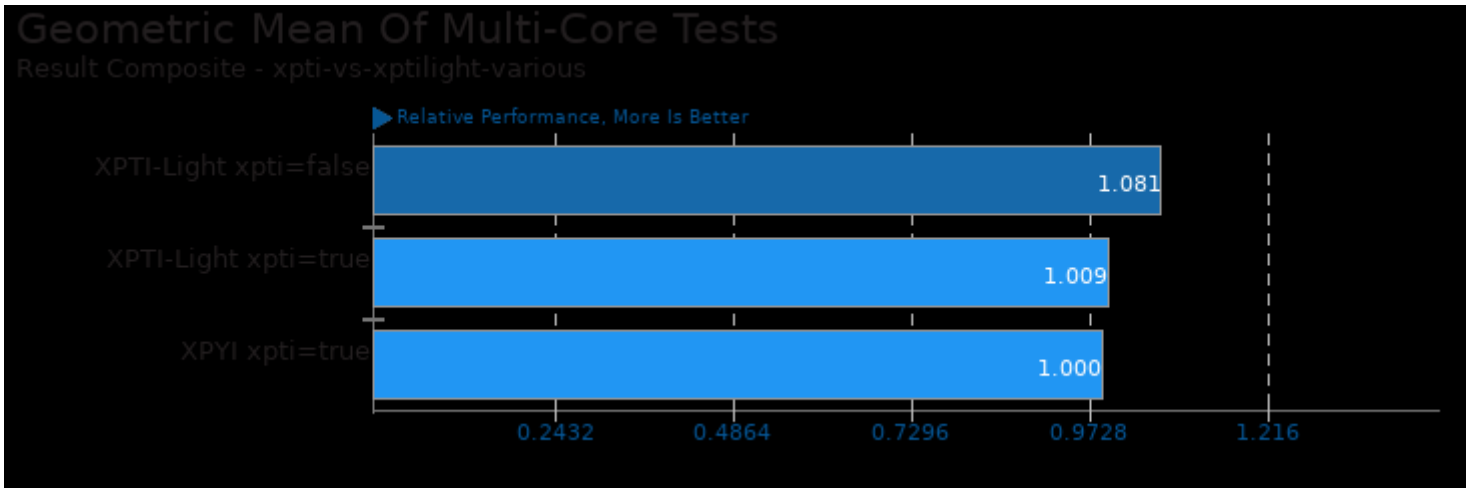
Geometric mean based upon tests: pts/build-linux-kernel, pts/build-php, pts/compress-pbzip2, pts/hackbench, pts/nginx, pts/pgbench and pts/stress-ng



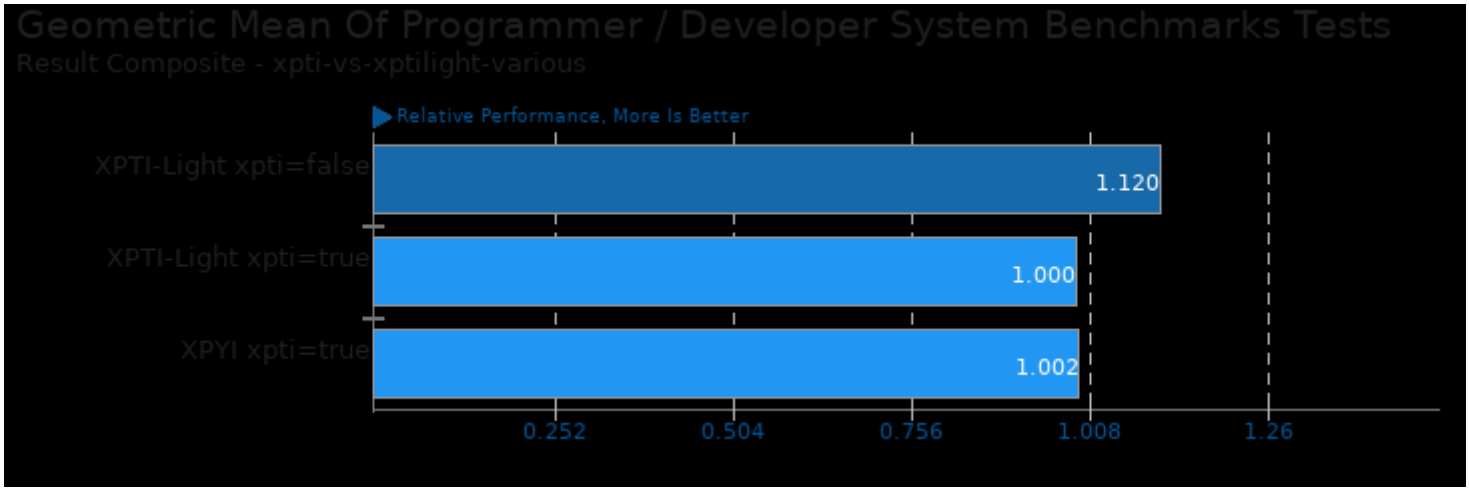
Geometric mean based upon tests: pts/iozone and pts/fio



Geometric mean based upon tests: pts/pgbench, pts/hackbench, pts/schbench and pts/stress-ng



Geometric mean based upon tests: pts/compress-pbzip2, pts/build-php, pts/build-linux-kernel, pts/build-mplayer and pts/pgbench

