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s25

Intel Xeon Gold 6312U testing with a Supermicro X12SPL-F v2.00 (1.1 BIOS) and ASPEED on CentOS Linux 8 via the Phoronix Test Suite.

Automated Executive Summary

s28 had the most wins, coming in first place for 35% of the tests.

Based on the geometric mean of all complete results, the fastest (s28) was 1.226x the speed of the slowest (s26). s25 was 0.995x the speed of s28, s27 was 0.975x the speed of s25, s26 was 0.841x the speed of s27.

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

perf-bench (Benchmark: Syscall Basic) at 2.696x
Flexible IO Tester (Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory) at 2.41x
Flexible IO Tester (Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory) at 2.408x
perf-bench (Benchmark: Futex Hash) at 2.177x
Flexible IO Tester (Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target: Default Test Directory) at 1.835x
Flexible IO Tester (Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target:

Default Test Directory) at 1.828x
Flexible IO Tester (Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory) at 1.715x
Flexible IO Tester (Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory) at 1.712x
Apache Benchmark (Static Web Page Serving) at 1.658x
Flexible IO Tester (Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory) at 1.627x.

Test Systems:

s25

Processor: Intel Xeon Gold 6238R @ 4.00GHz (28 Cores / 56 Threads), Motherboard: Supermicro X11SPL-F v1.02 (3.3 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 6 x 32 GB DDR4-2933MT/s 36ASF4G72PZ-2G9J3, Disk: 5758GB MR9361-8i, Graphics: ASPEED, Network: 2 x Intel I210

OS: CentOS Linux 8, Kernel: 4.18.0-193.19.1.el8_2.x86_64 (x86_64), Compiler: GCC 8.3.1 20191121, File-System: xfs, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-redhat-linux --disable-libmpx --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: MQ-DEADLINE / attr2,inode64,noquota,relatime,rw,seclabel,sunit=128,swidth=512
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x5002f01
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Mitigation of Clear buffers; SMT vulnerable

s26

Processor: Intel Xeon Gold 6238R @ 4.00GHz (28 Cores / 56 Threads), Motherboard: Supermicro X11SPL-F v1.02 (3.4 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 6 x 32 GB DDR4-2933MT/s 18ASF4G72PZ-2G9B1, Disk: 5758GB MR9361-8i, Graphics: ASPEED, Network: 2 x Intel I210

OS: CentOS Linux 8, Kernel: 4.18.0-240.10.1.el8_3.x86_64 (x86_64), Compiler: GCC 8.3.1 20191121, File-System: xfs, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-redhat-linux --disable-libmpx --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: MQ-DEADLINE / attr2,inode64,logbsize=32k,logbufs=8,noquota,relatime,rw,seclabel,sunit=128,swidth=512 / Block Size: 4096
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x5003003
Security Notes: SELinux + itlb_multihit: KVM: Mitigation of Split huge pages + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Mitigation of TSX disabled

s27

Processor: Intel Xeon Gold 6238R @ 4.00GHz (28 Cores / 56 Threads), Motherboard: Supermicro X11SPL-F v1.02 (3.4 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 6 x 32 GB DDR4-2933MT/s 18ASF4G72PZ-2G9E1, Disk:

5758GB MR9361-8i, Graphics: ASPEED, Network: 2 x Intel I210

OS: CentOS Linux 8, Kernel: 4.18.0-305.3.1.el8.x86_64 (x86_64), Compiler: GCC 8.4.1 20200928, File-System: xfs, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=x86_64-redhat-linux --disable-libmpx --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: NONE / attr2,inode64,logbsize=32k,logbufs=8,noquota,relatime,rw,seclabel,sunit=128,swidth=512 / Block Size: 4096
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x5003006
Security Notes: SELinux + itlb_multihit: KVM: Mitigation of Split huge pages + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Mitigation of TSX disabled

s28

Processor: Intel Xeon Gold 6312U @ 3.60GHz (24 Cores / 48 Threads), Motherboard: Supermicro X12SPL-F v2.00 (1.1 BIOS), Chipset: Intel Device 0998, Memory: 8 x 32 GB DDR4-3200MT/s 18ASF4G72PDZ-3G2E1, Disk: 6718GB MR9361-8i, Graphics: ASPEED, Network: 2 x Intel I210

OS: CentOS Linux 8, Kernel: 4.18.0-305.12.1.el8_4.x86_64 (x86_64), Compiler: GCC 8.4.1 20200928, File-System: xfs, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=x86_64-redhat-linux --disable-libmpx --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: NONE / attr2,inode64,logbsize=32k,logbufs=8,noquota,relatime,rw,seclabel,sunit=128,swidth=512 / Block Size: 4096
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0xd0002a0
Security Notes: SELinux + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	s25	s26	s27	s28
Flexible IO Tester - Rand Read - Sync - No - Yes - 1MB (MB/s)	2338	**1909**	**2555**	2362
Normalized	91.51%	74.72%	100%	92.45%
Standard Deviation		2.1%	0.1%	0.1%
Flexible IO Tester - Rand Read - Sync - No - Yes - 1MB (IOPS)	2337	**1902**	**2554**	2360
Normalized	91.5%	74.47%	100%	92.4%
Standard Deviation			0.1%	
Flexible IO Tester - Rand Read - Sync - No - Yes - 2MB (MB/s)	3166	**2173**	**3220**	3034
Normalized	98.32%	67.48%	100%	94.22%
Standard Deviation	0.1%	5.9%	0%	0%
Flexible IO Tester - Rand Read - Sync - No - Yes - 2MB (IOPS)	1582	**1086**	**1610**	1516
Normalized	98.26%	67.45%	100%	94.16%
Standard Deviation		5.9%		

Flexible IO Tester - Rand Read - Sync - No - Yes - 4KB (MB/s)	44.3	39.3	**48.3**	**36.7**
Normalized	91.72%	81.37%	100%	75.98%
Standard Deviation	0.3%	0.1%	0.3%	0%
Flexible IO Tester - Rand Read - Sync - No - Yes - 4KB (IOPS)	11333	10100	**12367**	**9391**
Normalized	91.64%	81.67%	100%	75.94%
Standard Deviation	0.5%		0.5%	0.1%
Flexible IO Tester - Rand Read - Sync - No - Yes - 4MB (MB/s)	**3674**	**2475**	3539	3346
Normalized	100%	67.37%	96.33%	91.07%
Standard Deviation	0.6%	0.5%		0%
Flexible IO Tester - Rand Read - Sync - No - Yes - 4MB (IOPS)	**918**	**618**	884	836
Normalized	100%	67.32%	96.3%	91.07%
Standard Deviation	0.6%	0.5%		
Flexible IO Tester - Rand Read - Sync - No - Yes - 8KB (MB/s)	79.3	65.6	**85.3**	**64.6**
Normalized	92.97%	76.91%	100%	75.73%
Standard Deviation	0.1%	0.2%	0.1%	0.8%
Flexible IO Tester - Rand Read - Sync - No - Yes - 8KB (IOPS)	10167	8401	**10900**	**8312**
Normalized	93.28%	77.07%	100%	76.26%
Standard Deviation	0.6%	0.1%		0%
Flexible IO Tester - Rand Read - Sync - No - Yes - 8MB (MB/s)	**4286**	**2854**	3962	3675
Normalized	100%	66.59%	92.44%	85.74%
Standard Deviation	0%	0.8%	0%	0%
Flexible IO Tester - Rand Read - Sync - No - Yes - 8MB (IOPS)	**535**	**356**	495	459
Normalized	100%	66.54%	92.52%	85.79%
Standard Deviation		0.7%		
Flexible IO Tester - Rand Read - Sync - No - Yes - 16KB (MB/s)	136	**104**	**146**	105
Normalized	93.15%	71.23%	100%	71.92%
Standard Deviation	0.4%			
Flexible IO Tester - Rand Read - Sync - No - Yes - 16KB (IOPS)	8675	**6686**	**9333**	6713
Normalized	92.95%	71.64%	100%	71.93%
Standard Deviation	0.1%	0.2%	0.1%	0.1%
Flexible IO Tester - Rand Read - Sync - No - Yes - 32KB (MB/s)	237	**159**	**258**	182
Normalized	91.86%	61.63%	100%	70.54%
Standard Deviation	1%	0.4%	1.8%	1.3%
Flexible IO Tester - Rand Read - Sync - No - Yes - 32KB (IOPS)	7567	**5078**	**8264**	5809
Normalized	91.57%	61.45%	100%	70.29%
Standard Deviation	1%	0.5%	1.8%	1.1%
Flexible IO Tester - Rand Read - Sync - No - Yes - 64KB (MB/s)	373	**224**	**411**	267
Normalized	90.75%	54.5%	100%	64.96%
Standard Deviation	1.5%	1.6%	1.4%	2.1%

Flexible IO Tester - Rand Read - Sync - No - Yes - 64KB (IOPS)	5974	**3593**	**6567**	4262
Normalized	90.97%	54.71%	100%	64.9%
Standard Deviation	1.5%	1.6%	1.5%	2%
Flexible IO Tester - Rand Write - Sync - No - Yes - 1MB (MB/s)	2641	**2640**	2667	**2760**
Normalized	95.69%	95.65%	96.63%	100%
Standard Deviation	0.1%			
Flexible IO Tester - Rand Write - Sync - No - Yes - 1MB (IOPS)	**2639**	2641	2665	**2759**
Normalized	95.65%	95.72%	96.59%	100%
Standard Deviation	0.1%			
Flexible IO Tester - Rand Write - Sync - No - Yes - 2MB (MB/s)	2907	**2836**	2926	**3023**
Normalized	96.16%	93.81%	96.79%	100%
Standard Deviation		0.2%		
Flexible IO Tester - Rand Write - Sync - No - Yes - 2MB (IOPS)	1453	**1417**	1463	**1511**
Normalized	96.16%	93.78%	96.82%	100%
Standard Deviation		0.1%		
Flexible IO Tester - Rand Write - Sync - No - Yes - 4KB (MB/s)	114	**91.6**	94.5	**118**
Normalized	96.61%	77.63%	80.08%	100%
Standard Deviation		0.1%	0.4%	
Flexible IO Tester - Rand Write - Sync - No - Yes - 4KB (IOPS)	29300	**23500**	24200	**30233**
Normalized	96.91%	77.73%	80.04%	100%
Standard Deviation			0.4%	0.8%
Flexible IO Tester - Rand Write - Sync - No - Yes - 4MB (MB/s)	2941	**2882**	2952	**3080**
Normalized	95.49%	93.57%	95.84%	100%
Standard Deviation	0%	0.2%	0%	
Flexible IO Tester - Rand Write - Sync - No - Yes - 4MB (IOPS)	735	**720**	737	**770**
Normalized	95.45%	93.51%	95.71%	100%
Standard Deviation		0.2%		
Flexible IO Tester - Rand Write - Sync - No - Yes - 8KB (MB/s)	227	**183**	188	**247**
Normalized	91.9%	74.09%	76.11%	100%
Standard Deviation				0.4%
Flexible IO Tester - Rand Write - Sync - No - Yes - 8KB (IOPS)	29000	**23433**	24067	**31633**
Normalized	91.68%	74.08%	76.08%	100%
Standard Deviation		0.2%	0.2%	0.4%
Flexible IO Tester - Rand Write - Sync - No - Yes - 8MB (MB/s)	2948	**2888**	2949	**3076**
Normalized	95.84%	93.89%	95.87%	100%
Standard Deviation	0%	0.3%		0%
Flexible IO Tester - Rand Write - Sync - No - Yes - 8MB (IOPS)	368	**361**	368	**384**
Normalized	95.83%	94.01%	95.83%	100%
Standard Deviation		0.3%		

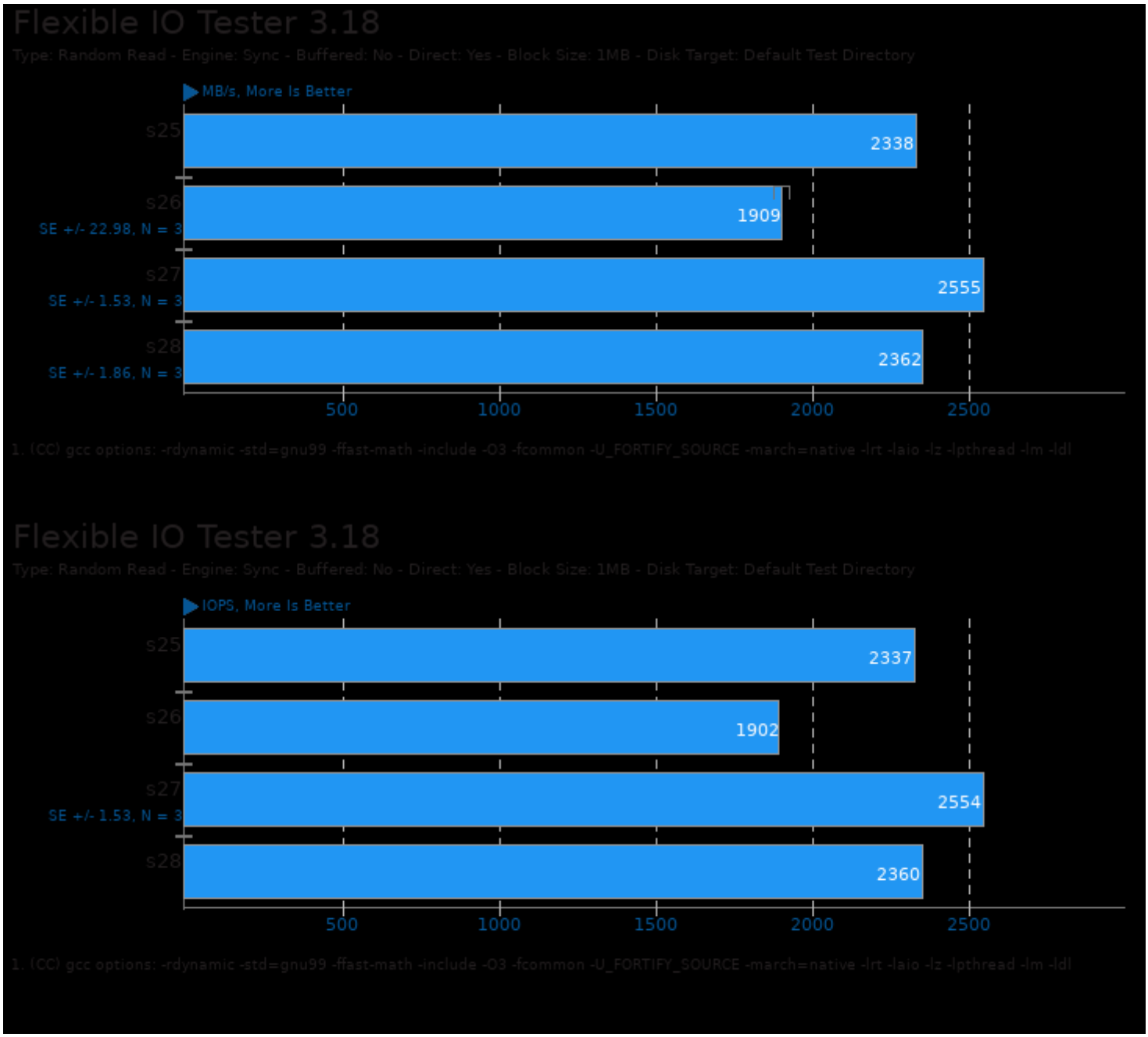
Flexible IO Tester - Rand Read - Sync - No - Yes - 128KB (MB/s)	1513	**1004**	1506	**2420**
Normalized	62.52%	41.49%	62.23%	100%
Standard Deviation	2.9%	1.8%	2.5%	0.3%
Flexible IO Tester - Rand Read - Sync - No - Yes - 128KB (IOPS)	12075	**8030**	12057	**19333**
Normalized	62.46%	41.54%	62.36%	100%
Standard Deviation	2.9%	1.7%	2.6%	0.3%
Flexible IO Tester - Rand Read - Sync - No - Yes - 256KB (MB/s)	2544	**1870**	2587	**3207**
Normalized	79.33%	58.31%	80.67%	100%
Standard Deviation	2.9%	2.2%	2.4%	0%
Flexible IO Tester - Rand Read - Sync - No - Yes - 256KB (IOPS)	10174	**7478**	10350	**12800**
Normalized	79.48%	58.42%	80.86%	100%
Standard Deviation	2.9%	2.2%	2.3%	
Flexible IO Tester - Rand Read - Sync - No - Yes - 512KB (MB/s)	3289	**2632**	3385	**4242**
Normalized	77.53%	62.05%	79.8%	100%
Standard Deviation	2.1%	2.5%	2.2%	0.7%
Flexible IO Tester - Rand Read - Sync - No - Yes - 512KB (IOPS)	6577	**5263**	6770	**8483**
Normalized	77.53%	62.04%	79.81%	100%
Standard Deviation	2.1%	2.5%	2.2%	0.7%
Flexible IO Tester - Rand Write - Sync - No - Yes - 16KB (MB/s)	444	**354**	370	**469**
Normalized	94.67%	75.48%	78.89%	100%
Standard Deviation		0.4%		
Flexible IO Tester - Rand Write - Sync - No - Yes - 16KB (IOPS)	28433	**22667**	23667	**29667**
Normalized	95.84%	76.4%	79.78%	100%
Standard Deviation	0.2%	0.3%	0.2%	1.9%
Flexible IO Tester - Rand Write - Sync - No - Yes - 32KB (MB/s)	792	**663**	686	**844**
Normalized	93.84%	78.55%	81.28%	100%
Standard Deviation	0.5%	0.5%	0.2%	
Flexible IO Tester - Rand Write - Sync - No - Yes - 32KB (IOPS)	25367	**21200**	21300	**26333**
Normalized	96.33%	80.51%	80.89%	100%
Standard Deviation	0.5%		2.4%	2.2%
Flexible IO Tester - Rand Write - Sync - No - Yes - 64KB (MB/s)	1325	**1304**	1320	**1399**
Normalized	94.71%	93.21%	94.35%	100%
Standard Deviation		0.1%	0.5%	0.7%
Flexible IO Tester - Rand Write - Sync - No - Yes - 64KB (IOPS)	21200	**20867**	21133	**22400**
Normalized	94.64%	93.16%	94.34%	100%
Standard Deviation		0.3%	0.5%	0.8%
Flexible IO Tester - Rand Write - Sync - No - Yes - 128KB (MB/s)	**1692**	1695	1709	**1804**
Normalized	93.79%	93.96%	94.73%	100%
Standard Deviation	1.1%	0.8%	0.7%	0.1%

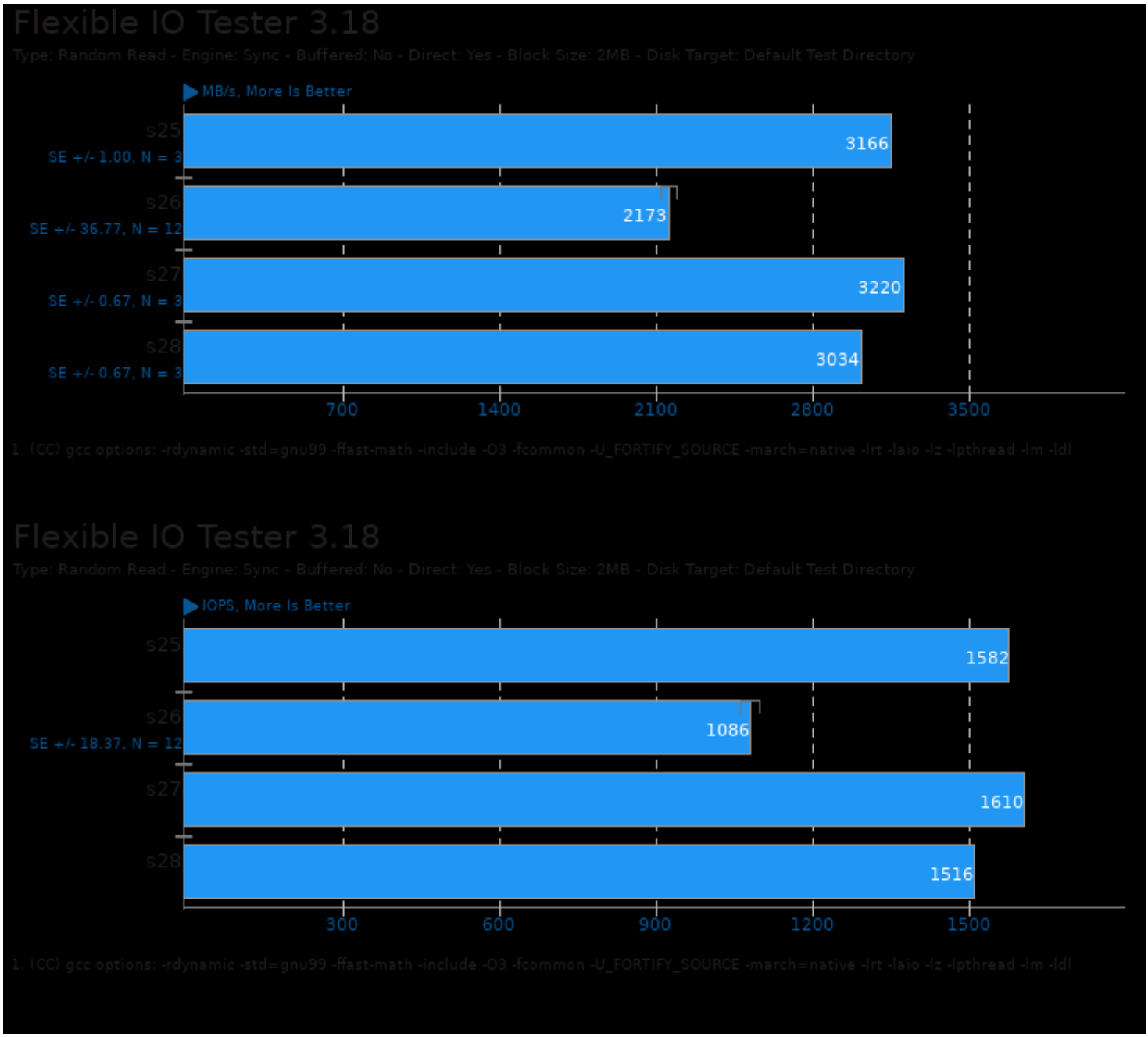
Flexible IO Tester - Rand Write - Sync - No - Yes - 128KB (IOPS)	**13567**	**13567**	13667	**14433**
Normalized	94%	94%	94.69%	100%
Standard Deviation	1.1%	0.9%	0.4%	0.4%
Flexible IO Tester - Rand Write - Sync - No - Yes - 256KB (MB/s)	1986	2015	**1983**	**2167**
Normalized	91.65%	92.99%	91.51%	100%
Standard Deviation	1%	0.8%		1.1%
Flexible IO Tester - Rand Write - Sync - No - Yes - 256KB (IOPS)	7943	8059	**7934**	**8669**
Normalized	91.63%	92.96%	91.52%	100%
Standard Deviation	1%	0.8%	0%	1.1%
Flexible IO Tester - Rand Write - Sync - No - Yes - 512KB (MB/s)	**2343**	2348	2376	**2530**
Normalized	92.61%	92.81%	93.91%	100%
Standard Deviation	0.9%	1%	0%	0.4%
Flexible IO Tester - Rand Write - Sync - No - Yes - 512KB (IOPS)	**4686**	4696	4752	**5060**
Normalized	92.61%	92.81%	93.91%	100%
Standard Deviation	0.9%	0.9%	0%	0.4%
RAMspeed SMP - Add - Integer (MB/s)	**33622**	**28518**	28613	33086
Normalized	100%	84.82%	85.1%	98.4%
Standard Deviation	1%	6.1%	4.9%	0.1%
RAMspeed SMP - Copy - Integer	32500	**25455**	27054	**32877**
Normalized	98.86%	77.43%	82.29%	100%
Standard Deviation	0.2%	4.5%	0.2%	0.2%
RAMspeed SMP - Scale - Integer	30654	**24190**	24775	**32813**
Normalized	93.42%	73.72%	75.5%	100%
Standard Deviation	1.3%	5.9%	1.5%	0.2%
RAMspeed SMP - Triad - Integer	32591	**27267**	27734	**33028**
Normalized	98.68%	82.56%	83.97%	100%
Standard Deviation	2.2%	8.4%	6.2%	0.1%
RAMspeed SMP - Average - Integer (MB/s)	32784	**24888**	27899	**32818**
Normalized	99.9%	75.84%	85.01%	100%
Standard Deviation	1.5%	1.3%	5.9%	0.5%
RAMspeed SMP - Add - Floating Point (MB/s)	**32963**	**27230**	28158	
Normalized	100%	82.61%	85.42%	
Standard Deviation	2%	2.3%	4.2%	
RAMspeed SMP - Copy - Floating Point (MB/s)	**32705**	**26234**	26988	
Normalized	100%	80.22%	82.52%	
Standard Deviation	0.8%	7.1%	4.7%	
RAMspeed SMP - Scale - Floating Point (MB/s)	**30928**	**25493**	26467	
Normalized	100%	82.43%	85.58%	
Standard Deviation	1.5%	4.4%	3.8%	
RAMspeed SMP - Triad - Floating Point (MB/s)	**32819**	**26180**	28611	
Normalized	100%	79.77%	87.18%	
Standard Deviation	0.3%	0.4%	4.4%	

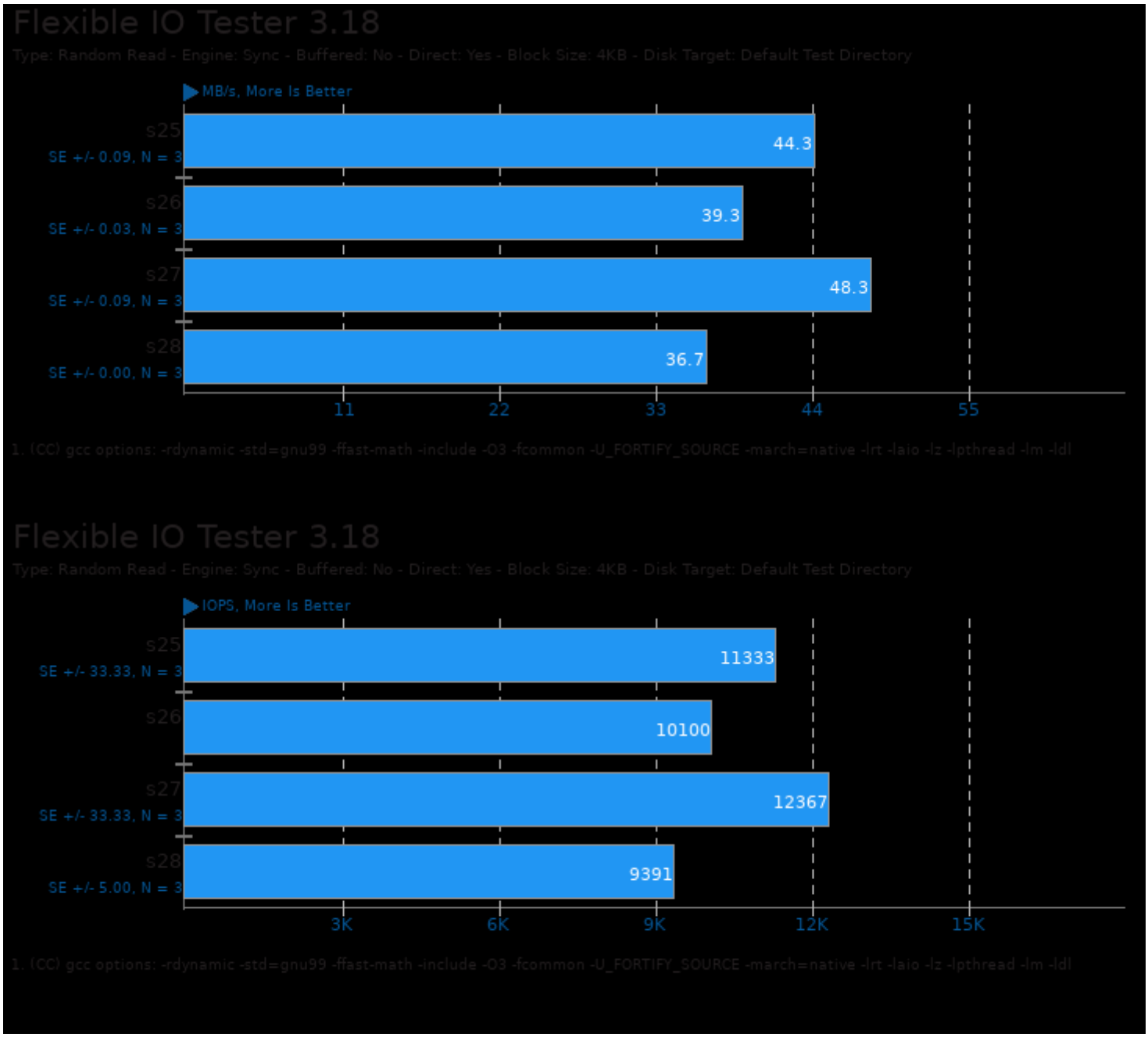
RAMspeed SMP - Average - Floating Point (MB/s)	**32133**	**26679**	27312
Normalized	100%	83.03%	85%
Standard Deviation	0.5%	6.2%	4.4%
perf-bench - Epoll Wait (ops/sec)	**13157**	**10836**	11983
Normalized	100%	82.36%	91.08%
Standard Deviation	3.4%	3.8%	0.3%
perf-bench - Futex Hash (ops/sec)	**1285177**	2682313	**2797237**
Normalized	45.94%	95.89%	100%
Standard Deviation	0%	1.8%	1.3%
perf-bench - Memcpy 1MB (GB/sec)	**15.927344**	17.136837	**17.147632**
Normalized	92.88%	99.94%	100%
Standard Deviation	1.4%	1.7%	1.9%
perf-bench - Memset 1MB (GB/sec)	**60.699343**	65.290936	**66.308858**
Normalized	91.54%	98.46%	100%
Standard Deviation	0.4%	0.8%	1.2%
perf-bench - Sched Pipe (ops/sec)	**208562**	**220132**	211376
Normalized	94.74%	100%	96.02%
Standard Deviation	1.6%	2%	1.7%
perf-bench - Futex Lock-Pi (ops/sec)	141	**140**	**143**
Normalized	98.6%	97.9%	100%
Standard Deviation		0.4%	0.8%
perf-bench - Syscall Basic (ops/sec)	**4883425**	**13164105**	12777794
Normalized	37.1%	100%	97.07%
Standard Deviation	0.1%	0.4%	0.7%
FFTE - N.2.3.C.F.R (MFLOPS)	**87941**	72401	**72111**
Normalized	100%	82.33%	82%
Standard Deviation	0.3%	0.4%	0.9%
Timed PHP Compilation - Time To Compile (sec)	**44.749**	**46.084**	45.808
Normalized	100%	97.1%	97.69%
Standard Deviation	0.3%	0.8%	0.8%
C-Ray - Total Time - 4.1.R.P.P (sec)	**31.791**	**37.572**	31.833
Normalized	100%	84.61%	99.87%
Standard Deviation	1.4%	2.1%	1.7%
Gzip Compression - L.S.T.A.T.t.g (sec)	40.895	**40.922**	**40.586**
Normalized	99.24%	99.18%	100%
Standard Deviation	0.2%	0.2%	0.2%
Minion - Graceful (sec)	51.374509	**51.615354**	**50.453271**
Normalized	98.21%	97.75%	100%
Standard Deviation	1.6%	0.9%	1.4%
Minion - Solitaire (sec)	**69.324861**	69.888077	**70.052898**
Normalized	100%	99.19%	98.96%
Standard Deviation	1.4%	1.8%	2.4%
Minion - Quasigroup (sec)	**110.193229**	110.516612	**110.644700**
Normalized	100%	99.71%	99.59%
Standard Deviation	0.3%	0.6%	0.1%
OpenSSL - R.4.b.P (Signs/sec)	**6259**	**6039**	6236
Normalized	100%	96.48%	99.63%
Standard Deviation	0.1%	0.4%	0.3%
glibc bench - cos (nanoseconds)	54.1252	**54.1369**	**54.1195**
Normalized	99.99%	99.97%	100%
Standard Deviation	0%	0.1%	0%
glibc bench - exp (nanoseconds)	7.39950	**7.59185**	**7.38088**
Normalized	99.75%	97.22%	100%

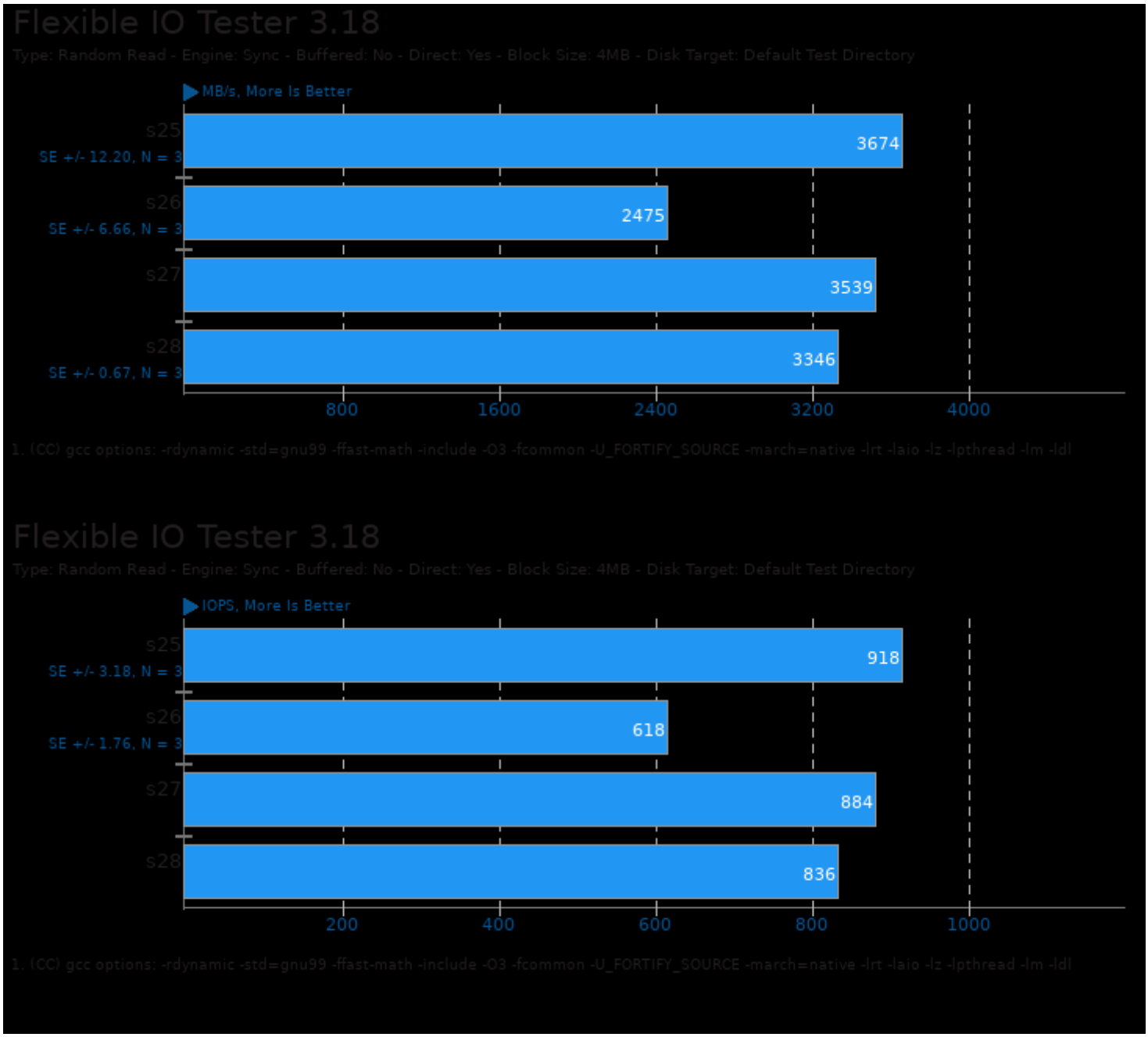
Standard Deviation	0%	0%	0.1%
glibc bench - ffs (nanoseconds)	**1.78604**	1.68702	**1.68543**
Normalized	94.37%	99.91%	100%
Standard Deviation	0.1%	0.1%	0.1%
glibc bench - sin (nanoseconds)	**52.8859**	52.8484	**52.8056**
Normalized	99.85%	99.92%	100%
Standard Deviation	0.2%	0.2%	0.2%
glibc bench - log2 (nanoseconds)	**9.46907**	9.19731	**9.16721**
Normalized	96.81%	99.67%	100%
Standard Deviation	0%	0%	0%
glibc bench - modf (nanoseconds)	2.56227	**2.88061**	**2.19636**
Normalized	85.72%	76.25%	100%
Standard Deviation	0.2%	0.3%	0.1%
glibc bench - sinh (nanoseconds)	**11.5665**	**11.4660**	11.5065
Normalized	99.13%	100%	99.65%
Standard Deviation	0.1%	0.1%	0%
glibc bench - sqrt (nanoseconds)	**2.05075**	**1.93536**	1.94806
Normalized	94.37%	100%	99.35%
Standard Deviation	0.1%	0.1%	0.1%
glibc bench - tanh (nanoseconds)	13.4317	**13.1938**	**13.5677**
Normalized	98.23%	100%	97.24%
Standard Deviation	0%	0%	6.1%
glibc bench - asinh (nanoseconds)	**16.1367**	15.7602	**15.7573**
Normalized	97.65%	99.98%	100%
Standard Deviation	0.2%	0.1%	0.1%
glibc bench - atanh (nanoseconds)	**12.9182**	12.4072	**12.4039**
Normalized	96.02%	99.97%	100%
Standard Deviation	3%	0%	0%
glibc bench - ffsll (nanoseconds)	**1.78799**	**1.68660**	1.68664
Normalized	94.33%	100%	100%
Standard Deviation	0%	0.1%	0.1%
glibc bench - sincos (nanoseconds)	**15.4933**	**15.5203**	15.5193
Normalized	100%	99.83%	99.83%
Standard Deviation	0.2%	0.2%	0.2%
glibc bench - pthread_once (nanoseconds)	**1.80634**	1.70242	**1.68921**
Normalized	93.52%	99.22%	100%
Standard Deviation	0.1%	0.2%	0%
GROMACS - Water Benchmark (Ns/Day)	**2.586**	**2.307**	2.320
Normalized	100%	89.21%	89.71%
Standard Deviation	0.4%	1.2%	1%
MariaDB - 1 (Queries/sec)	16195		
Standard Deviation	0.8%		
MariaDB - 4 (Queries/sec)	13575		
Standard Deviation	0.8%		
MariaDB - 8 (Queries/sec)	10992		
Standard Deviation	1.9%		
MariaDB - 16 (Queries/sec)	7958		
Standard Deviation	0.9%		
MariaDB - 32 (Queries/sec)	3713		
Standard Deviation	0.2%		
MariaDB - 64 (Queries/sec)	1497		
Standard Deviation	0.3%		

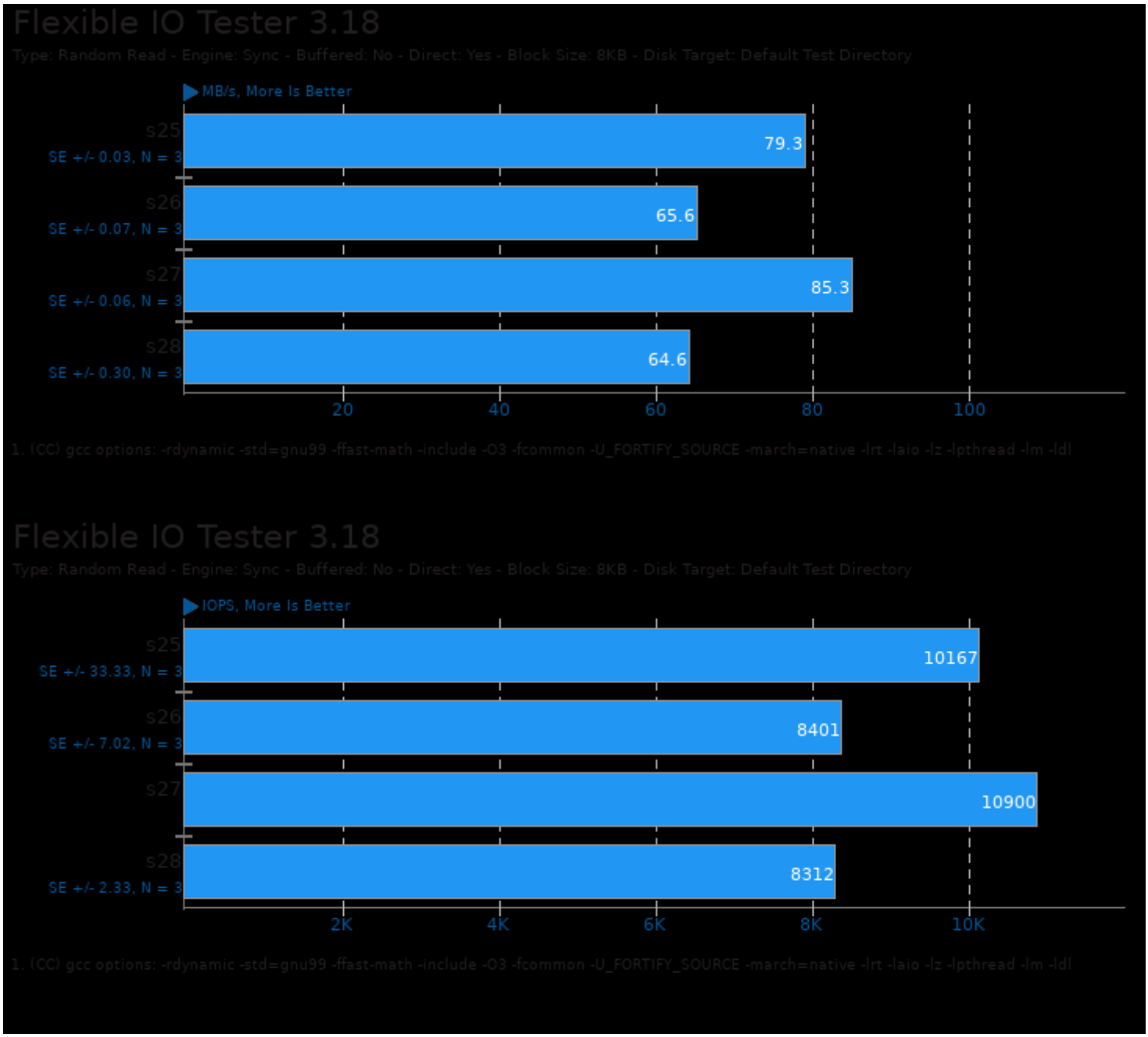
MariaDB - 128 (Queries/sec)	620		
Standard Deviation	0.1%		
MariaDB - 256 (Queries/sec)	506		
Standard Deviation	0.1%		
Sysbench - Memory (Events/sec)	17930664	**18613408**	**17640125**
Normalized	96.33%	100%	94.77%
Standard Deviation	0.2%	1.5%	0.9%
Sysbench - CPU (Events/sec)	46781	**46518**	**46812**
Normalized	99.93%	99.37%	100%
Standard Deviation	0%	0%	0%
NGINX Benchmark - S.W.P.S (Reqs/sec)	23545	**17363**	**27437**
Normalized	85.81%	63.28%	100%
Standard Deviation	0.1%	0.1%	0.1%
Apache Benchmark - S.W.P.S (Reqs/sec)	25359	**15777**	**26159**
Normalized	96.94%	60.31%	100%
Standard Deviation	0.2%	0.1%	0.3%
PHPBench - P.B.S (Score)	**597554**	**594332**	597504
Normalized	100%	99.46%	99.99%
Standard Deviation	0.2%	0.3%	0.2%
PHP Micro Benchmarks - Zend bench (sec)	**0.415**	**0.416**	**0.416**
Normalized	100%	99.76%	99.76%
Standard Deviation	0.1%	0.2%	0.3%
PHP Micro Benchmarks - Zend micro_bench (sec)	**2.215**	2.214	**2.207**
Normalized	99.64%	99.68%	100%
Standard Deviation	0.5%	0.6%	0.1%

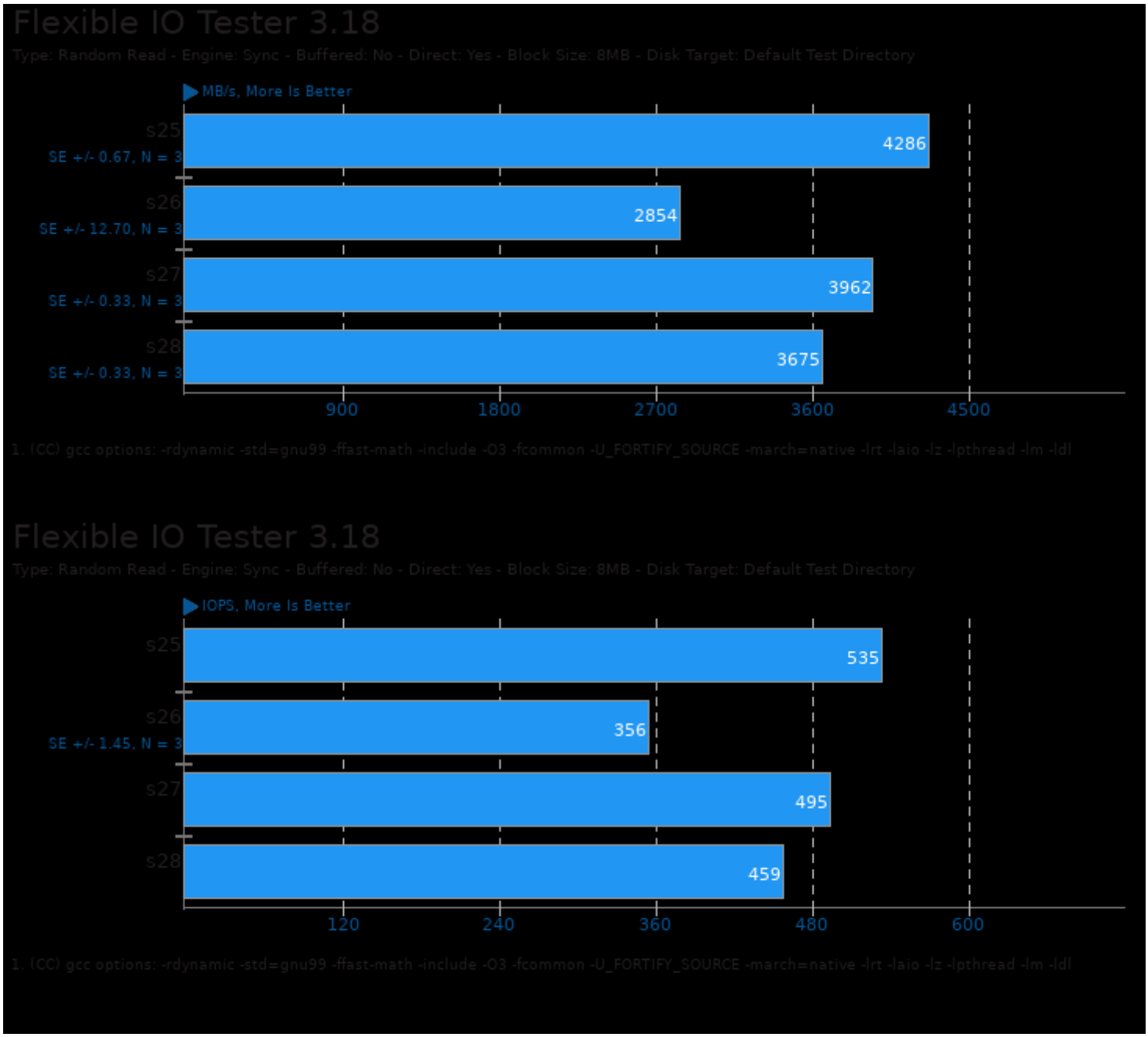

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 1MB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
2338
s26
1909
SE +/- 22.98, N = 3
s27
2555
SE +/- 1.53, N = 3
s28
2362
SE +/- 1.86, N = 3
500
1000
1500
2000
2500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 1MB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
2337
s26
1902
s27
2554
SE +/- 1.53, N = 3
s28
2360
500
1000
1500
2000
2500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

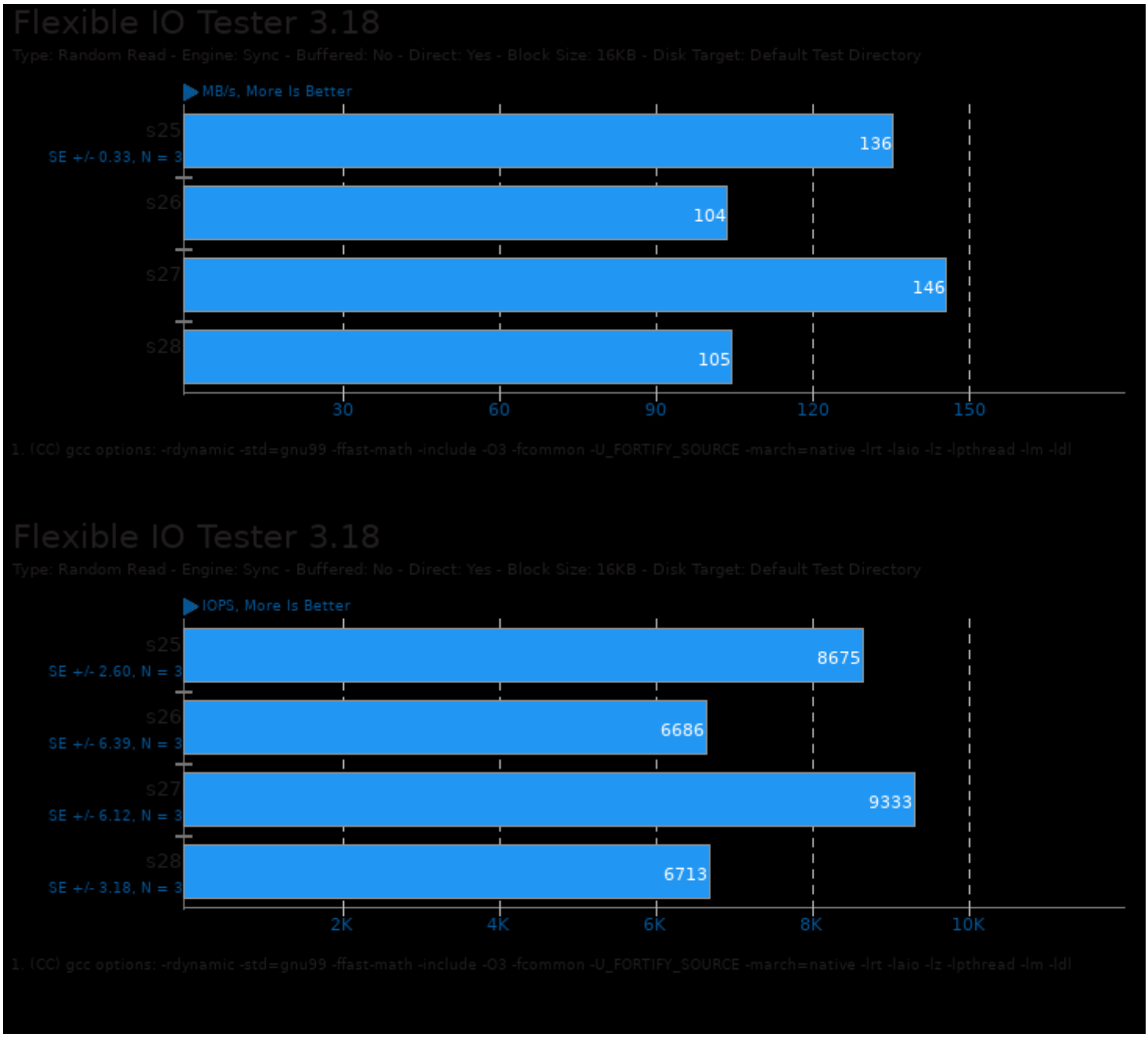

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 2MB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 1.00, N = 3
3166
s26
SE +/- 36.77, N = 12
2173
s27
SE +/- 0.67, N = 3
3220
s28
SE +/- 0.67, N = 3
3034
700
1400
2100
2800
3500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 2MB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
1582
s26
SE +/- 18.37, N = 12
1086
s27
1610
s28
1516
300
600
900
1200
1500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

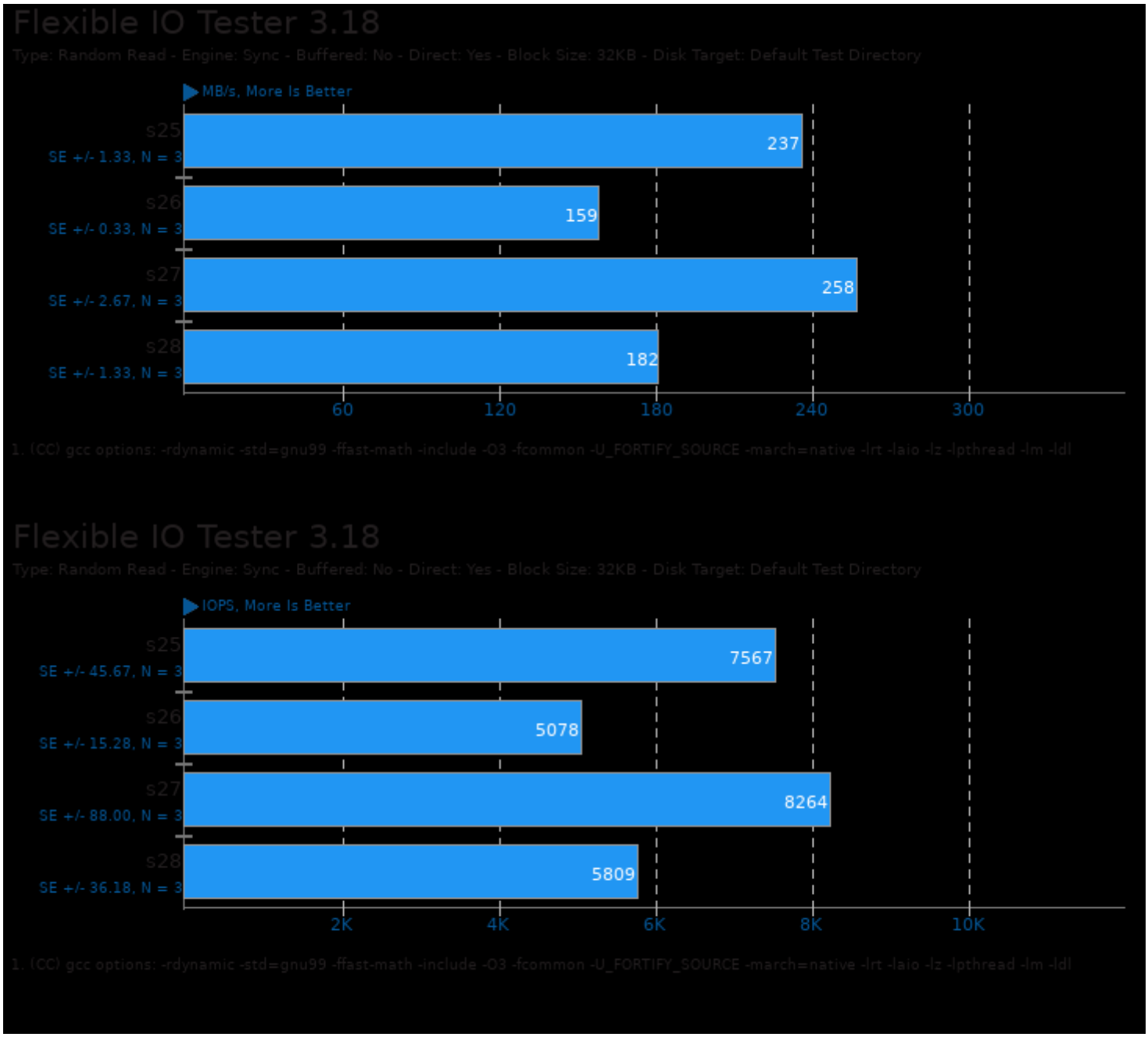

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 0.09, N = 3
44.3
s26
SE +/- 0.03, N = 3
39.3
s27
SE +/- 0.09, N = 3
48.3
s28
SE +/- 0.00, N = 3
36.7
11
22
33
44
55
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 33.33, N = 3
11333
s26
10100
s27
SE +/- 33.33, N = 3
12367
s28
SE +/- 5.00, N = 3
9391
3K
6K
9K
12K
15K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