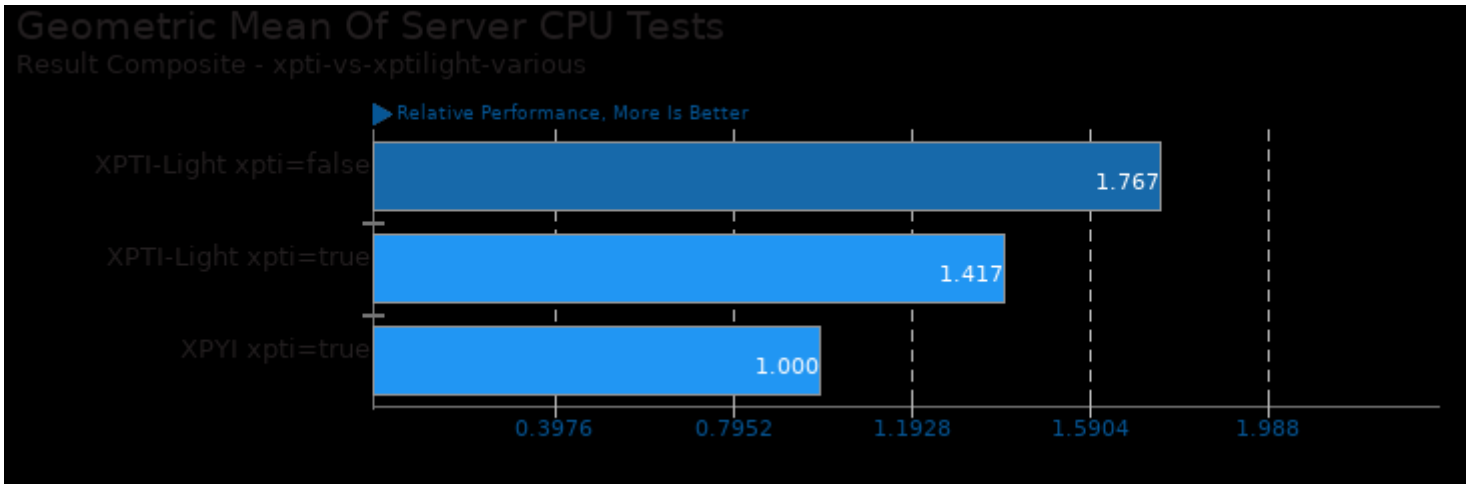


Geometric mean based upon tests: pts/build-php, pts/build-linux-kernel and pts/build-mplayer

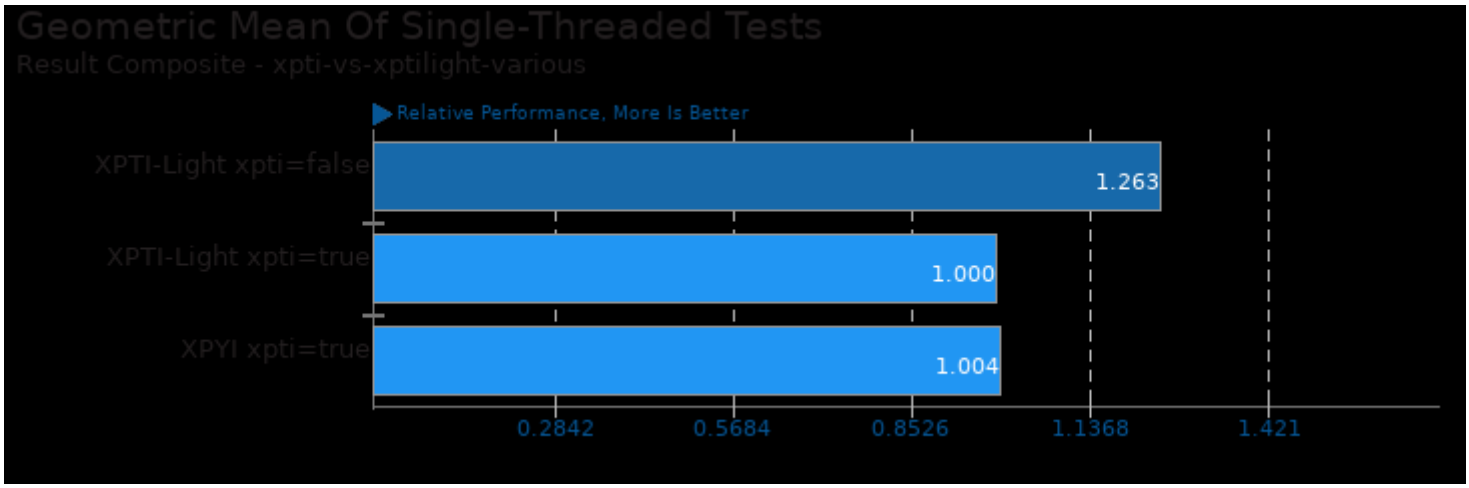


Geometric mean based upon tests: pts/nginx and pts/pgbench

xpti-vs-xptilight-various



Geometric mean based upon tests: pts/build-linux-kernel, pts/build-php, pts/hackbench and pts/stress-ng



Geometric mean based upon tests: pts/compress-gzip and pts/nginx

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 04:24.