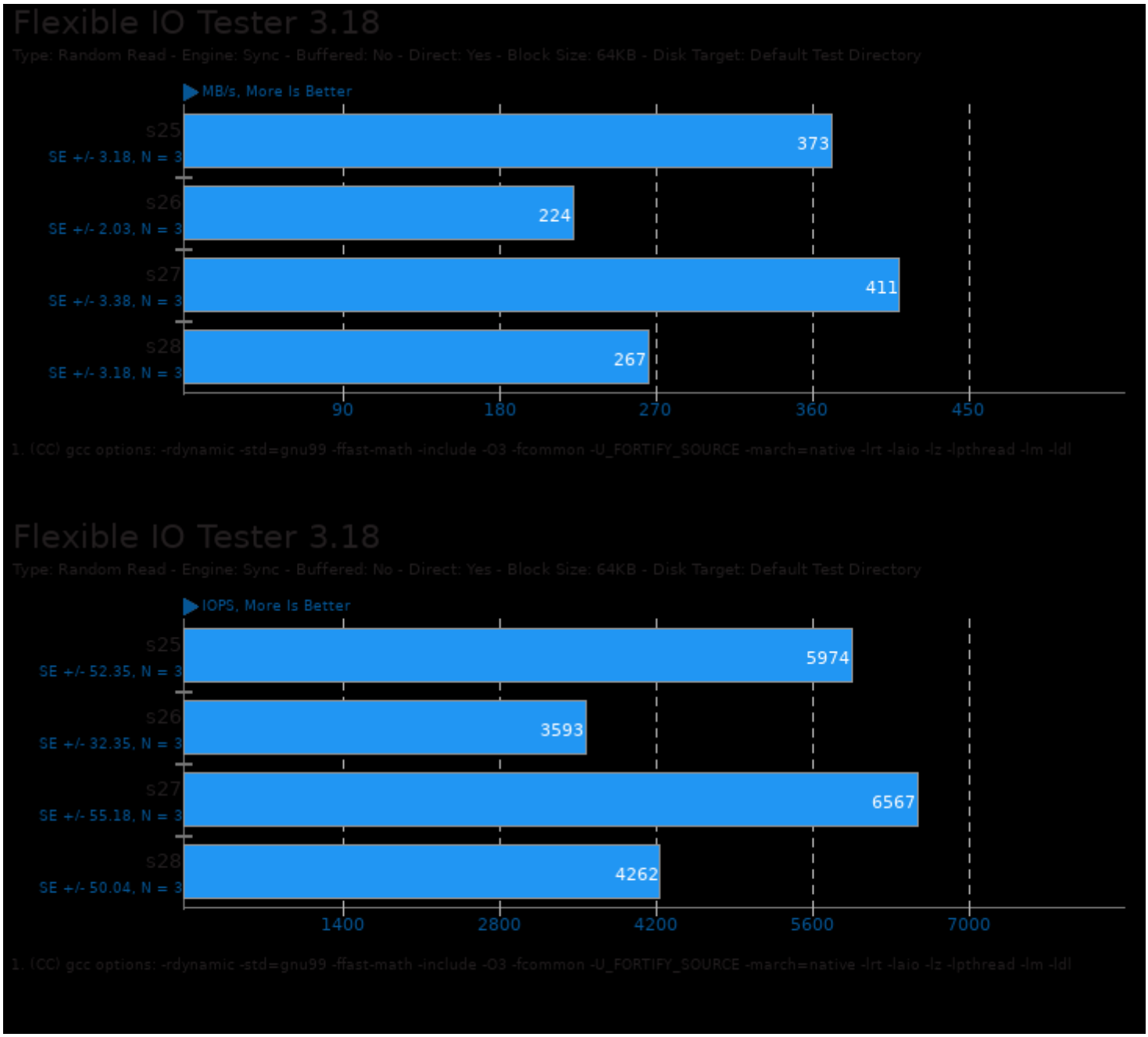

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 4MB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 12.20, N = 3
3674
s26
SE +/- 6.66, N = 3
2475
s27
3539
s28
SE +/- 0.67, N = 3
3346
800
1600
2400
3200
4000
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 4MB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 3.18, N = 3
918
s26
SE +/- 1.76, N = 3
618
s27
884
s28
836
200
400
600
800
1000
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

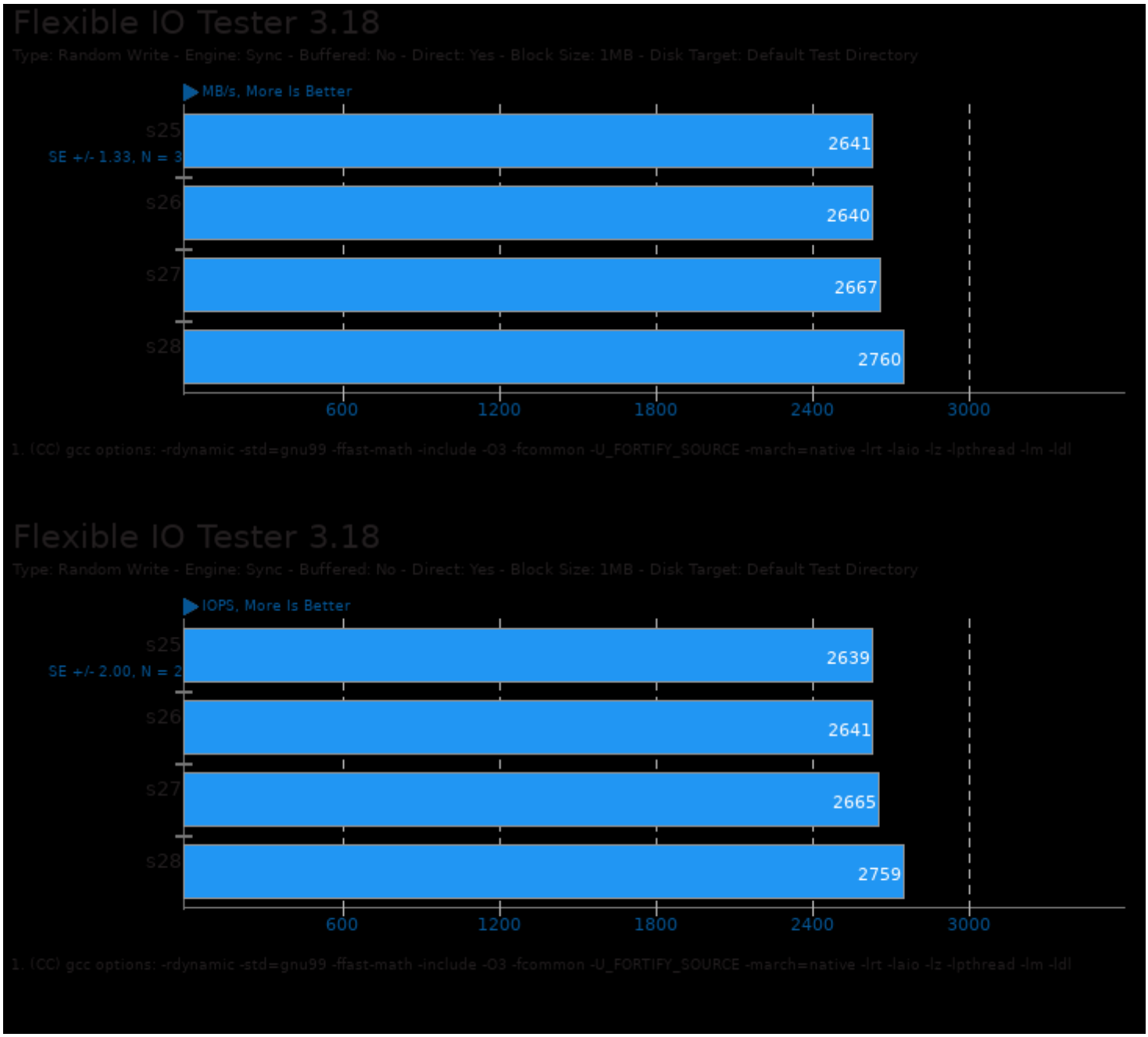

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 0.03, N = 3
79.3
s26
SE +/- 0.07, N = 3
65.6
s27
SE +/- 0.06, N = 3
85.3
s28
SE +/- 0.30, N = 3
64.6
20
40
60
80
100
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 33.33, N = 3
10167
s26
SE +/- 7.02, N = 3
8401
s27
10900
s28
SE +/- 2.33, N = 3
8312
2K
4K
6K
8K
10K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

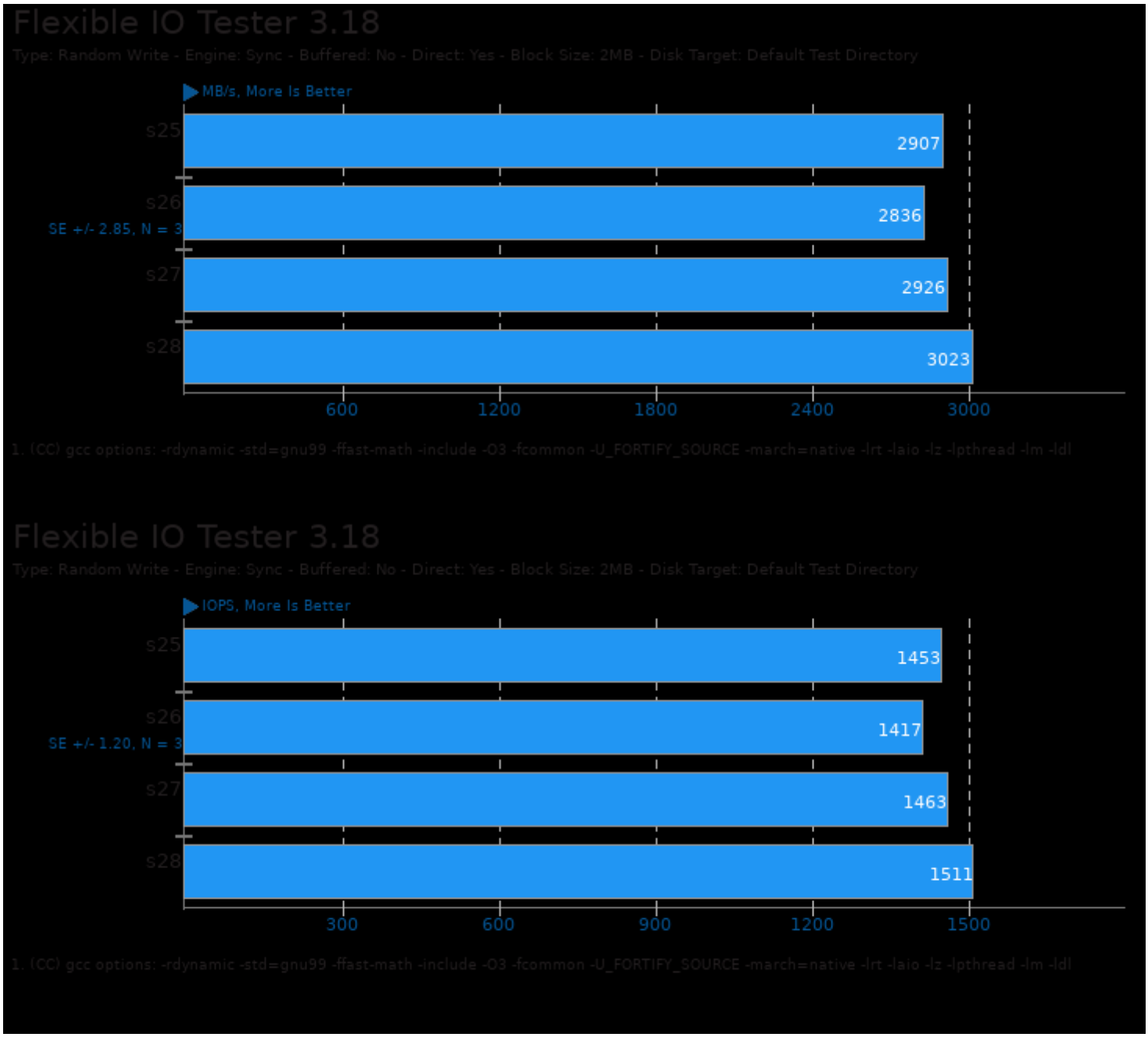

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 0.67, N = 3
4286
s26
SE +/- 12.70, N = 3
2854
s27
SE +/- 0.33, N = 3
3962
s28
SE +/- 0.33, N = 3
3675
900
1800
2700
3600
4500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
535
s26
SE +/- 1.45, N = 3
356
s27
495
s28
459
120
240
360
480
600
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

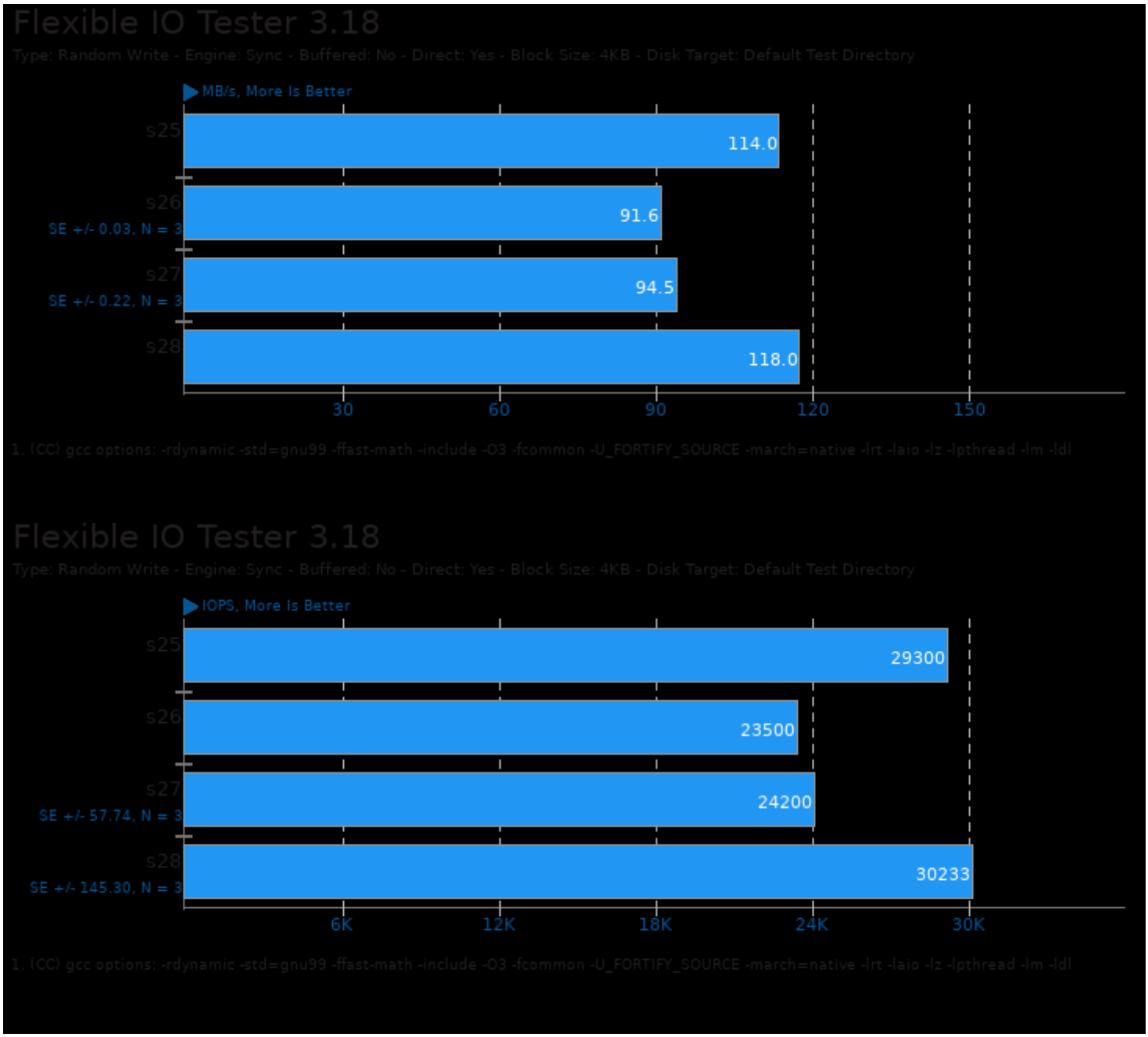

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 16KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 0.33, N = 3
136
s26
104
s27
146
s28
105
30
60
90
120
150
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 16KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 2.60, N = 3
8675
s26
SE +/- 6.39, N = 3
6686
s27
SE +/- 6.12, N = 3
9333
s28
SE +/- 3.18, N = 3
6713
2K
4K
6K
8K
10K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

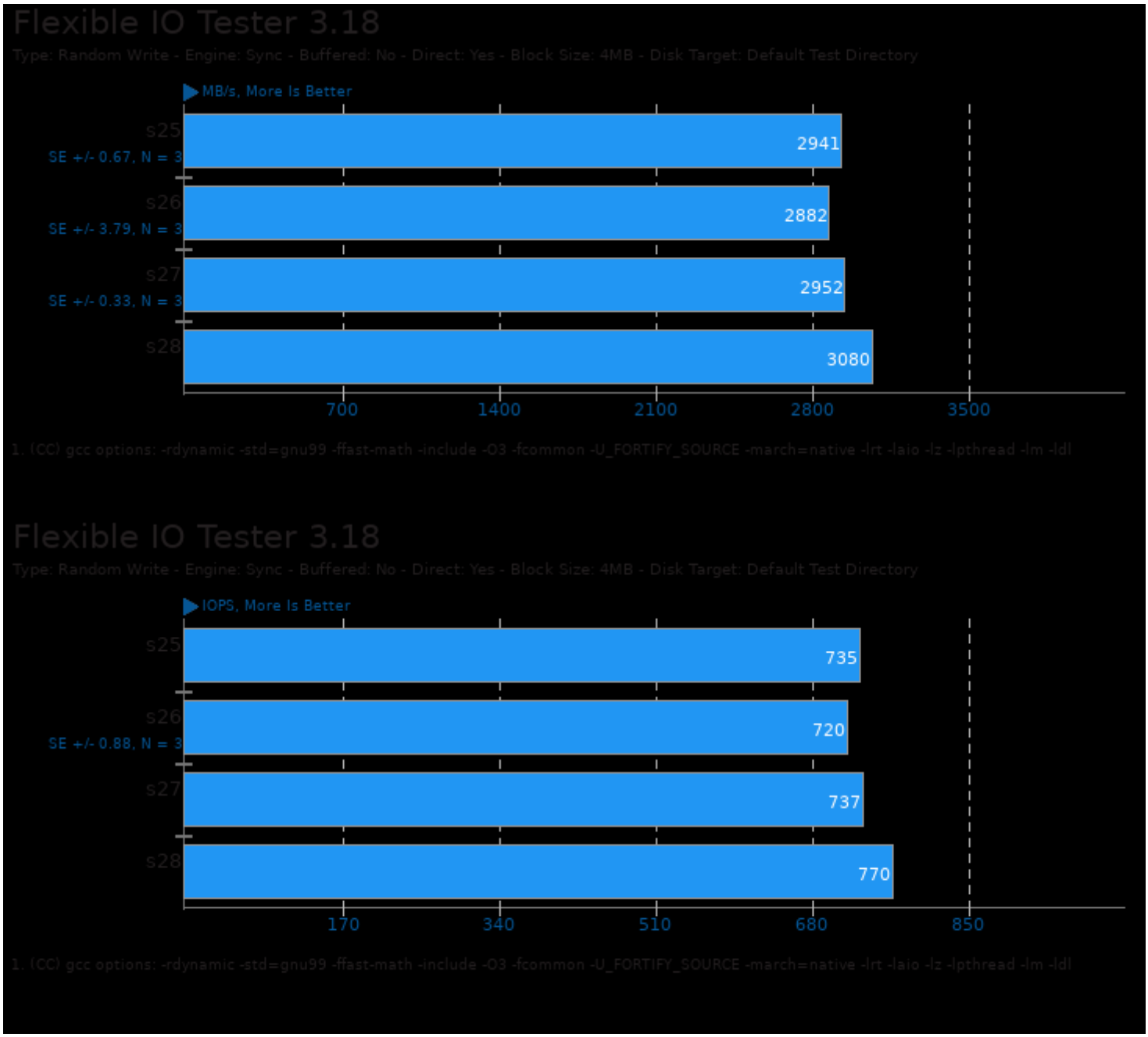

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 1.33, N = 3
237
s26
SE +/- 0.33, N = 3
159
s27
SE +/- 2.67, N = 3
258
s28
SE +/- 1.33, N = 3
182
60
120
180
240
300
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 45.67, N = 3
7567
s26
SE +/- 15.28, N = 3
5078
s27
SE +/- 88.00, N = 3
8264
s28
SE +/- 36.18, N = 3
5809
2K
4K
6K
8K
10K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

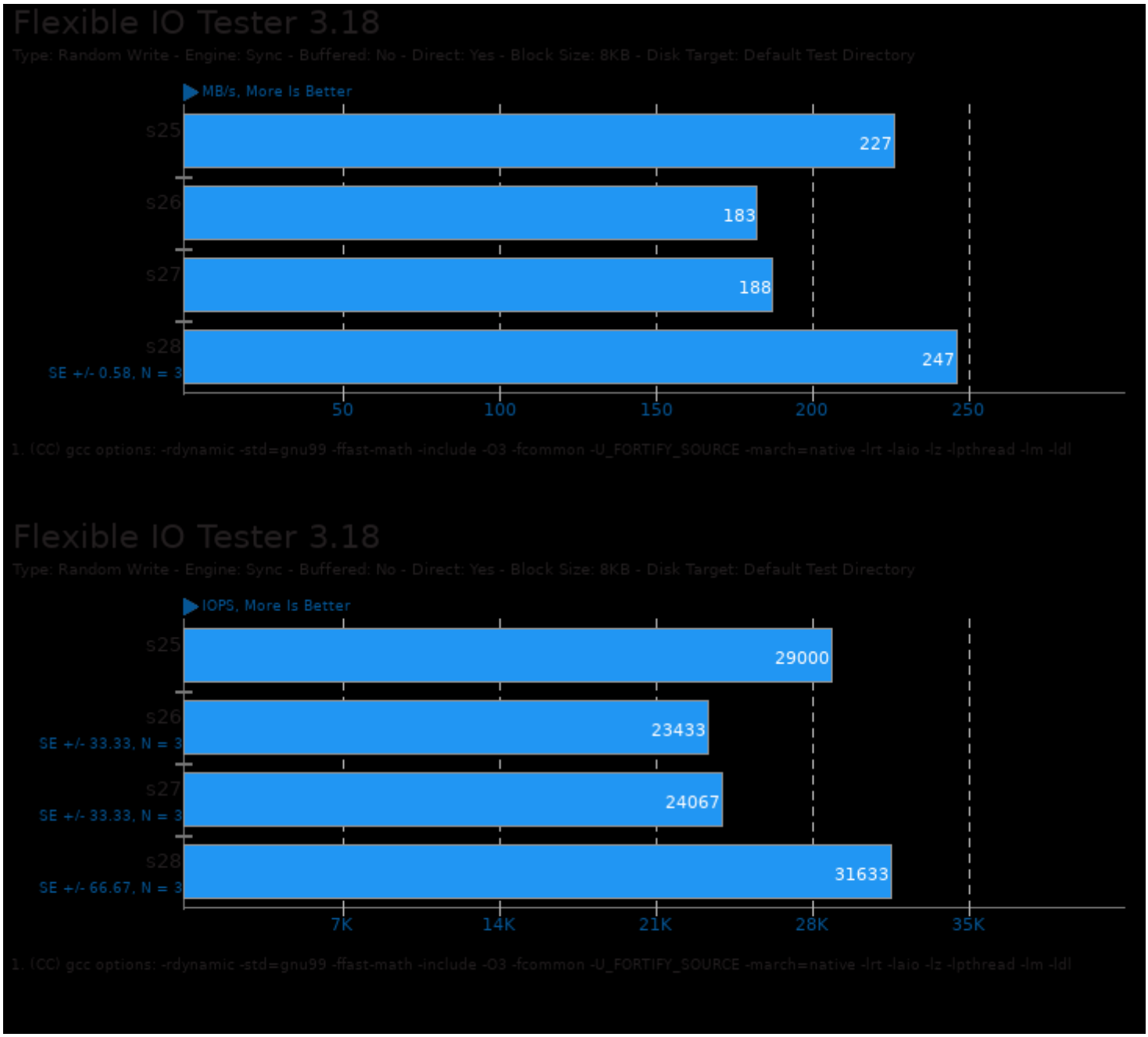

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 3.18, N = 3
373
s26
SE +/- 2.03, N = 3
224
s27
SE +/- 3.38, N = 3
411
s28
SE +/- 3.18, N = 3
267
90
180
270
360
450
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 52.35, N = 3
5974
s26
SE +/- 32.35, N = 3
3593
s27
SE +/- 55.18, N = 3
6567
s28
SE +/- 50.04, N = 3
4262
1400
2800
4200
5600
7000
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

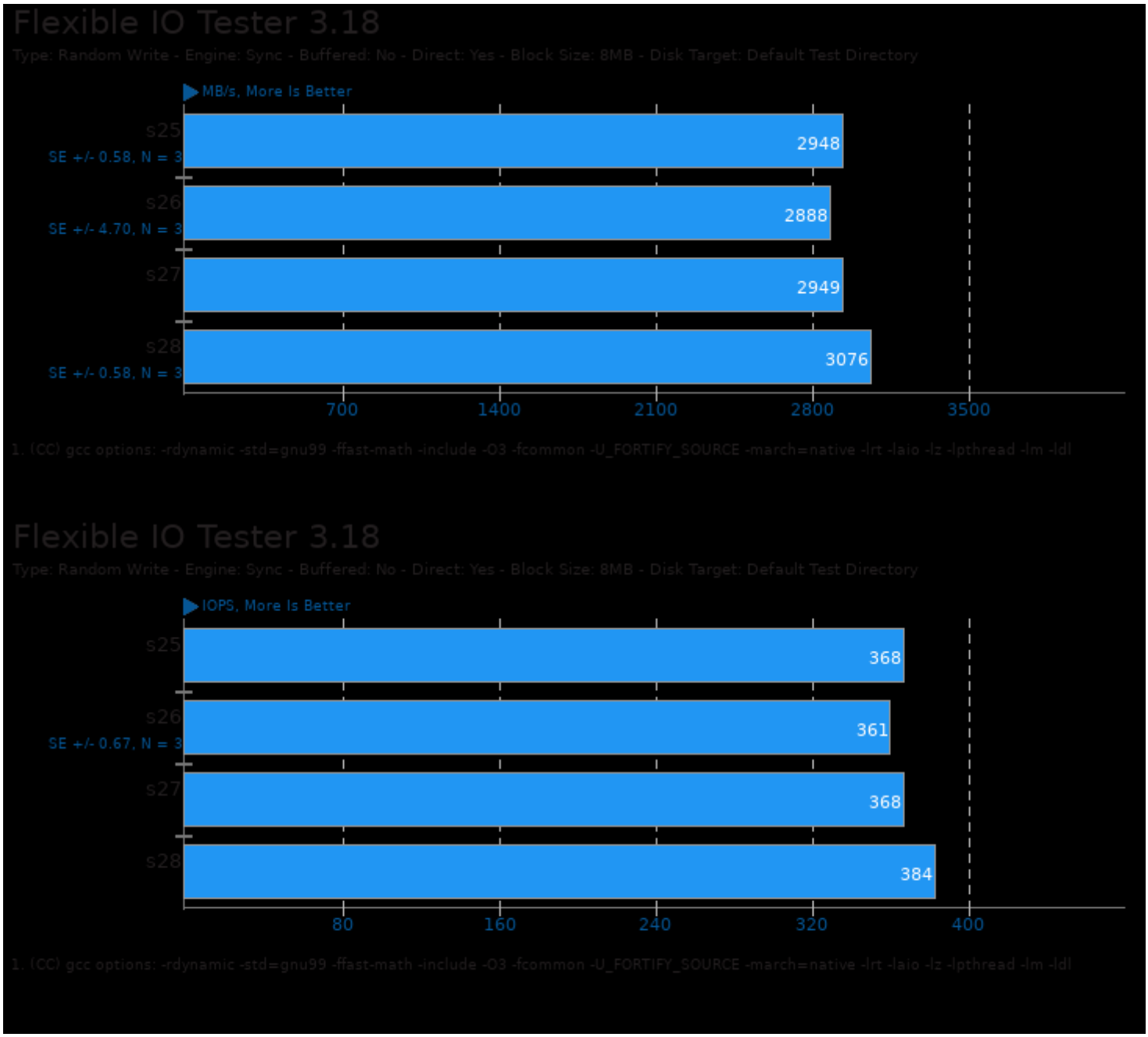

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 1MB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 1.33, N = 3
2641
s26
2640
s27
2667
s28
2760
600
1200
1800
2400
3000
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 1MB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 2.00, N = 2
2639
s26
2641
s27
2665
s28
2759
600
1200
1800
2400
3000
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

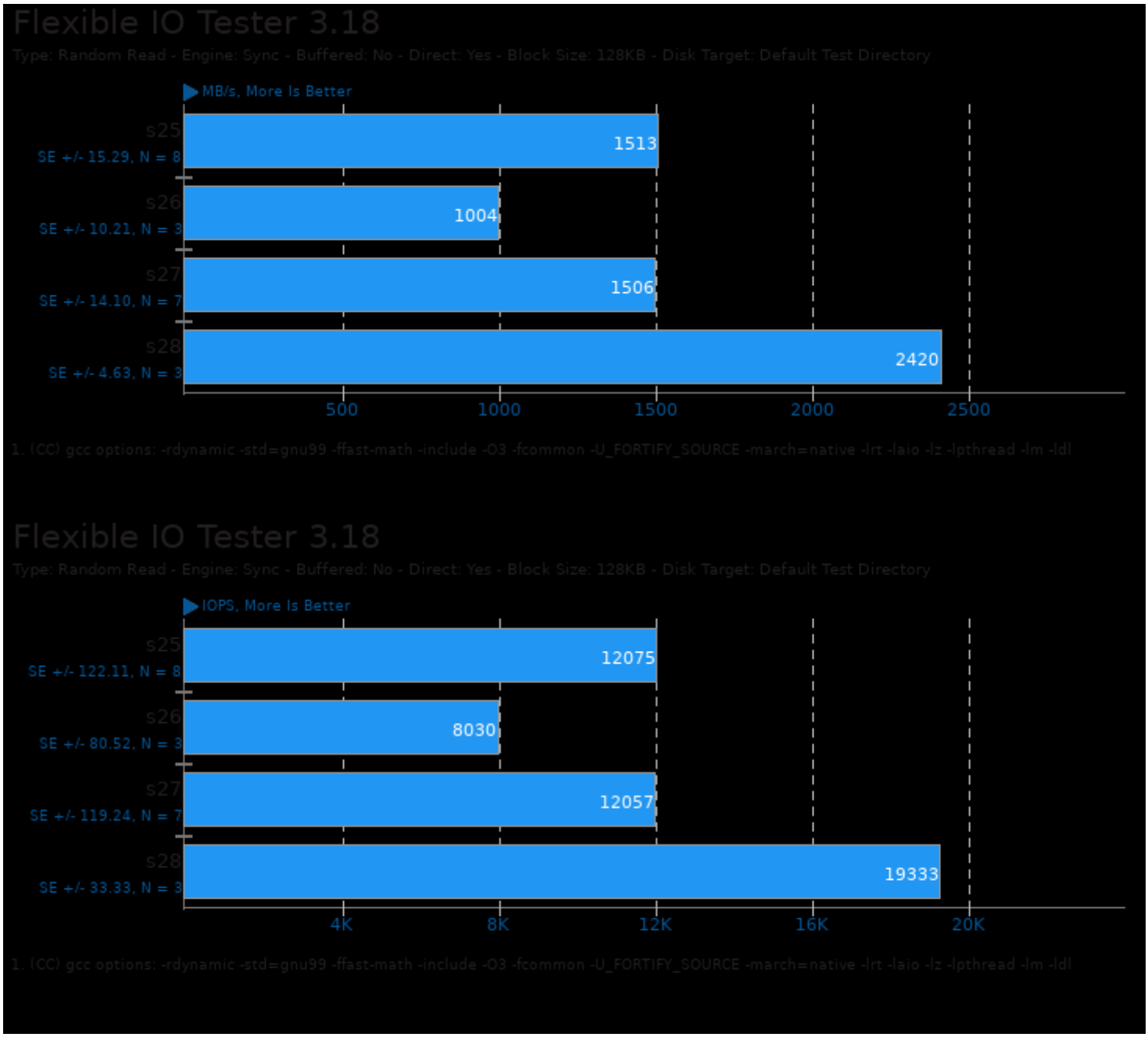

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 2MB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
2907
s26
2836
SE +/- 2.85, N = 3
s27
2926
s28
3023
600
1200
1800
2400
3000
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 2MB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
1453
s26
1417
SE +/- 1.20, N = 3
s27
1463
s28
1511
300
600
900
1200
1500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

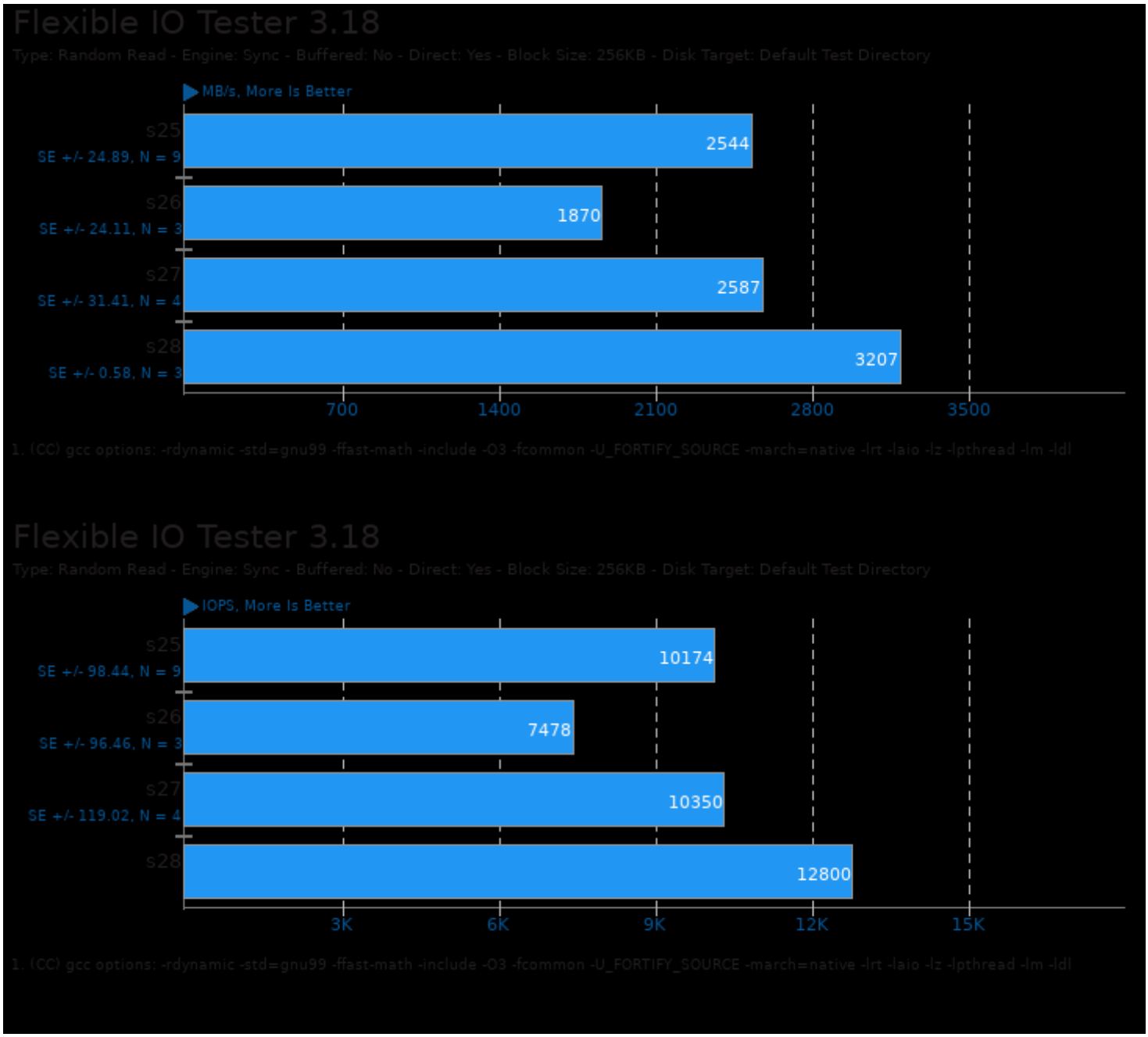

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
114.0
s26
91.6
SE +/- 0.03, N = 3
s27
94.5
SE +/- 0.22, N = 3
s28
118.0
30
60
90
120
150
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
29300
s26
23500
s27
24200
SE +/- 57.74, N = 3
s28
30233
SE +/- 145.30, N = 3
6K
12K
18K
24K
30K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

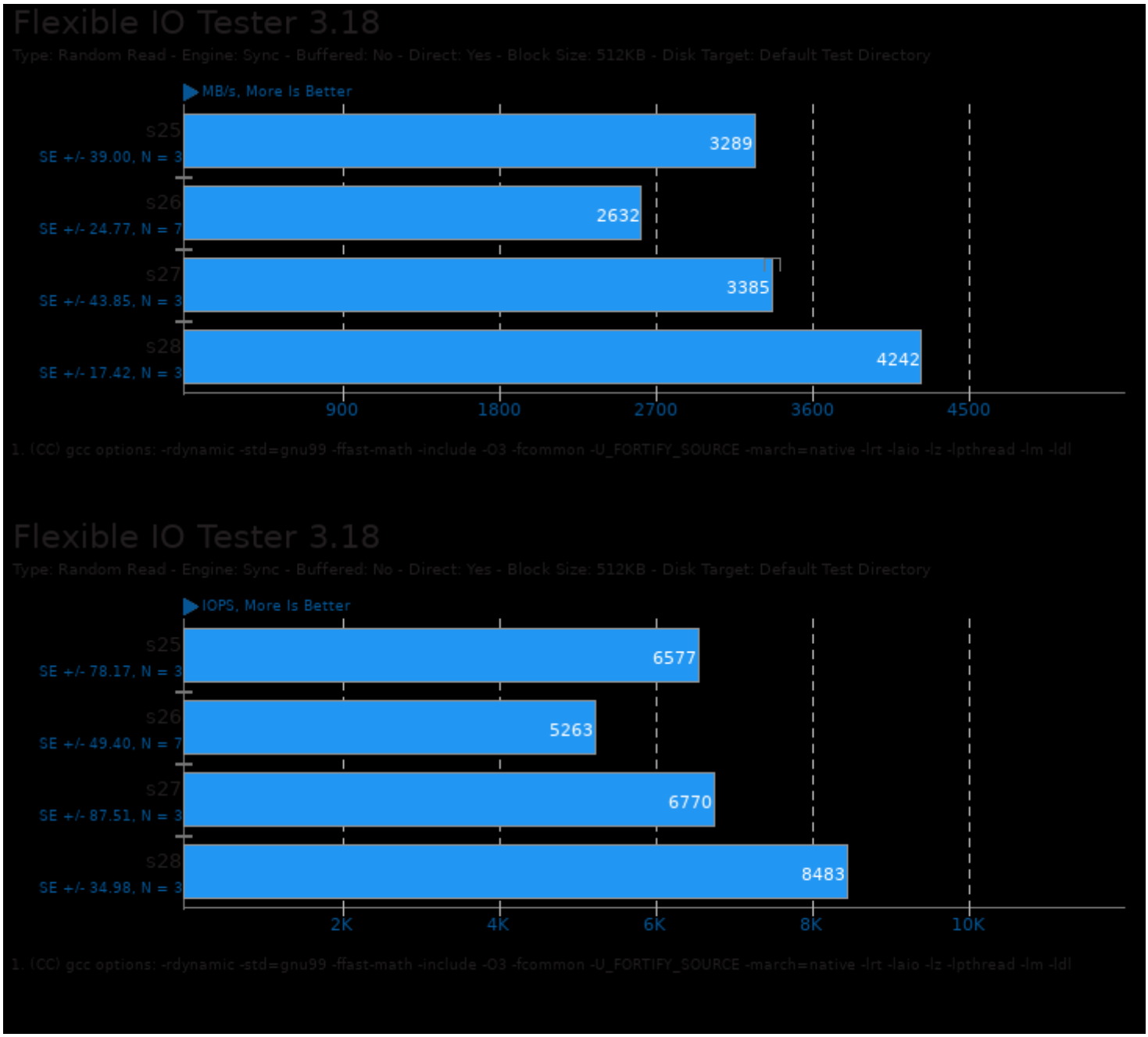

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 4MB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
2941
SE +/- 0.67, N = 3
s26
2882
SE +/- 3.79, N = 3
s27
2952
SE +/- 0.33, N = 3
s28
3080
700
1400
2100
2800
3500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 4MB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
735
s26
720
SE +/- 0.88, N = 3
s27
737
s28
770
170
340
510
680
850
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

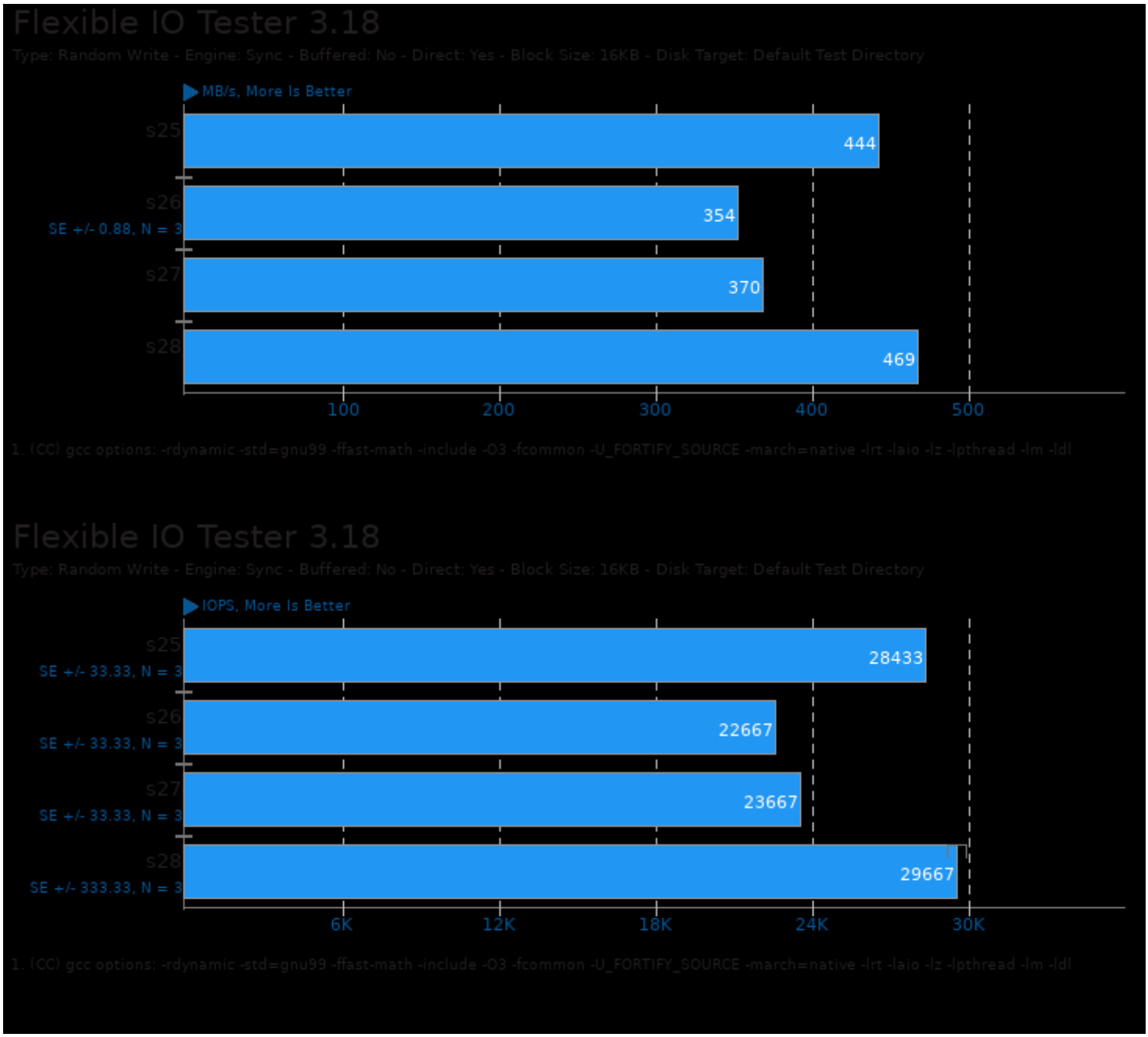

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
227
s26
183
s27
188
s28
247
SE +/- 0.58, N = 3
50
100
150
200
250
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
29000
s26
23433
SE +/- 33.33, N = 3
s27
24067
SE +/- 33.33, N = 3
s28
31633
SE +/- 66.67, N = 3
7K
14K
21K
28K
35K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

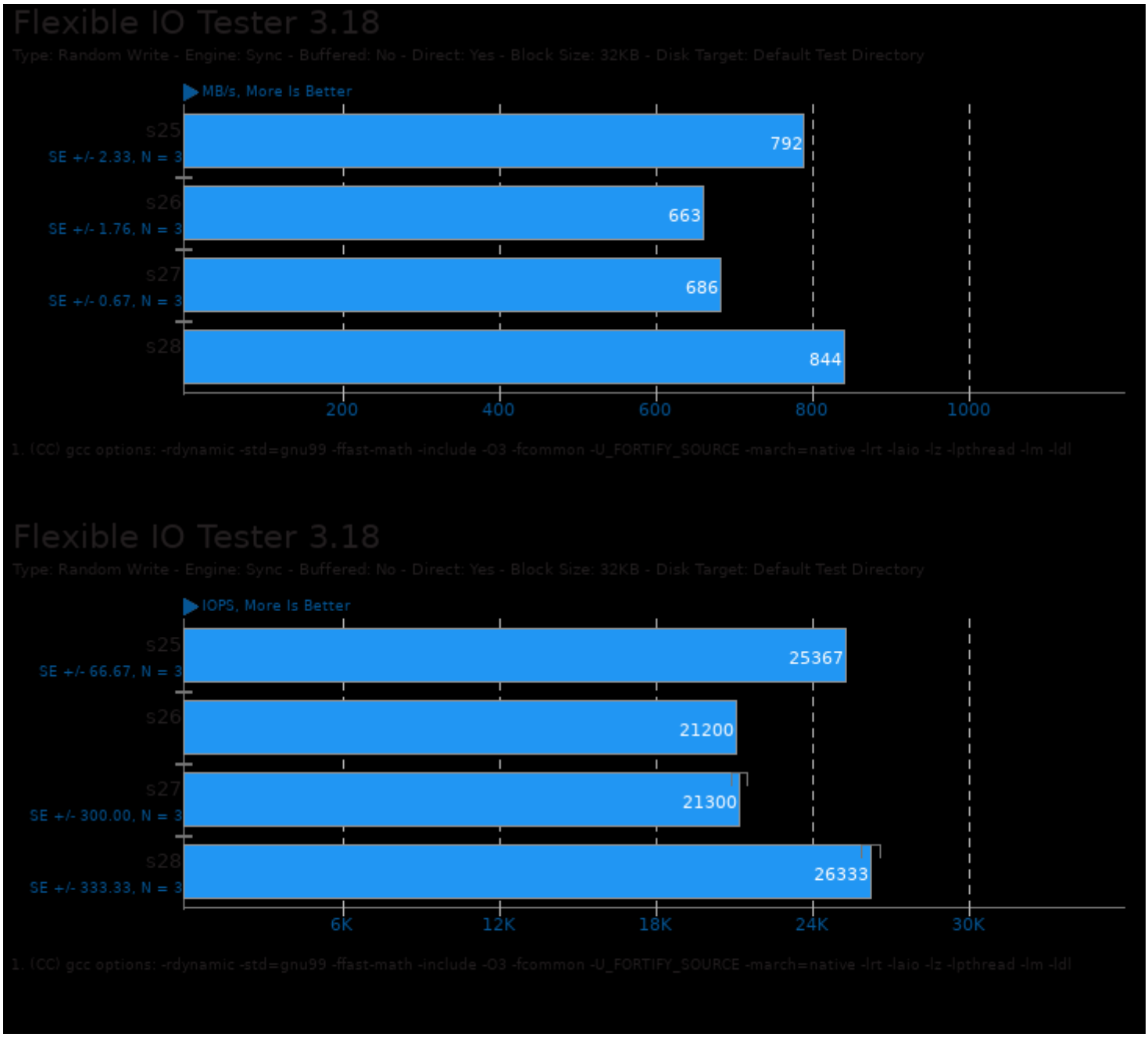

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
2948
SE +/- 0.58, N = 3
s26
2888
SE +/- 4.70, N = 3
s27
2949
s28
3076
SE +/- 0.58, N = 3
700
1400
2100
2800
3500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
368
s26
361
SE +/- 0.67, N = 3
s27
368
s28
384
80
160
240
320
400
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

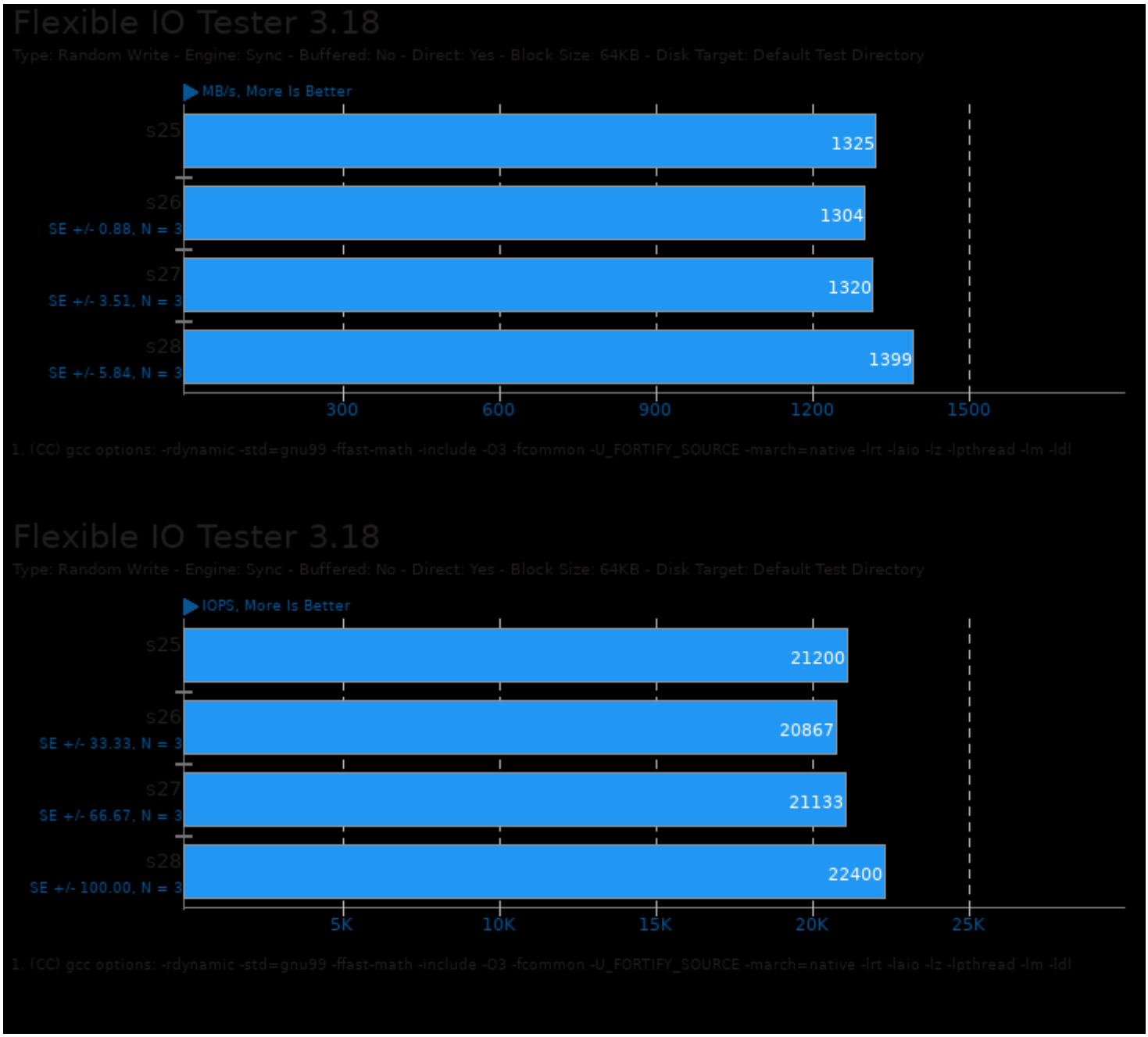

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 15.29, N = 8
1513
s26
SE +/- 10.21, N = 3
1004
s27
SE +/- 14.10, N = 7
1506
s28
SE +/- 4.63, N = 3
2420
500
1000
1500
2000
2500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 122.11, N = 8
12075
s26
SE +/- 80.52, N = 3
8030
s27
SE +/- 119.24, N = 7
12057
s28
SE +/- 33.33, N = 3
19333
4K
8K
12K
16K
20K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

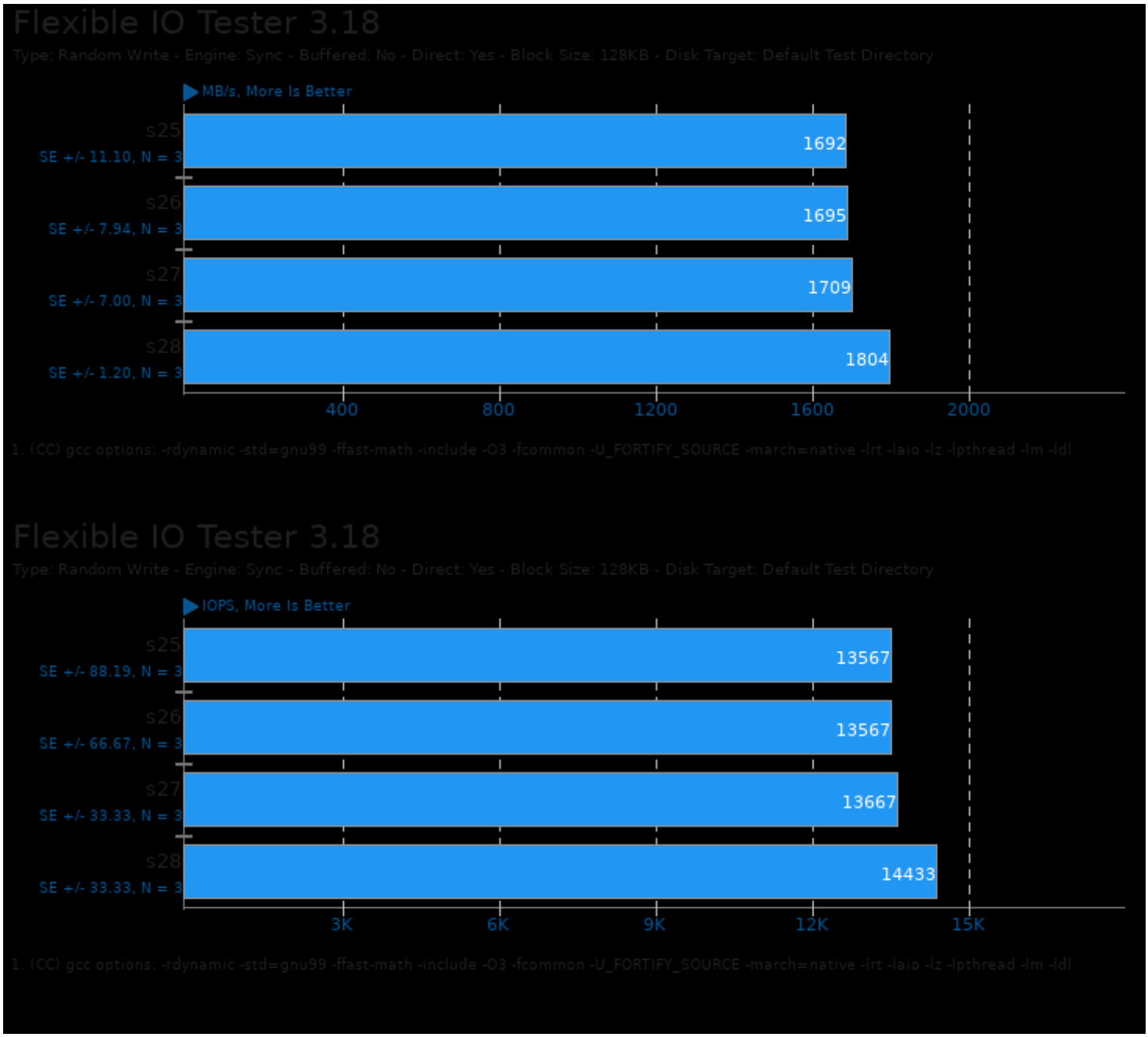

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 24.89, N = 9
2544
s26
SE +/- 24.11, N = 3
1870
s27
SE +/- 31.41, N = 4
2587
s28
SE +/- 0.58, N = 3
3207
700
1400
2100
2800
3500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 98.44, N = 9
10174
s26
SE +/- 96.46, N = 3
7478
s27
SE +/- 119.02, N = 4
10350
s28
12800
3K
6K
9K
12K
15K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

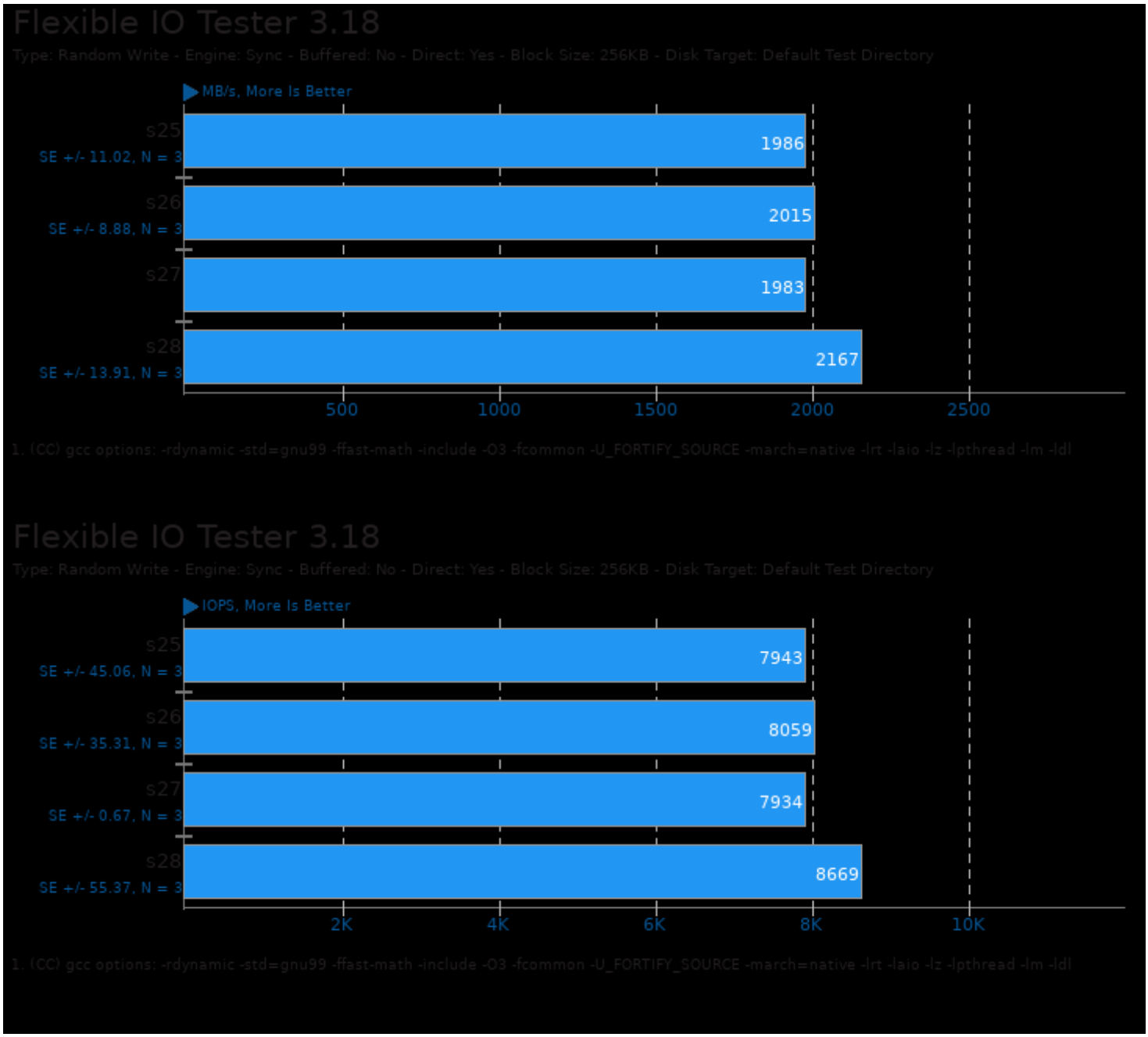

Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 512KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 39.00, N = 3
3289
s26
SE +/- 24.77, N = 7
2632
s27
SE +/- 43.85, N = 3
3385
s28
SE +/- 17.42, N = 3
4242
900
1800
2700
3600
4500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Read - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 512KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 78.17, N = 3
6577
s26
SE +/- 49.40, N = 7
5263
s27
SE +/- 87.51, N = 3
6770
s28
SE +/- 34.98, N = 3
8483
2K
4K
6K
8K
10K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

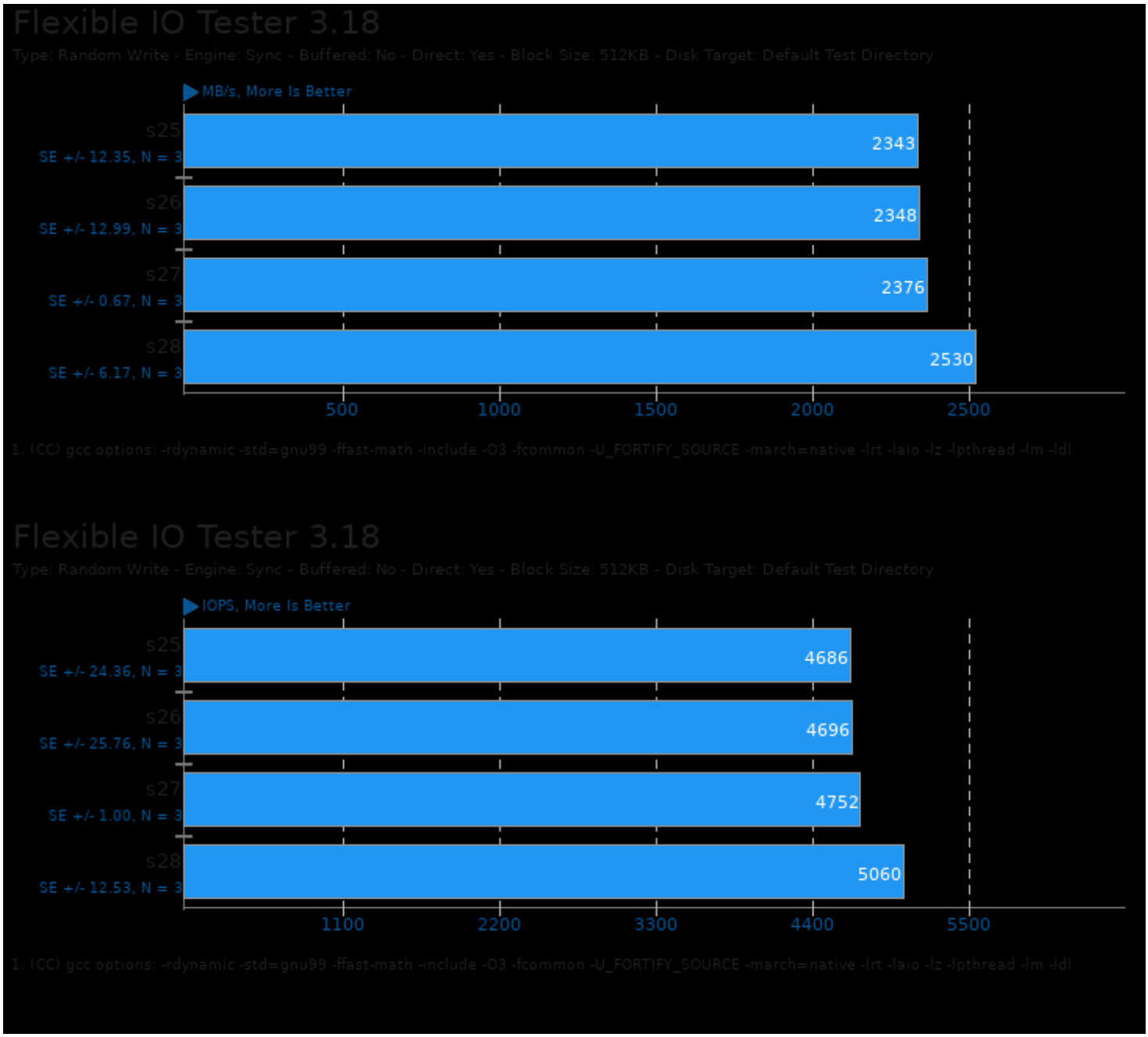

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 16KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
444
s26
354
SE +/- 0.88, N = 3
s27
370
s28
469
100
200
300
400
500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 16KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 33.33, N = 3
28433
s26
SE +/- 33.33, N = 3
22667
s27
SE +/- 33.33, N = 3
23667
s28
SE +/- 333.33, N = 3
29667
6K
12K
18K
24K
30K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

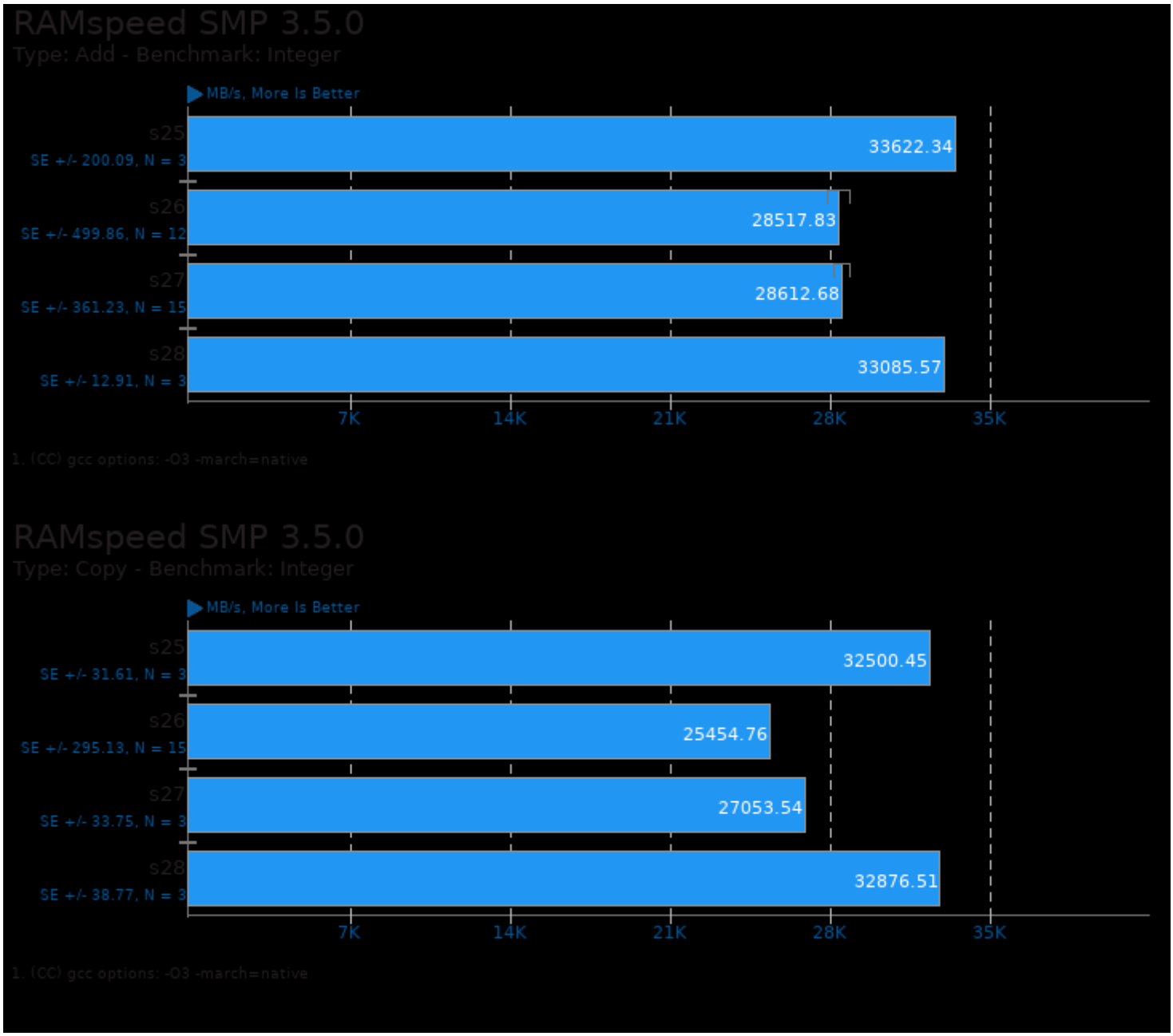

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 2.33, N = 3
792
s26
SE +/- 1.76, N = 3
663
s27
SE +/- 0.67, N = 3
686
s28
844
200
400
600
800
1000
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 66.67, N = 3
25367
s26
21200
s27
SE +/- 300.00, N = 3
21300
s28
SE +/- 333.33, N = 3
26333
6K
12K
18K
24K
30K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

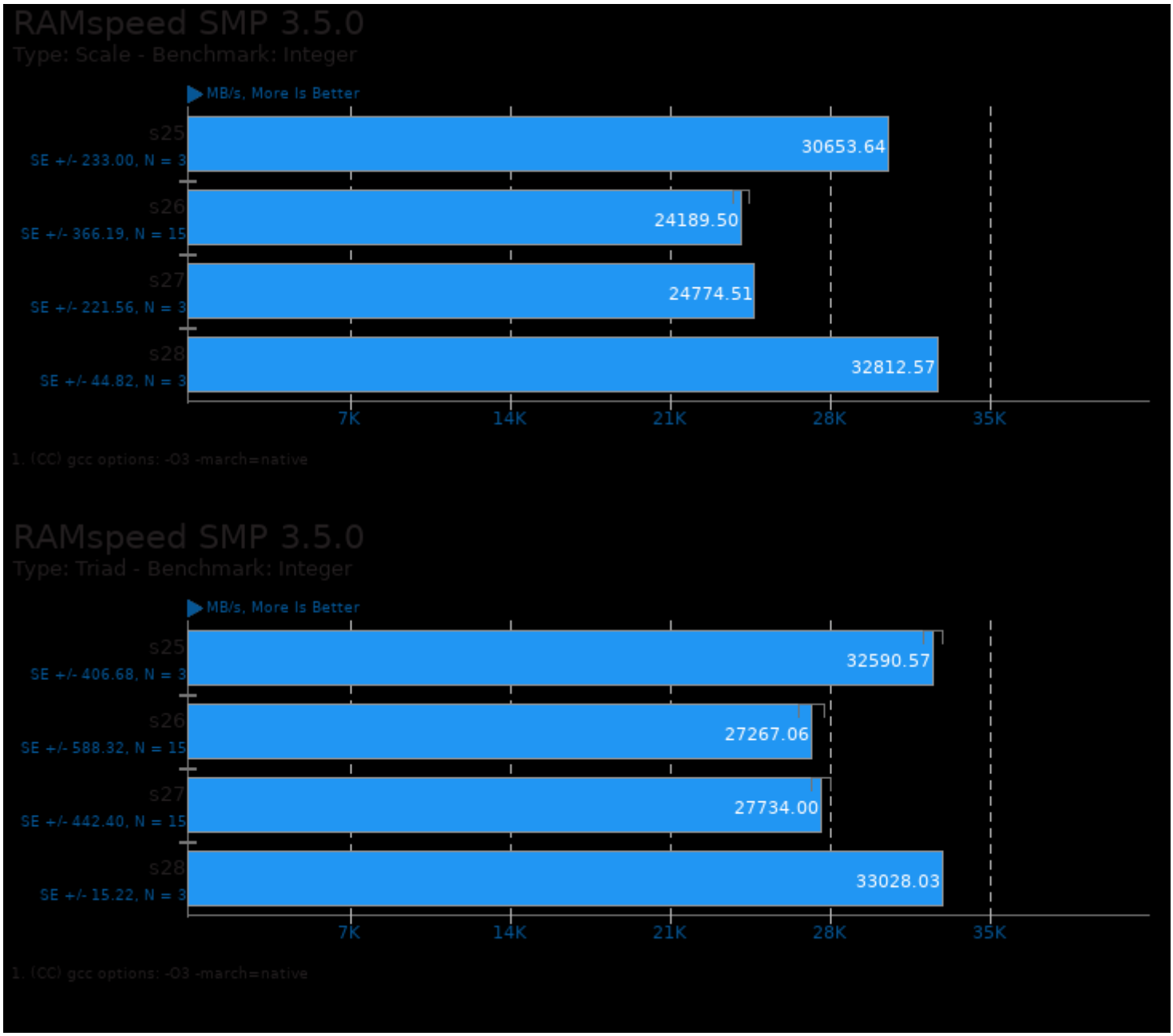

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
1325
s26
SE +/- 0.88, N = 3
1304
s27
SE +/- 3.51, N = 3
1320
s28
SE +/- 5.84, N = 3
1399
300
600
900
1200
1500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
21200
s26
SE +/- 33.33, N = 3
20867
s27
SE +/- 66.67, N = 3
21133
s28
SE +/- 100.00, N = 3
22400
5K
10K
15K
20K
25K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

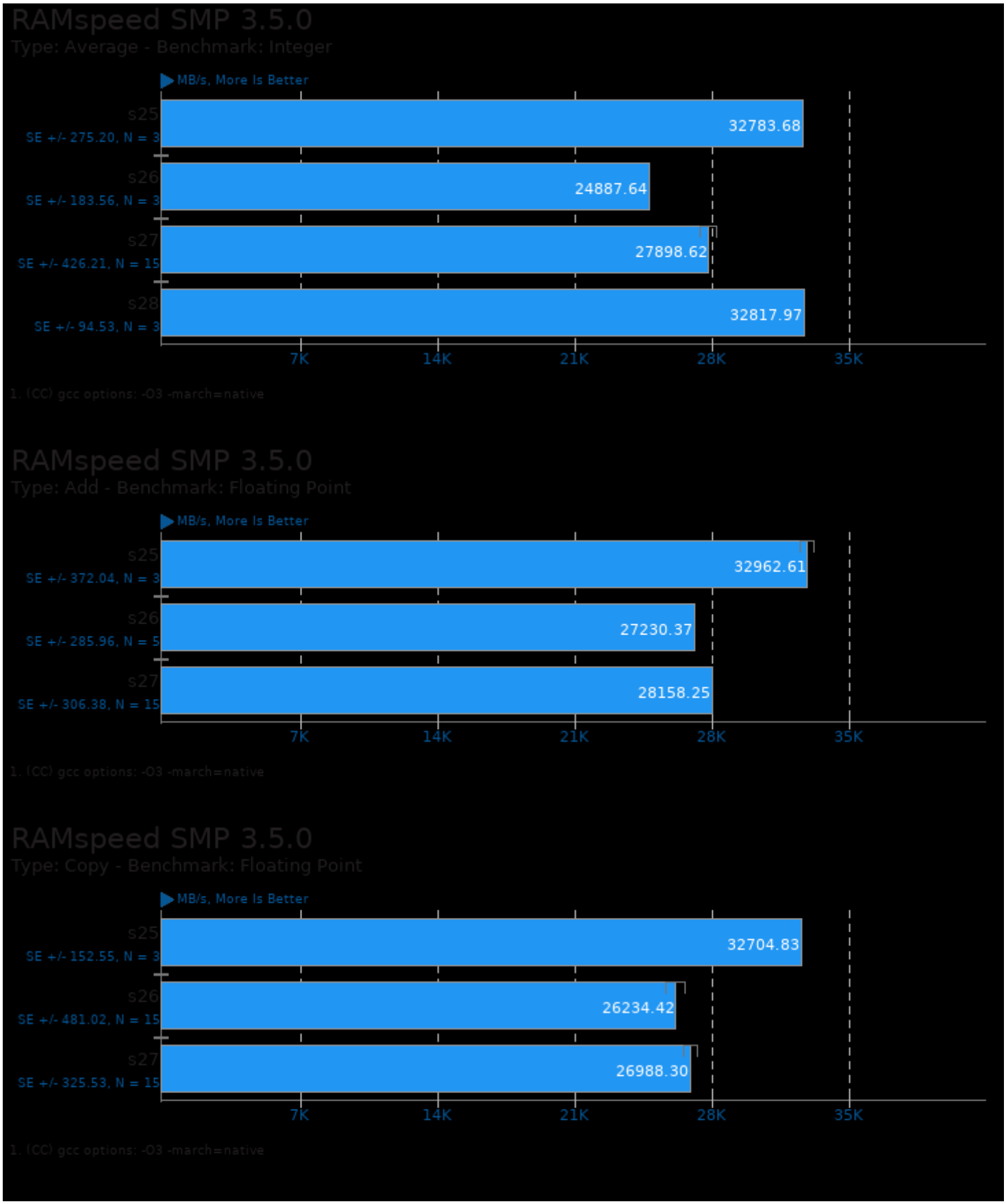

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 11.10, N = 3
1692
s26
SE +/- 7.94, N = 3
1695
s27
SE +/- 7.00, N = 3
1709
s28
SE +/- 1.20, N = 3
1804
400
800
1200
1600
2000
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 88.19, N = 3
13567
s26
SE +/- 66.67, N = 3
13567
s27
SE +/- 33.33, N = 3
13667
s28
SE +/- 33.33, N = 3
14433
3K
6K
9K
12K
15K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

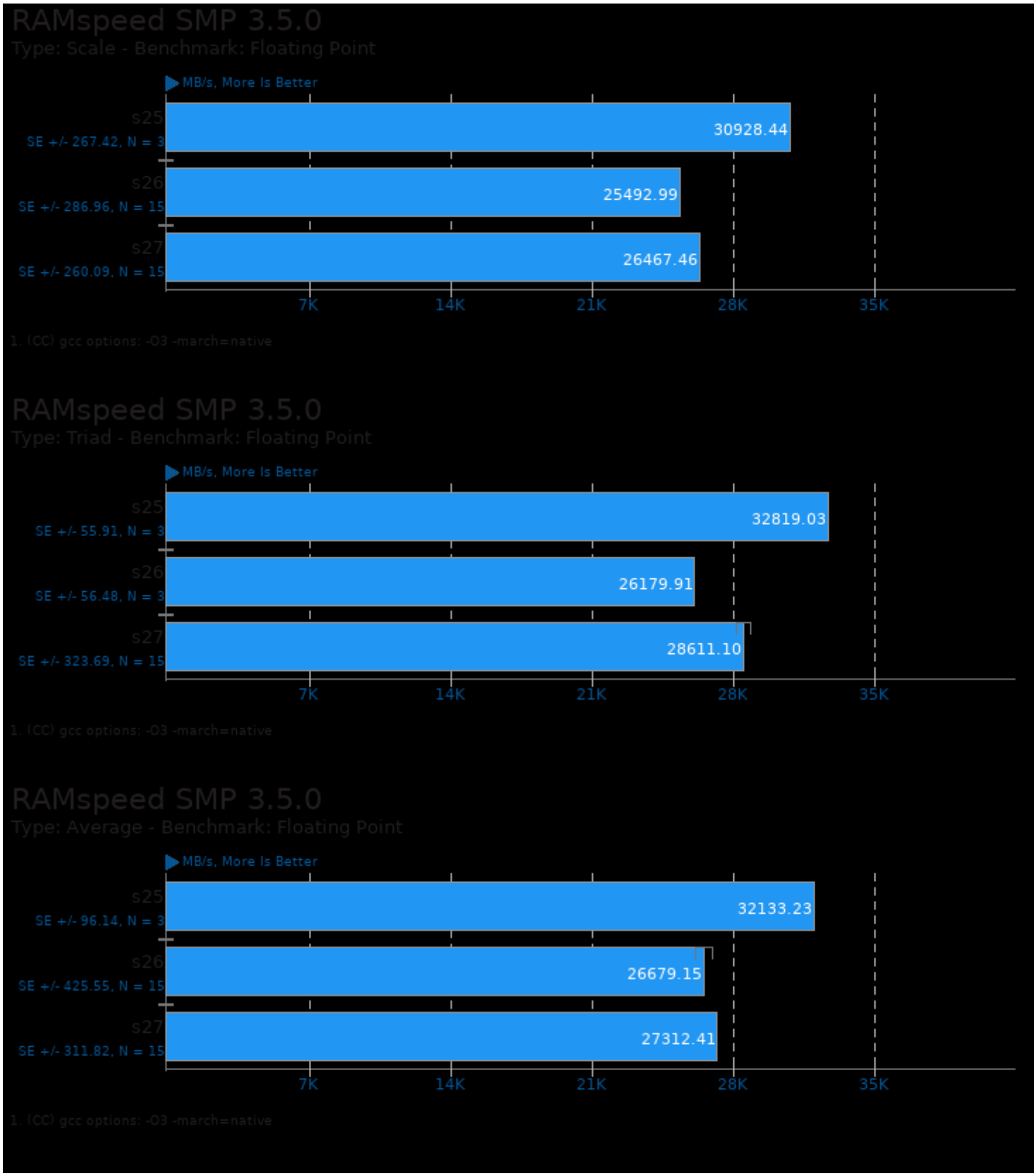

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 11.02, N = 3
1986
s26
SE +/- 8.88, N = 3
2015
s27
1983
s28
SE +/- 13.91, N = 3
2167
500
1000
1500
2000
2500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 45.06, N = 3
7943
s26
SE +/- 35.31, N = 3
8059
s27
SE +/- 0.67, N = 3
7934
s28
SE +/- 55.37, N = 3
8669
2K
4K
6K
8K
10K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

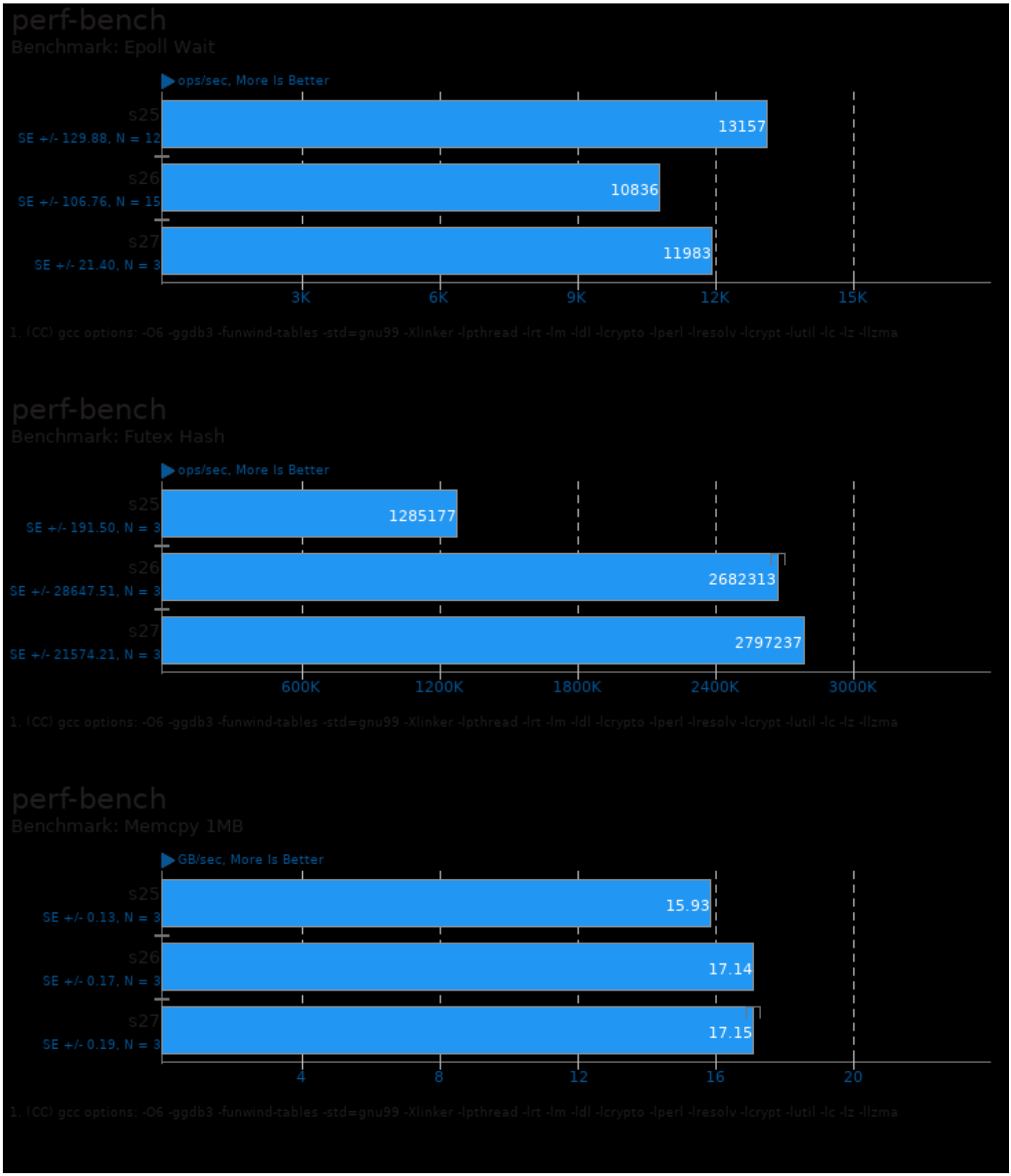

Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 512KB - Disk Target: Default Test Directory
MB/s, More Is Better
s25
SE +/- 12.35, N = 3
2343
s26
SE +/- 12.99, N = 3
2348
s27
SE +/- 0.67, N = 3
2376
s28
SE +/- 6.17, N = 3
2530
500
1000
1500
2000
2500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl
Flexible IO Tester 3.18
Type: Random Write - Engine: Sync - Buffered: No - Direct: Yes - Block Size: 512KB - Disk Target: Default Test Directory
IOPS, More Is Better
s25
SE +/- 24.36, N = 3
4686
s26
SE +/- 25.76, N = 3
4696
s27
SE +/- 1.00, N = 3
4752
s28
SE +/- 12.53, N = 3
5060
1100
2200
3300
4400
5500
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

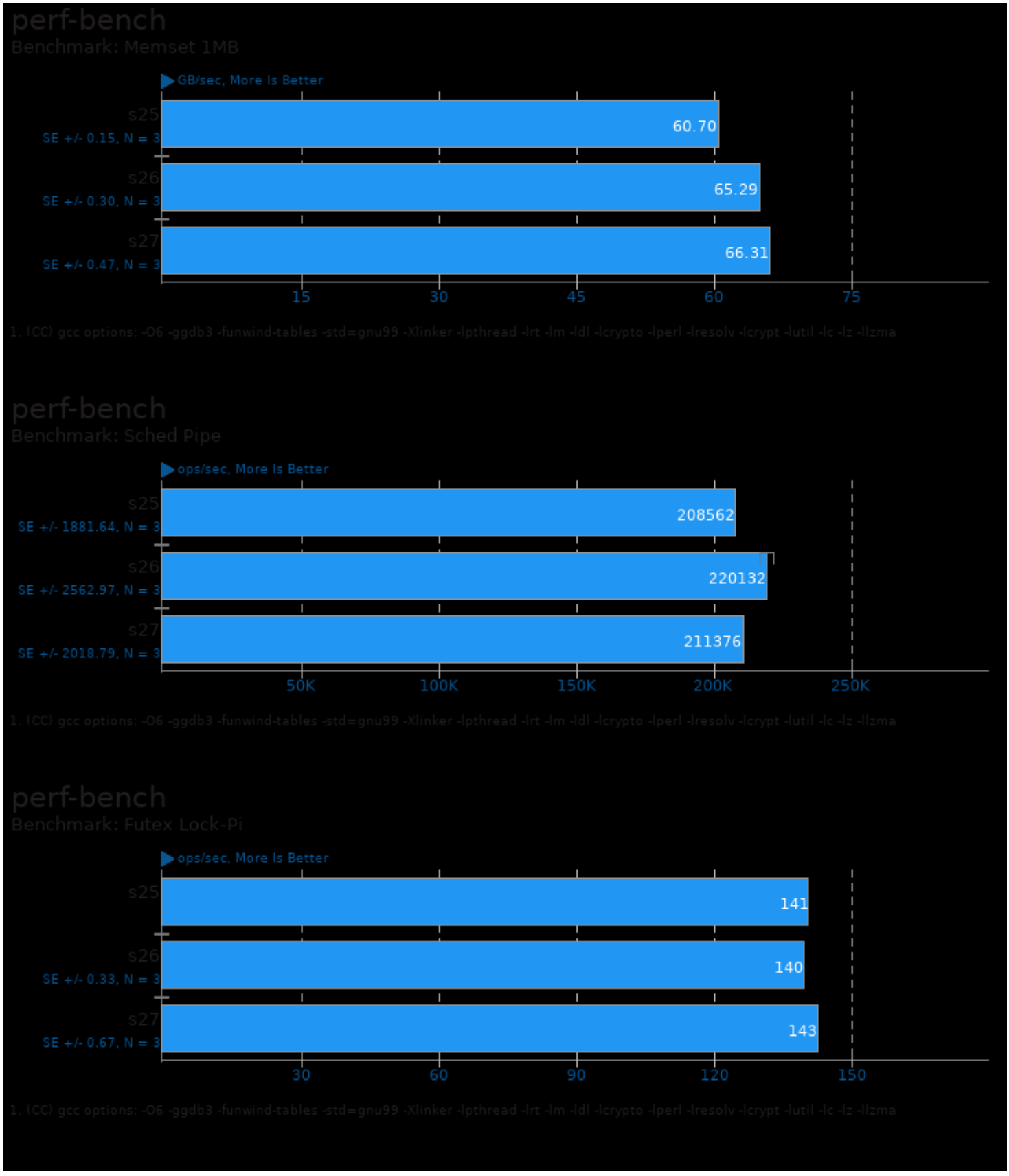

RAMspeed SMP 3.5.0
Type: Add - Benchmark: Integer
MB/s, More Is Better
s25
SE +/- 200.09, N = 3
33622.34
s26
SE +/- 499.86, N = 12
28517.83
s27
SE +/- 361.23, N = 15
28612.68
s28
SE +/- 12.91, N = 3
33085.57
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Copy - Benchmark: Integer
MB/s, More Is Better
s25
SE +/- 31.61, N = 3
32500.45
s26
SE +/- 295.13, N = 15
25454.76
s27
SE +/- 33.75, N = 3
27053.54
s28
SE +/- 38.77, N = 3
32876.51
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native


RAMspeed SMP 3.5.0
Type: Scale - Benchmark: Integer
MB/s, More Is Better
s25
SE +/- 233.00, N = 3
30653.64
s26
SE +/- 366.19, N = 15
24189.50
s27
SE +/- 221.56, N = 3
24774.51
s28
SE +/- 44.82, N = 3
32812.57
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Triad - Benchmark: Integer
MB/s, More Is Better
s25
SE +/- 406.68, N = 3
32590.57
s26
SE +/- 588.32, N = 15
27267.06
s27
SE +/- 442.40, N = 15
27734.00
s28
SE +/- 15.22, N = 3
33028.03
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native


RAMspeed SMP 3.5.0
Type: Average - Benchmark: Integer
MB/s, More Is Better
s25
SE +/- 275.20, N = 3
32783.68
s26
SE +/- 183.56, N = 3
24887.64
s27
SE +/- 426.21, N = 15
27898.62
s28
SE +/- 94.53, N = 3
32817.97
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Add - Benchmark: Floating Point
MB/s, More Is Better
s25
SE +/- 372.04, N = 3
32962.61
s26
SE +/- 285.96, N = 5
27230.37
s27
SE +/- 306.38, N = 15
28158.25
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Copy - Benchmark: Floating Point
MB/s, More Is Better
s25
SE +/- 152.55, N = 3
32704.83
s26
SE +/- 481.02, N = 15
26234.42
s27
SE +/- 325.53, N = 15
26988.30
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native

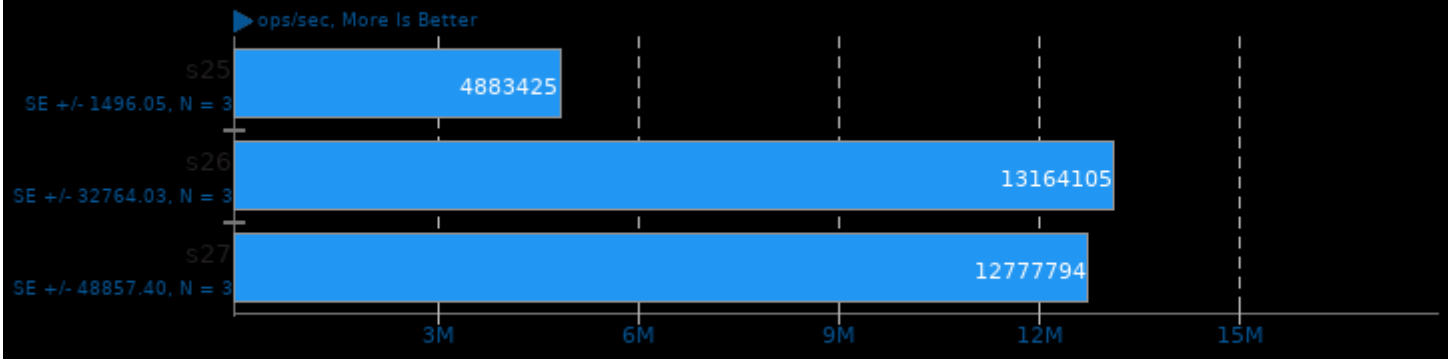

RAMspeed SMP 3.5.0
Type: Scale - Benchmark: Floating Point
MB/s, More Is Better
s25
SE +/- 267.42, N = 3
30928.44
s26
SE +/- 286.96, N = 15
25492.99
s27
SE +/- 260.09, N = 15
26467.46
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Triad - Benchmark: Floating Point
MB/s, More Is Better
s25
SE +/- 55.91, N = 3
32819.03
s26
SE +/- 56.48, N = 3
26179.91
s27
SE +/- 323.69, N = 15
28611.10
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Average - Benchmark: Floating Point
MB/s, More Is Better
s25
SE +/- 96.14, N = 3
32133.23
s26
SE +/- 425.55, N = 15
26679.15
s27
SE +/- 311.82, N = 15
27312.41
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native


perf-bench
Benchmark: Epoll Wait
ops/sec, More Is Better
s25
SE +/- 129.88, N = 12
13157
s26
SE +/- 106.76, N = 15
10836
s27
SE +/- 21.40, N = 3
11983
3K
6K
9K
12K
15K
1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -Xlinker -lpthread -lrt -lm -ldl -lcrypto -lperl -lresolv -lcrypt -lutil -lc -lz -llzma
perf-bench
Benchmark: Futex Hash
ops/sec, More Is Better
s25
SE +/- 191.50, N = 3
1285177
s26
SE +/- 28647.51, N = 3
2682313
s27
SE +/- 21574.21, N = 3
2797237
600K
1200K
1800K
2400K
3000K
1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -Xlinker -lpthread -lrt -lm -ldl -lcrypto -lperl -lresolv -lcrypt -lutil -lc -lz -llzma
perf-bench
Benchmark: Memcpy 1MB
GB/sec, More Is Better
s25
SE +/- 0.13, N = 3
15.93
s26
SE +/- 0.17, N = 3
17.14
s27
SE +/- 0.19, N = 3
17.15
4
8
12
16
20
1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -Xlinker -lpthread -lrt -lm -ldl -lcrypto -lperl -lresolv -lcrypt -lutil -lc -lz -llzma


perf-bench
Benchmark: Memset 1MB
GB/sec, More Is Better
s25
SE +/- 0.15, N = 3
60.70
s26
SE +/- 0.30, N = 3
65.29
s27
SE +/- 0.47, N = 3
66.31
15
30
45
60
75
1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -Xlinker -lpthread -lrt -lm -ldl -lcrypto -lperl -lresolv -lcrypt -lutil -lc -lz -llzma
perf-bench
Benchmark: Sched Pipe
ops/sec, More Is Better
s25
SE +/- 1881.64, N = 3
208562
s26
SE +/- 2562.97, N = 3
220132
s27
SE +/- 2018.79, N = 3
211376
50K
100K
150K
200K
250K
1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -Xlinker -lpthread -lrt -lm -ldl -lcrypto -lperl -lresolv -lcrypt -lutil -lc -lz -llzma
perf-bench
Benchmark: Futex Lock-Pi
ops/sec, More Is Better
s25
141
s26
SE +/- 0.33, N = 3
140
s27
SE +/- 0.67, N = 3
143
30
60
90
120
150
1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -Xlinker -lpthread -lrt -lm -ldl -lcrypto -lperl -lresolv -lcrypt -lutil -lc -lz -llzma

perf-bench

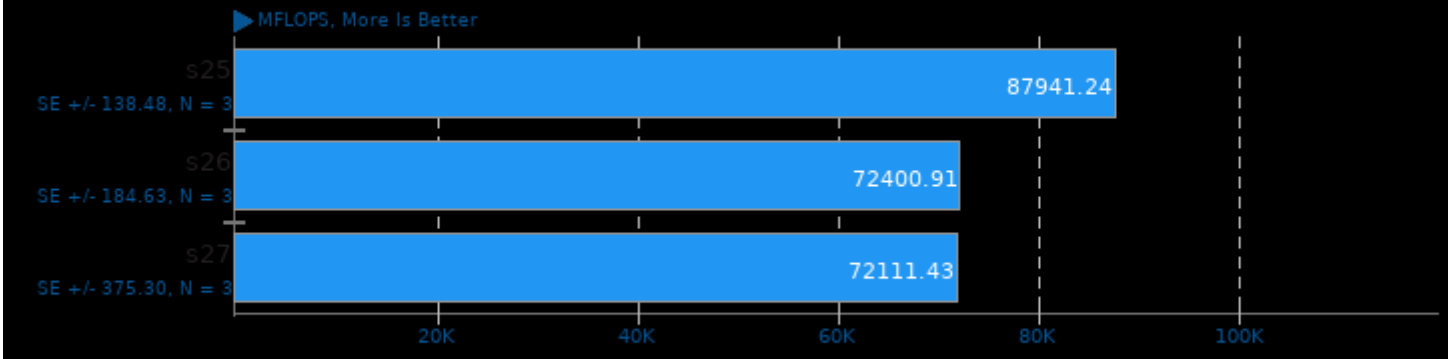
Benchmark: Syscall Basic



1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -Xlinker -lpthread -lrt -lm -ldl -lcrypto -lperl -lresolv -lcrypt -lutil -lc -lz -llzma

FFTE 7.0

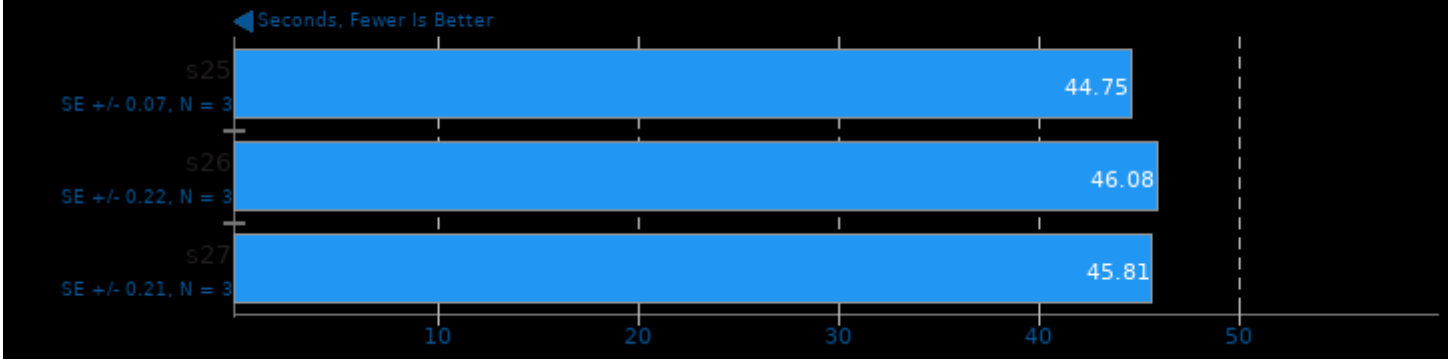
N=256, 3D Complex FFT Routine

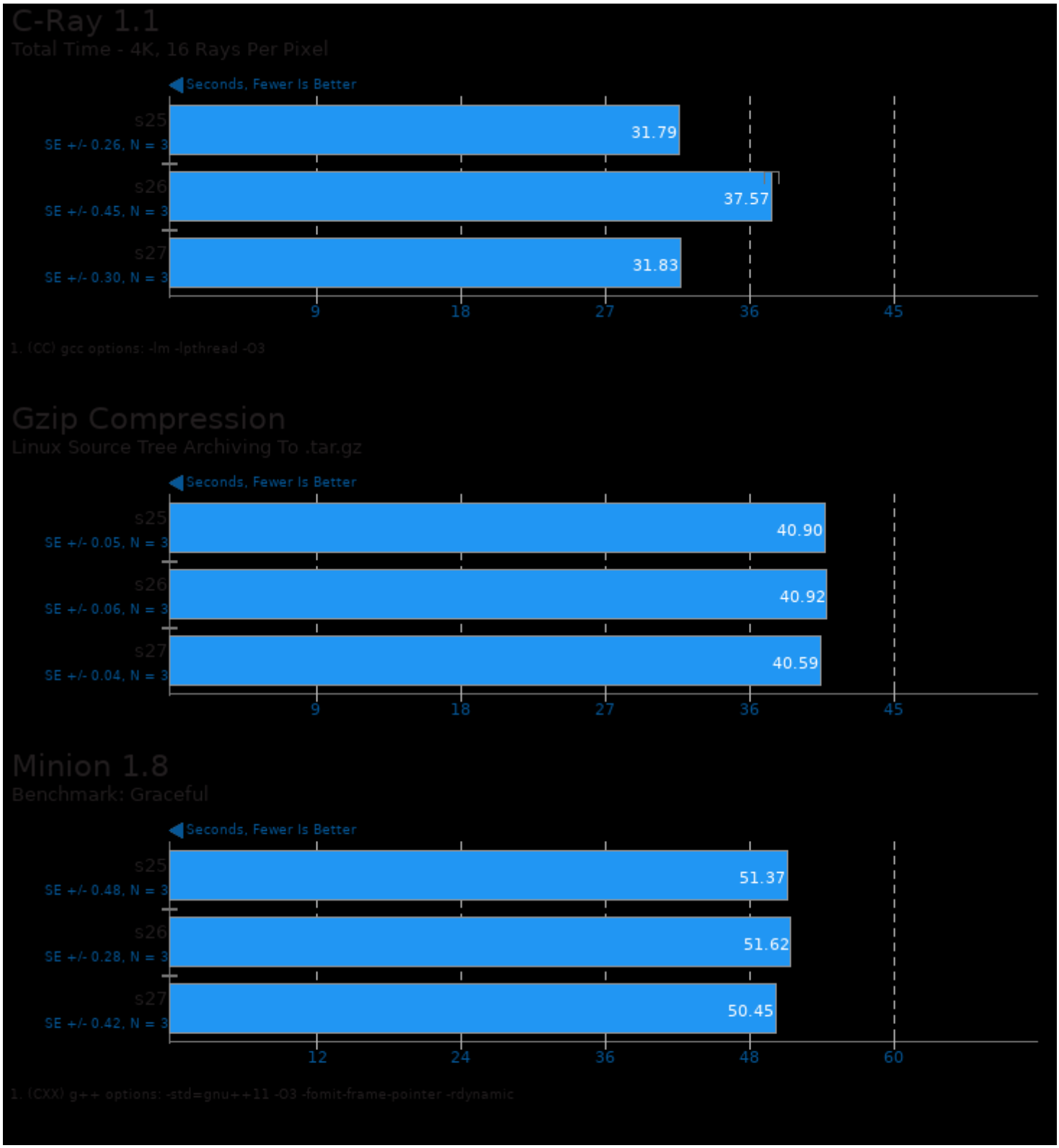


1. (F9X) gfortran options: -O3 -fomit-frame-pointer -fopenmp

Timed PHP Compilation 7.4.2

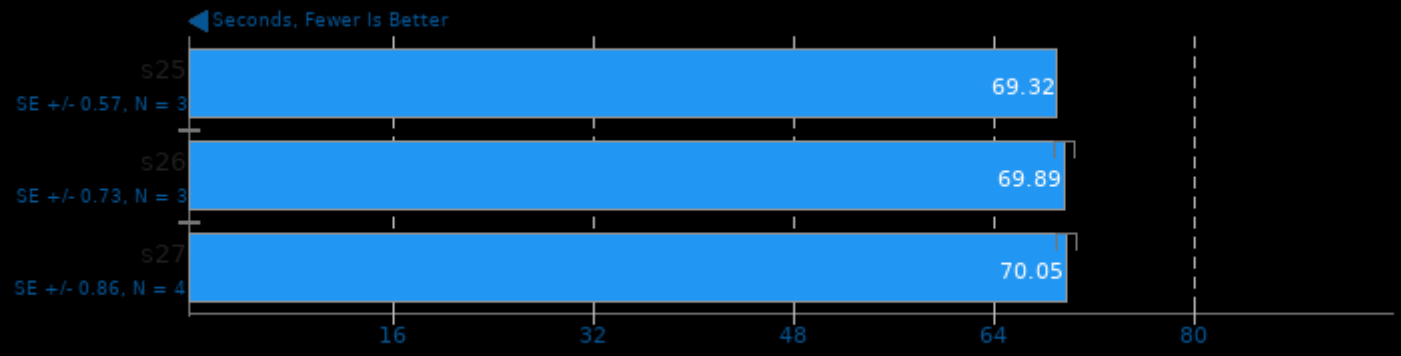
Time To Compile




C-Ray 1.1
Total Time - 4K, 16 Rays Per Pixel
Seconds, Fewer Is Better
s25
SE +/- 0.26, N = 3
31.79
s26
SE +/- 0.45, N = 3
37.57
s27
SE +/- 0.30, N = 3
31.83
9
18
27
36
45
1. (CC) gcc options: -lm -lpthread -O3
Gzip Compression
Linux Source Tree Archiving To .tar.gz
Seconds, Fewer Is Better
s25
SE +/- 0.05, N = 3
40.90
s26
SE +/- 0.06, N = 3
40.92
s27
SE +/- 0.04, N = 3
40.59
9
18
27
36
45
Minion 1.8
Benchmark: Graceful
Seconds, Fewer Is Better
s25
SE +/- 0.48, N = 3
51.37
s26
SE +/- 0.28, N = 3
51.62
s27
SE +/- 0.42, N = 3
50.45
12
24
36
48
60
1. (CXX) g++ options: -std=gnu++11 -O3 -fomit-frame-pointer -rdynamic

Minion 1.8

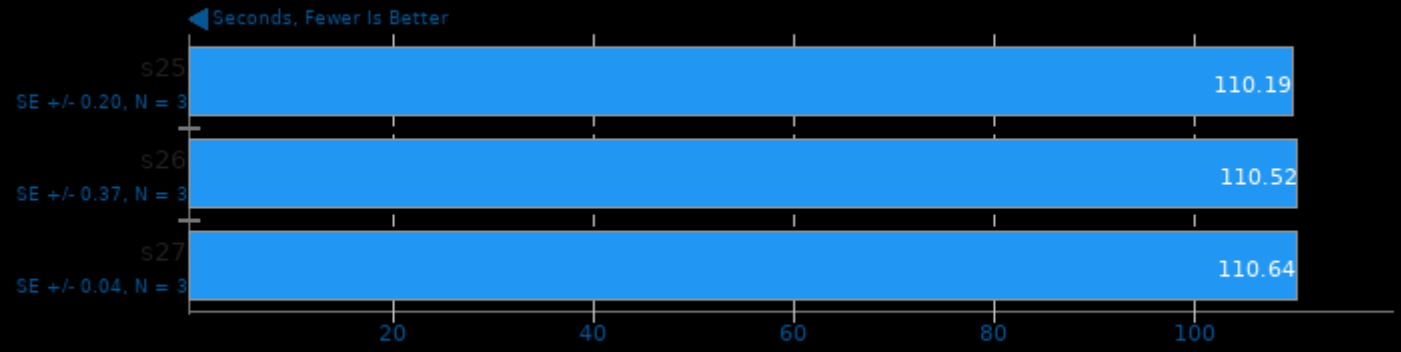
Benchmark: Solitaire



1. (CXX) g++ options: -std=gnu++11 -O3 -fomit-frame-pointer -rdynamic

Minion 1.8

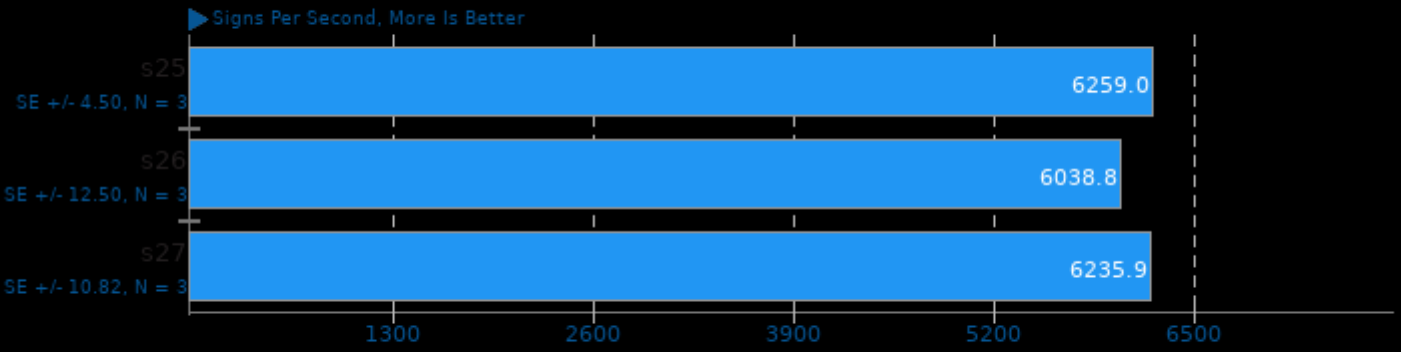
Benchmark: Quasigroup



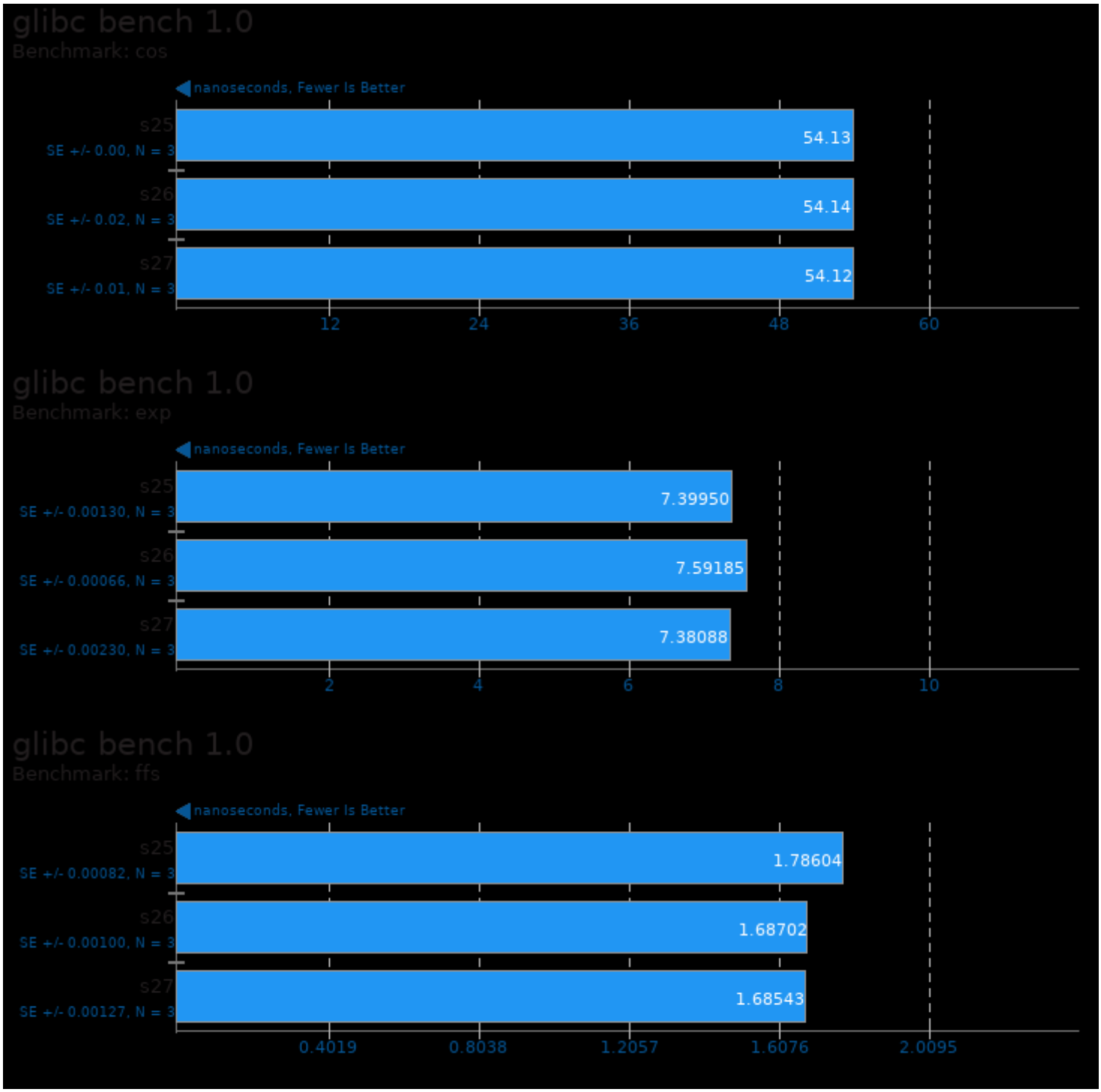
1. (CXX) g++ options: -std=gnu++11 -O3 -fomit-frame-pointer -rdynamic

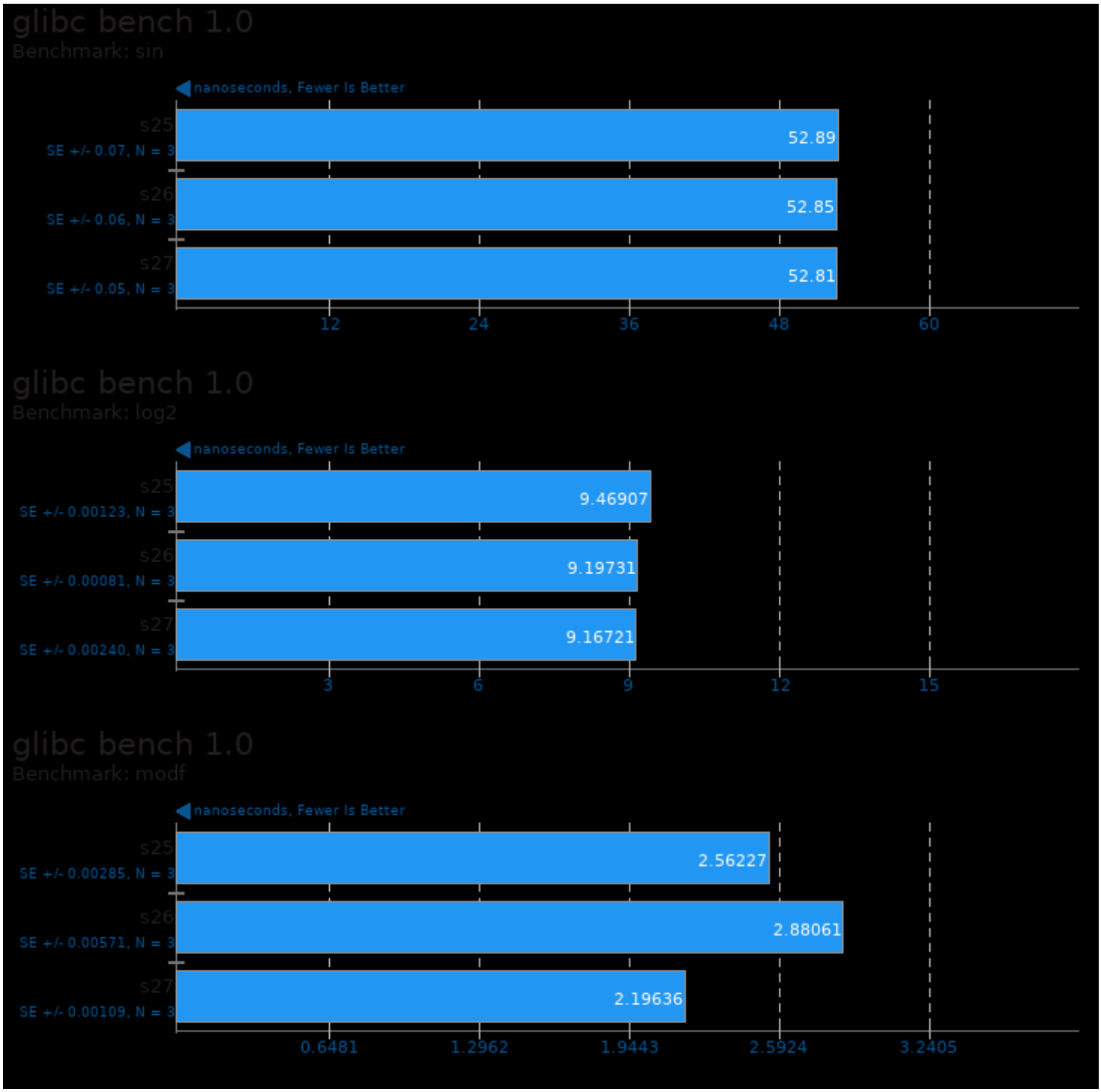
OpenSSL 1.1.1

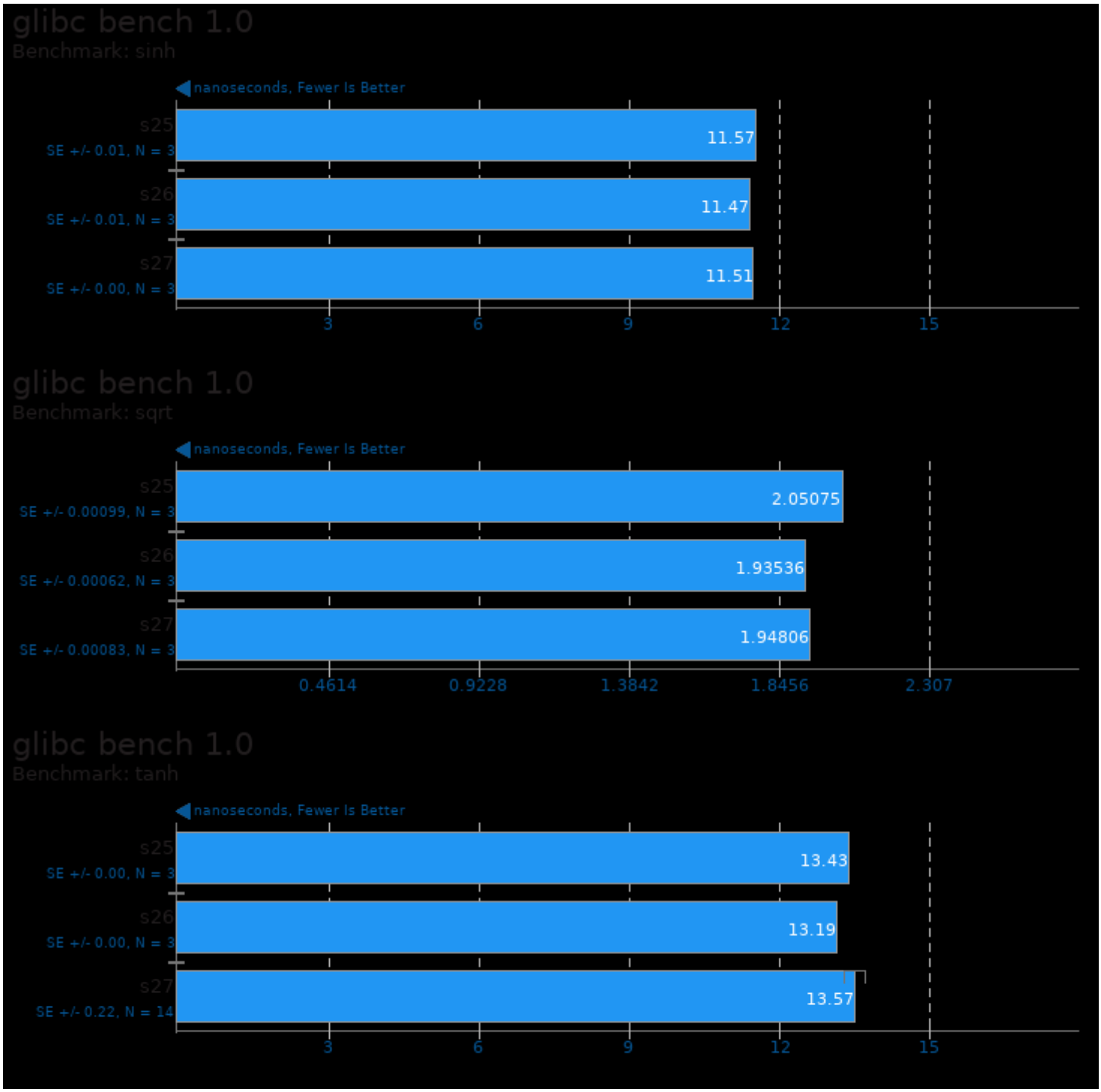
RSA 4096-bit Performance

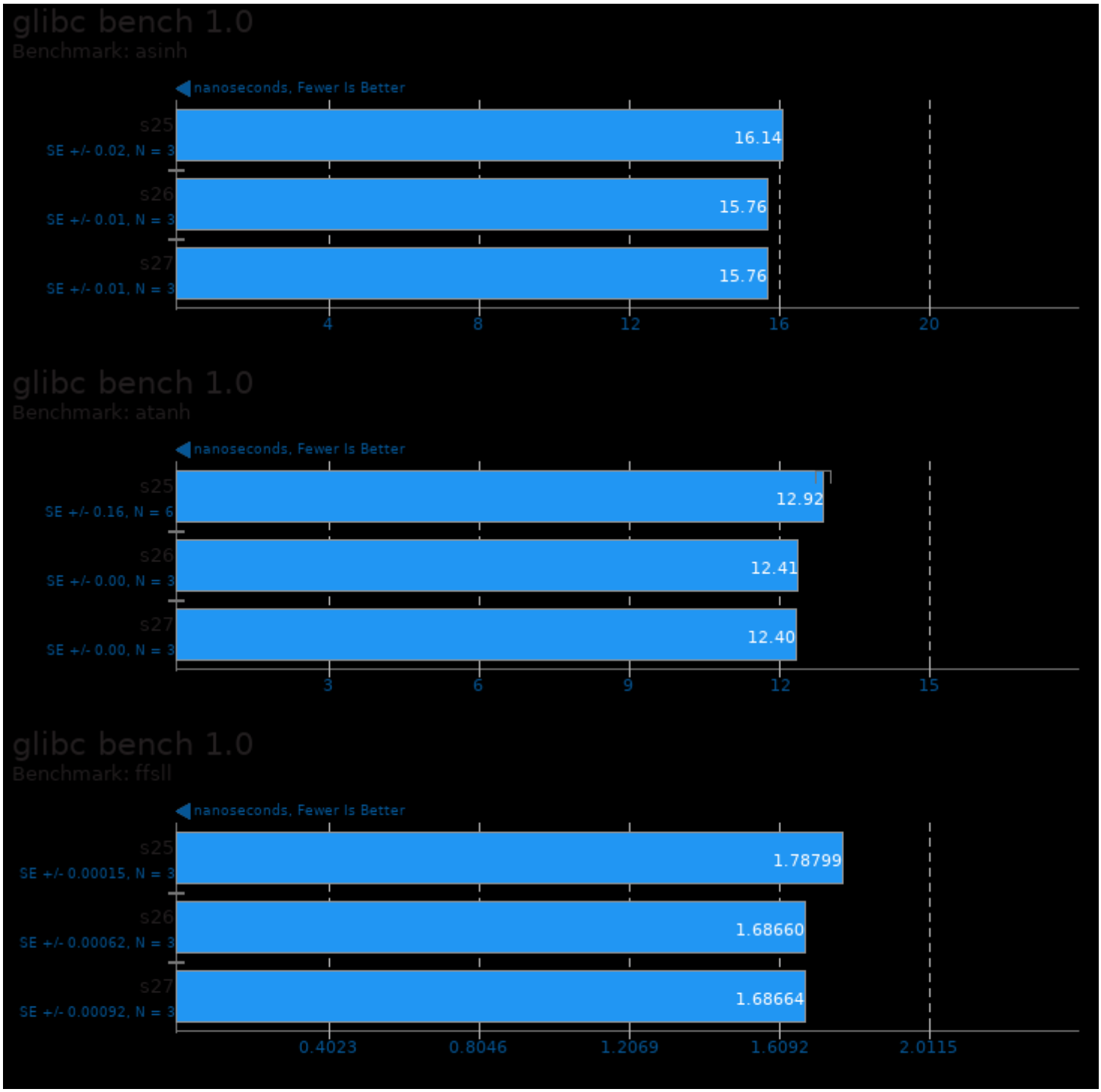


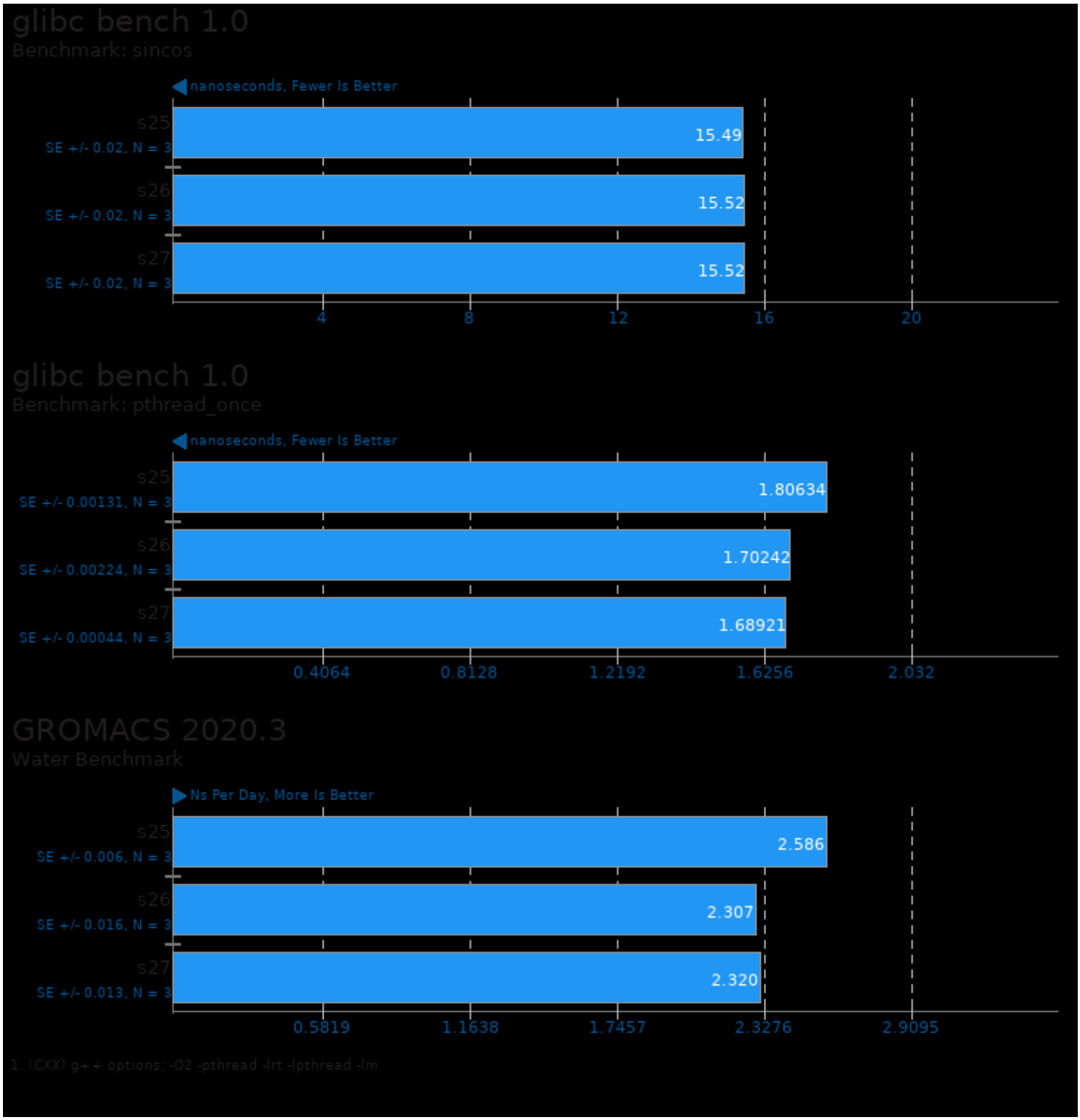
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

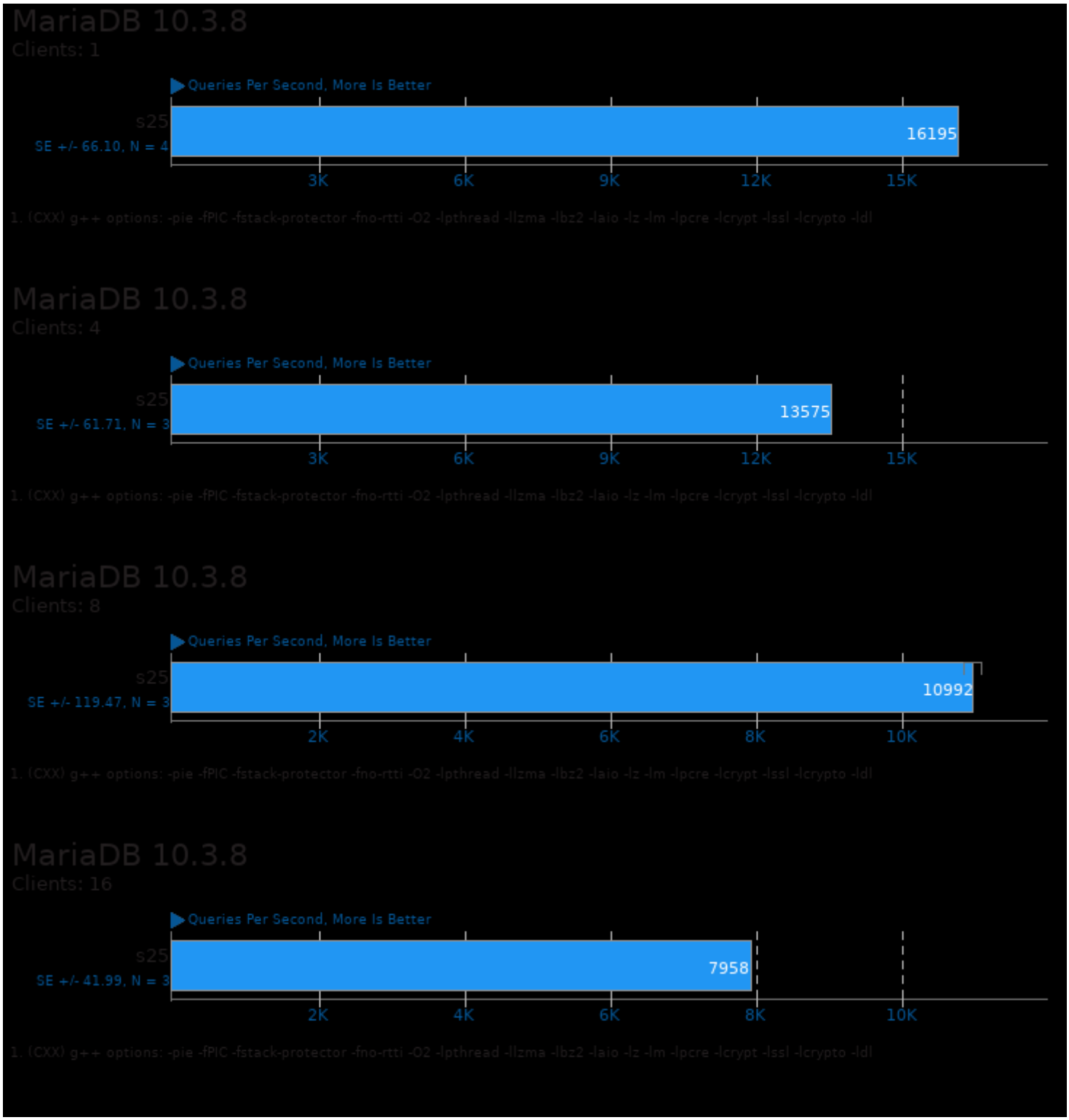

glibc bench 1.0
Benchmark: cos
nanoseconds, Fewer Is Better
s25
SE +/- 0.00, N = 3
54.13
s26
SE +/- 0.02, N = 3
54.14
s27
SE +/- 0.01, N = 3
54.12
12
24
36
48
60
glibc bench 1.0
Benchmark: exp
nanoseconds, Fewer Is Better
s25
SE +/- 0.00130, N = 3
7.39950
s26
SE +/- 0.00066, N = 3
7.59185
s27
SE +/- 0.00230, N = 3
7.38088
2
4
6
8
10
glibc bench 1.0
Benchmark: ffs
nanoseconds, Fewer Is Better
s25
SE +/- 0.00082, N = 3
1.78604
s26
SE +/- 0.00100, N = 3
1.68702
s27
SE +/- 0.00127, N = 3
1.68543
0.4019
0.8038
1.2057
1.6076
2.0095

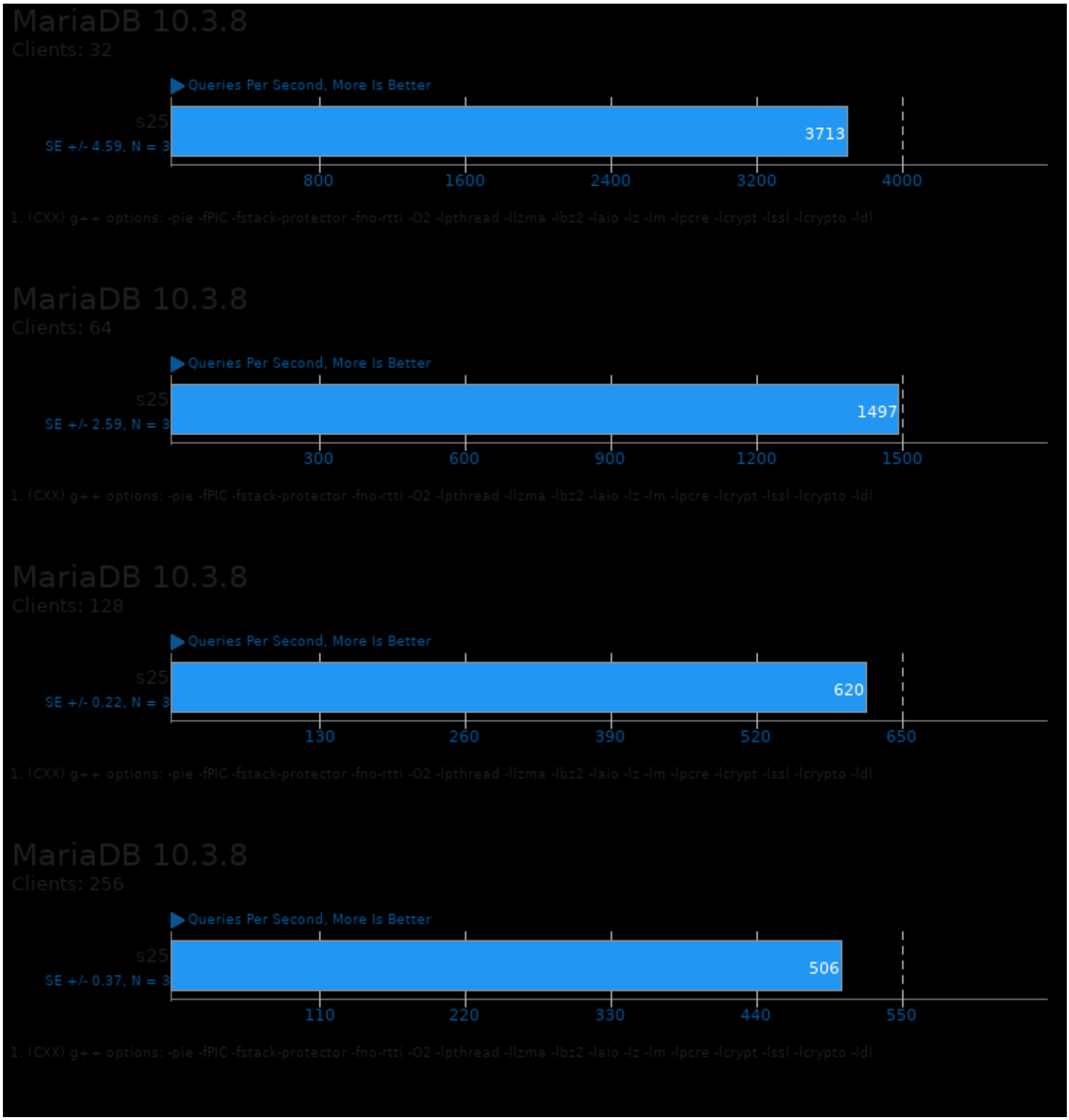

glibc bench 1.0
Benchmark: sin
nanoseconds, Fewer Is Better
s25
SE +/- 0.07, N = 3
52.89
s26
SE +/- 0.06, N = 3
52.85
s27
SE +/- 0.05, N = 3
52.81
12
24
36
48
60
glibc bench 1.0
Benchmark: log2
nanoseconds, Fewer Is Better
s25
SE +/- 0.00123, N = 3
9.46907
s26
SE +/- 0.00081, N = 3
9.19731
s27
SE +/- 0.00240, N = 3
9.16721
3
6
9
12
15
glibc bench 1.0
Benchmark: modf
nanoseconds, Fewer Is Better
s25
SE +/- 0.00285, N = 3
2.56227
s26
SE +/- 0.00571, N = 3
2.88061
s27
SE +/- 0.00109, N = 3
2.19636
0.6481
1.2962
1.9443
2.5924
3.2405

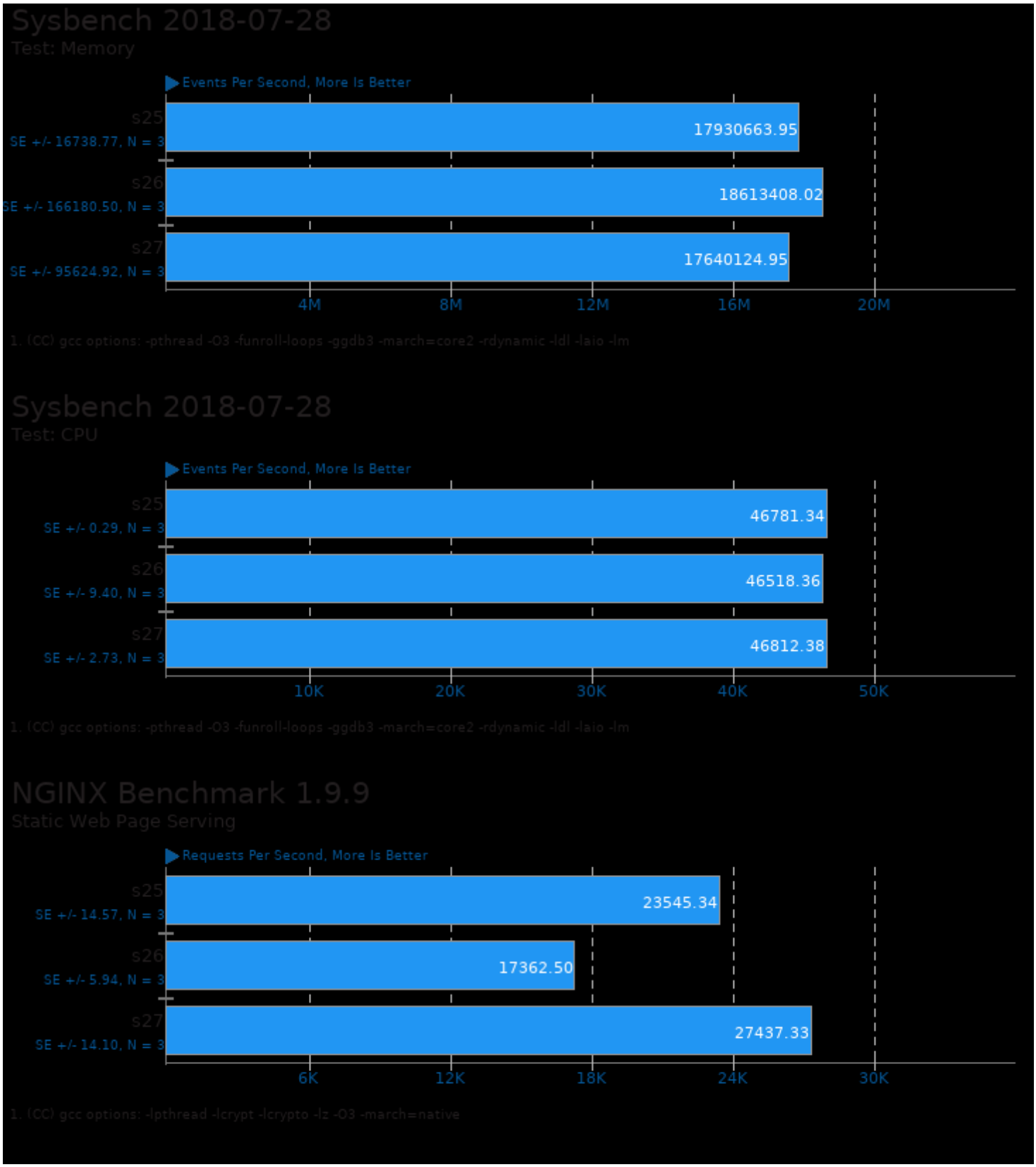

glibc bench 1.0
Benchmark: sinh
nanoseconds, Fewer Is Better
s25
SE +/- 0.01, N = 3
11.57
s26
SE +/- 0.01, N = 3
11.47
s27
SE +/- 0.00, N = 3
11.51
3
6
9
12
15
glibc bench 1.0
Benchmark: sqrt
nanoseconds, Fewer Is Better
s25
SE +/- 0.00099, N = 3
2.05075
s26
SE +/- 0.00062, N = 3
1.93536
s27
SE +/- 0.00083, N = 3
1.94806
0.4614
0.9228
1.3842
1.8456
2.307
glibc bench 1.0
Benchmark: tanh
nanoseconds, Fewer Is Better
s25
SE +/- 0.00, N = 3
13.43
s26
SE +/- 0.00, N = 3
13.19
s27
SE +/- 0.22, N = 14
13.57
3
6
9
12
15

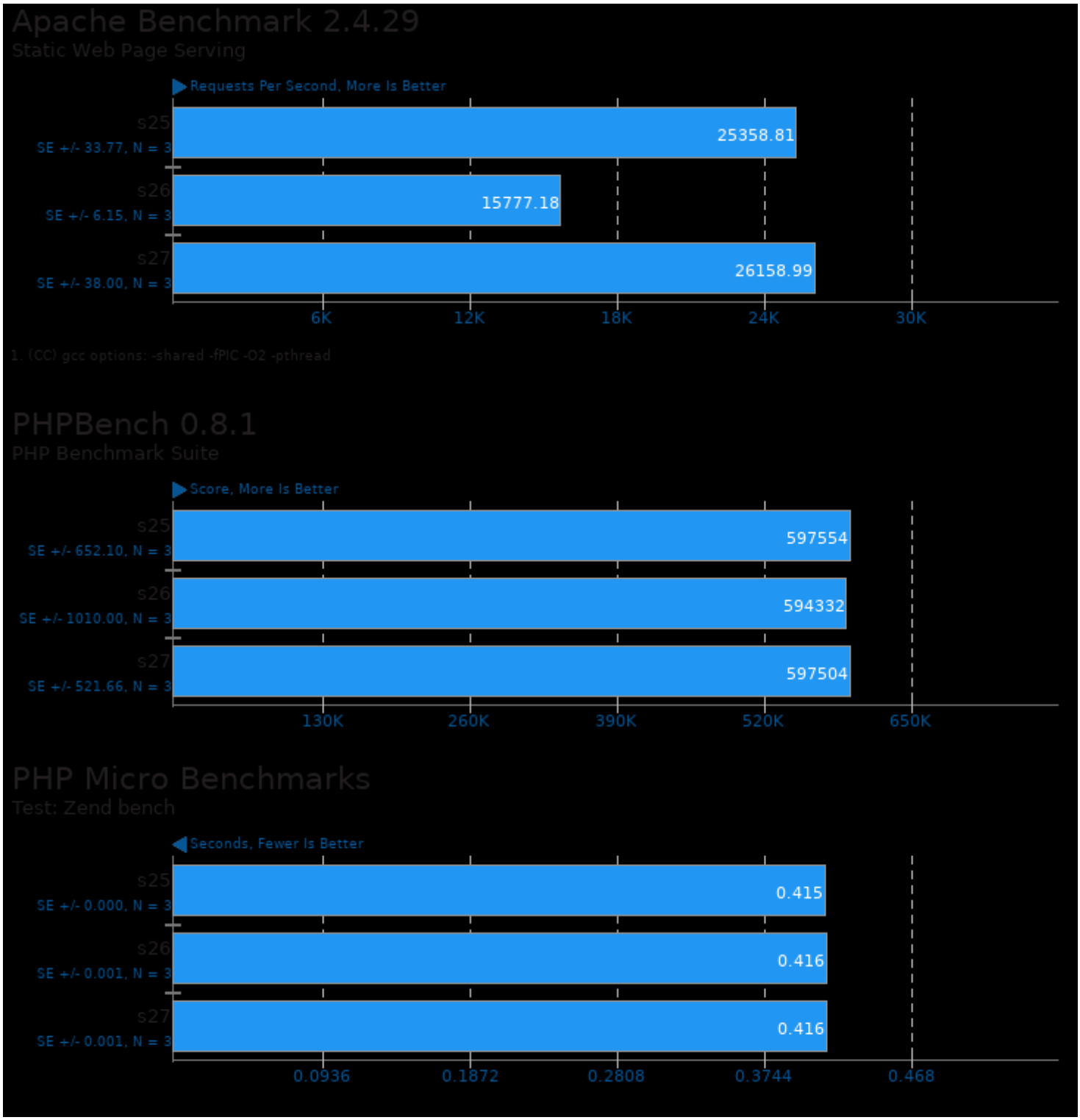

glibc bench 1.0
Benchmark: asinh
nanoseconds, Fewer Is Better
s25
SE +/- 0.02, N = 3
16.14
s26
SE +/- 0.01, N = 3
15.76
s27
SE +/- 0.01, N = 3
15.76
4
8
12
16
20
glibc bench 1.0
Benchmark: atanh
nanoseconds, Fewer Is Better
s25
SE +/- 0.16, N = 6
12.92
s26
SE +/- 0.00, N = 3
12.41
s27
SE +/- 0.00, N = 3
12.40
3
6
9
12
15
glibc bench 1.0
Benchmark: ffsll
nanoseconds, Fewer Is Better
s25
SE +/- 0.00015, N = 3
1.78799
s26
SE +/- 0.00062, N = 3
1.68660
s27
SE +/- 0.00092, N = 3
1.68664
0.4023
0.8046
1.2069
1.6092
2.0115

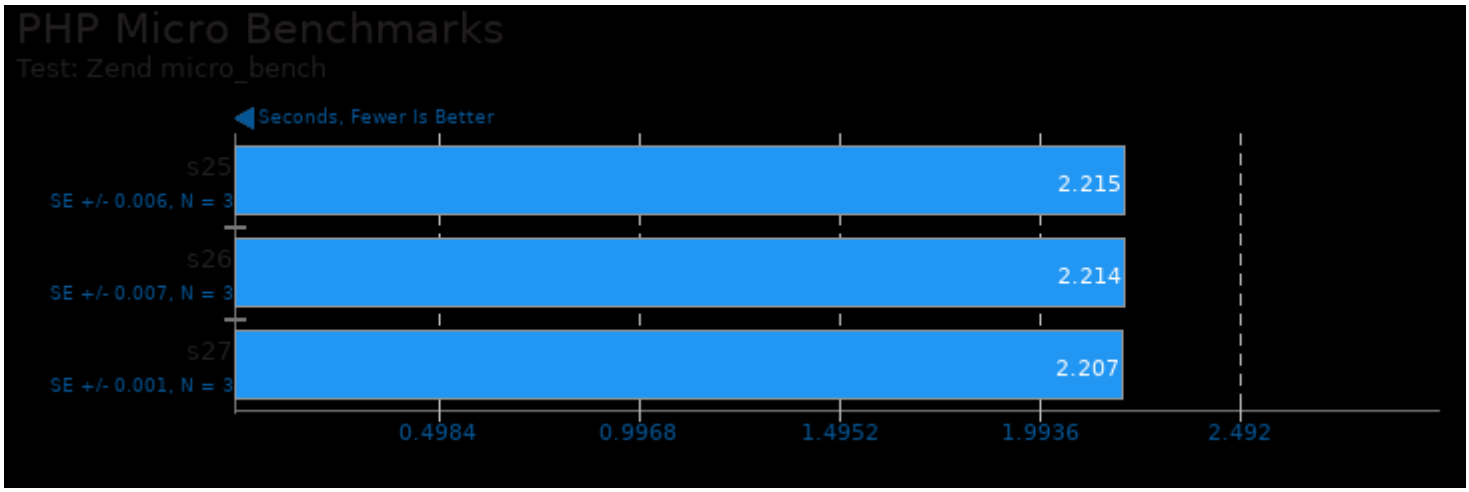

glibc bench 1.0
Benchmark: sincos
nanoseconds, Fewer Is Better
s25
SE +/- 0.02, N = 3
15.49
s26
SE +/- 0.02, N = 3
15.52
s27
SE +/- 0.02, N = 3
15.52
4
8
12
16
20
glibc bench 1.0
Benchmark: pthread_once
nanoseconds, Fewer Is Better
s25
SE +/- 0.00131, N = 3
1.80634
s26
SE +/- 0.00224, N = 3
1.70242
s27
SE +/- 0.00044, N = 3
1.68921
0.4064
0.8128
1.2192
1.6256
2.032
GROMACS 2020.3
Water Benchmark
Ns Per Day, More Is Better
s25
SE +/- 0.006, N = 3
2.586
s26
SE +/- 0.016, N = 3
2.307
s27
SE +/- 0.013, N = 3
2.320
0.5819
1.1638
1.7457
2.3276
2.9095
1. (CXX) g++ options: -O2 -pthread -lrt -lpthread -lm


MariaDB 10.3.8
Clients: 1
Queries Per Second, More Is Better
s25
SE +/- 66.10, N = 4
16195
3K
6K
9K
12K
15K
1. (CXX) g++ options: -pie -fPIC -fstack-protector -fno-rtti -O2 -lpthread -llzma -lbz2 -laio -lz -lm -lpcre -lcrypt -lssl -lcrypto -ldl
MariaDB 10.3.8
Clients: 4
Queries Per Second, More Is Better
s25
SE +/- 61.71, N = 3
13575
3K
6K
9K
12K
15K
1. (CXX) g++ options: -pie -fPIC -fstack-protector -fno-rtti -O2 -lpthread -llzma -lbz2 -laio -lz -lm -lpcre -lcrypt -lssl -lcrypto -ldl
MariaDB 10.3.8
Clients: 8
Queries Per Second, More Is Better
s25
SE +/- 119.47, N = 3
10992
2K
4K
6K
8K
10K
1. (CXX) g++ options: -pie -fPIC -fstack-protector -fno-rtti -O2 -lpthread -llzma -lbz2 -laio -lz -lm -lpcre -lcrypt -lssl -lcrypto -ldl
MariaDB 10.3.8
Clients: 16
Queries Per Second, More Is Better
s25
SE +/- 41.99, N = 3
7958
2K
4K
6K
8K
10K
1. (CXX) g++ options: -pie -fPIC -fstack-protector -fno-rtti -O2 -lpthread -llzma -lbz2 -laio -lz -lm -lpcre -lcrypt -lssl -lcrypto -ldl

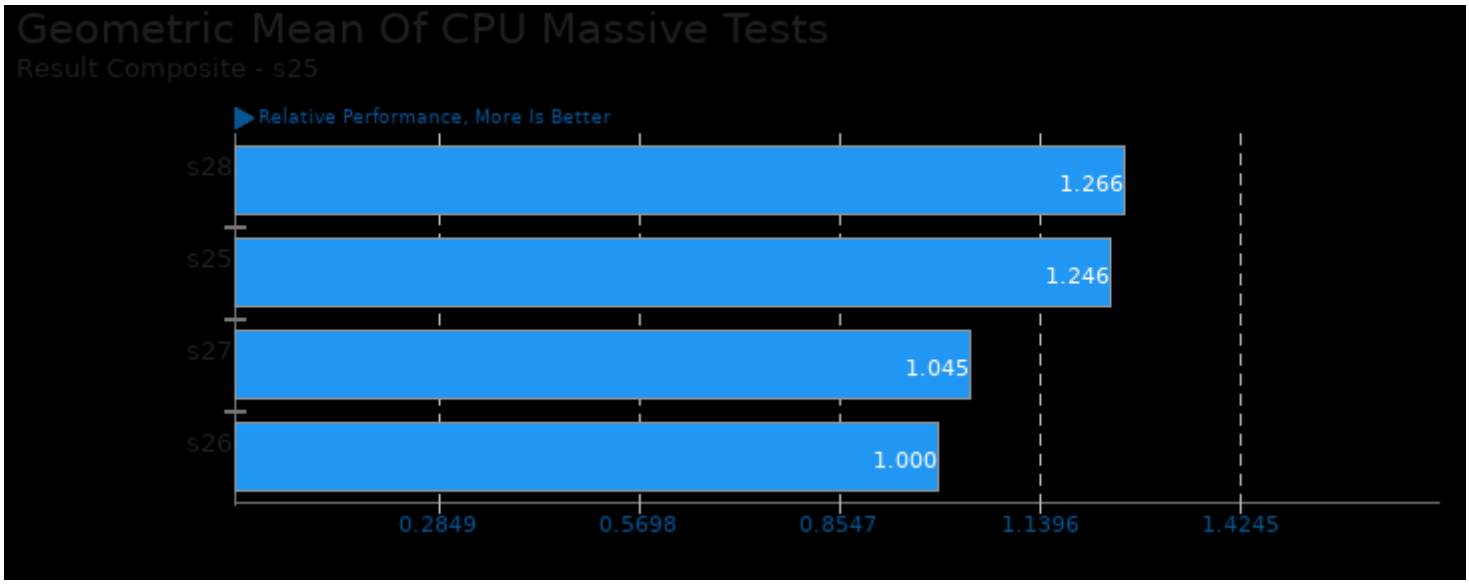

MariaDB 10.3.8
Clients: 32
Queries Per Second, More Is Better
s25
SE +/- 4.59, N = 3
3713
800
1600
2400
3200
4000
1. (CXX) g++ options: -pie -fPIC -fstack-protector -fno-rtti -O2 -lpthread -llzma -lbz2 -laio -lz -lm -lpcre -lcrypt -lssl -lcrypto -ldl
MariaDB 10.3.8
Clients: 64
Queries Per Second, More Is Better
s25
SE +/- 2.59, N = 3
1497
300
600
900
1200
1500
1. (CXX) g++ options: -pie -fPIC -fstack-protector -fno-rtti -O2 -lpthread -llzma -lbz2 -laio -lz -lm -lpcre -lcrypt -lssl -lcrypto -ldl
MariaDB 10.3.8
Clients: 128
Queries Per Second, More Is Better
s25
SE +/- 0.22, N = 3
620
130
260
390
520
650
1. (CXX) g++ options: -pie -fPIC -fstack-protector -fno-rtti -O2 -lpthread -llzma -lbz2 -laio -lz -lm -lpcre -lcrypt -lssl -lcrypto -ldl
MariaDB 10.3.8
Clients: 256
Queries Per Second, More Is Better
s25
SE +/- 0.37, N = 3
506
110
220
330
440
550
1. (CXX) g++ options: -pie -fPIC -fstack-protector -fno-rtti -O2 -lpthread -llzma -lbz2 -laio -lz -lm -lpcre -lcrypt -lssl -lcrypto -ldl


Sysbench 2018-07-28
Test: Memory
Events Per Second, More Is Better
s25
SE +/- 16738.77, N = 3
17930663.95
s26
SE +/- 166180.50, N = 3
18613408.02
s27
SE +/- 95624.92, N = 3
17640124.95
4M
8M
12M
16M
20M
1. (CC) gcc options: -pthread -O3 -funroll-loops -ggdb3 -march=core2 -rdynamic -ldl -laio -lm
Sysbench 2018-07-28
Test: CPU
Events Per Second, More Is Better
s25
SE +/- 0.29, N = 3
46781.34
s26
SE +/- 9.40, N = 3
46518.36
s27
SE +/- 2.73, N = 3
46812.38
10K
20K
30K
40K
50K
1. (CC) gcc options: -pthread -O3 -funroll-loops -ggdb3 -march=core2 -rdynamic -ldl -laio -lm
NGINX Benchmark 1.9.9
Static Web Page Serving
Requests Per Second, More Is Better
s25
SE +/- 14.57, N = 3
23545.34
s26
SE +/- 5.94, N = 3
17362.50
s27
SE +/- 14.10, N = 3
27437.33
6K
12K
18K
24K
30K
1. (CC) gcc options: -lpthread -lcrypt -lcrypto -lz -O3 -march=native

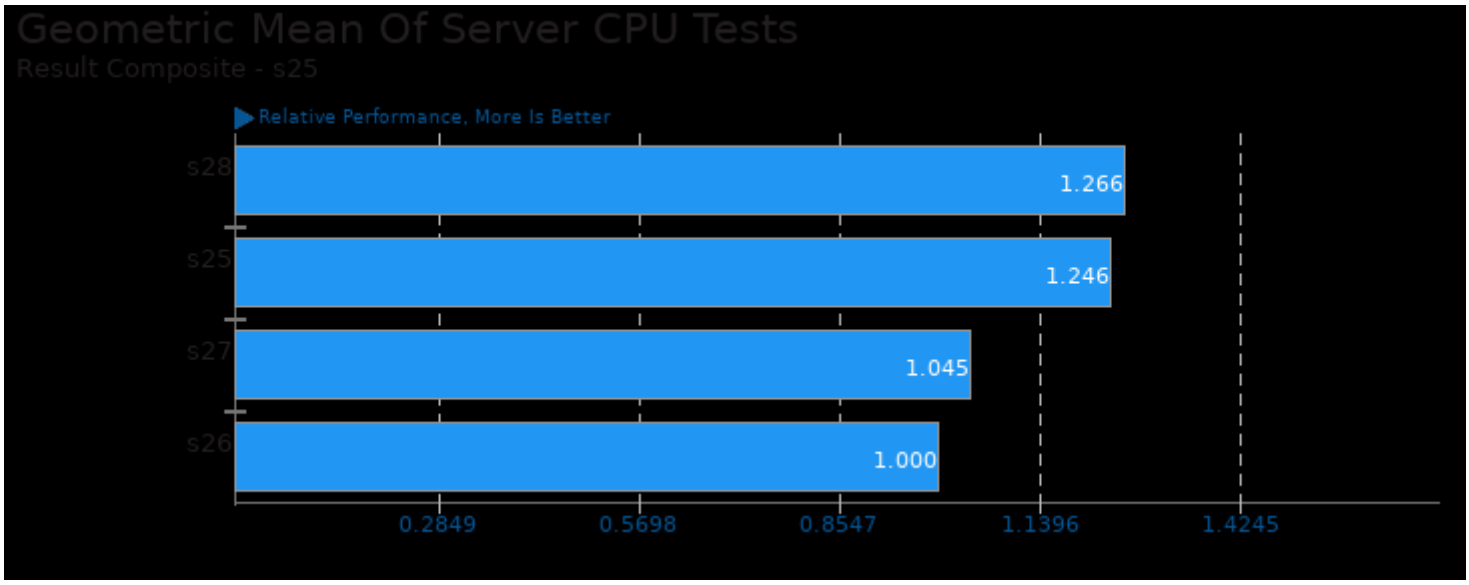

Apache Benchmark 2.4.29
Static Web Page Serving
Requests Per Second, More Is Better
s25
SE +/- 33.77, N = 3
25358.81
s26
SE +/- 6.15, N = 3
15777.18
s27
SE +/- 38.00, N = 3
26158.99
6K
12K
18K
24K
30K
1. (CC) gcc options: -shared -fPIC -O2 -pthread
PHPBench 0.8.1
PHP Benchmark Suite
Score, More Is Better
s25
SE +/- 652.10, N = 3
597554
s26
SE +/- 1010.00, N = 3
594332
s27
SE +/- 521.66, N = 3
597504
130K
260K
390K
520K
650K
PHP Micro Benchmarks
Test: Zend bench
Seconds, Fewer Is Better
s25
SE +/- 0.000, N = 3
0.415
s26
SE +/- 0.001, N = 3
0.416
s27
SE +/- 0.001, N = 3
0.416
0.0936
0.1872
0.2808
0.3744
0.468


PHP Micro Benchmarks
Test: Zend micro_bench
Seconds, Fewer Is Better
s25
SE +/- 0.006, N = 3
2.215
s26
SE +/- 0.007, N = 3
2.214
s27
SE +/- 0.001, N = 3
2.207
0.4984
0.9968
1.4952
1.9936
2.492

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



Geometric mean based upon tests: pts/apache, pts/mysqlslap, pts/build-php, pts/c-ray, pts/glibc-bench, pts/openssl, pts/minion, pts/nginx, pts/phpbench, pts/ramspeed and pts/sysbench



Geometric mean based upon tests: pts/build-php, pts/c-ray, pts/openssl, pts/glibc-bench, pts/mysqlslap, pts/sysbench, pts/phpbench and pts/ramspeed

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 08:29.