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complete-last

Intel Xeon Gold 6238 testing with a Supermicro X11SPL-F v1.01 (3.1 BIOS) and ASPEED on CentOS Linux 7 via the Phoronix Test Suite.

Automated Executive Summary

s18 had the most wins, coming in first place for 31% of the tests.

Based on the geometric mean of all complete results, the fastest (s19) was 1.947x the speed of the slowest (b1).

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

C-Ray (Total Time) at 4.942x
IOzone (Record Size: 4Kb - File Size: 4GB - Disk Test: Write Performance) at 4.053x
IOzone (Record Size: 64Kb - File Size: 8GB - Disk Test: Write Performance) at 3.99x
IOzone (Record Size: 1MB - File Size: 8GB - Disk Test: Write Performance) at 3.937x
IOzone (Record Size: 4Kb - File Size: 8GB - Disk Test: Write Performance) at 3.798x
IOzone (Record Size: 1MB - File Size: 2GB - Disk Test: Write Performance) at 3.699x
IOzone (Record Size: 64Kb - File Size: 2GB - Disk Test: Write Performance) at 3.686x
IOzone (Record Size: 4Kb - File Size: 2GB - Disk Test: Write Performance) at 3.575x
OpenSSL (RSA 4096-bit Performance) at 2.652x
Parallel BZIP2 Compression (256MB File Compression) at 2.541x.

Test Systems:

Intel Xeon E5-2680 v4

Intel Xeon E5-2680 v4 27-09-16

Intel Xeon E5-2680 v4 27-09-16 - all

Processor: Intel Xeon E5-2680 v4 @ 3.30GHz (28 Cores), Motherboard: Supermicro X10SRi-F, Chipset: Intel Xeon E7 v4/Xeon, Memory: 64512MB, Disk: 2879GB MR9271-8i, Graphics: ASPEED ASPEED Family, Network: Intel I350 Gigabit Connection

OS: CentOS 6.8, Kernel: 2.6.32-642.4.2.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4

Compiler Notes: --build=x86_64-redhat-linux --disable-dssi --disable-libjava-multilib --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-unique-object --enable-java-awt=gtk --enable-java-maintainer-mode --enable-languages=c,c++,objc,obj-c++,java,fortran,ada --enable-libgcj-multifile --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-cloog --with-ppl --with-tune=generic
Disk Notes: CFQ / barrier=1,data=ordered,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance
System Notes: SELinux: Enabled.

b1

Processor: Intel Xeon E5-2630 v4 @ 3.10GHz (20 Cores), Motherboard: Supermicro X10SRi-F, Chipset: Intel Xeon E7 v4/Xeon, Memory: 32768MB, Disk: 40005GB MR9271-4i, Graphics: ASPEED ASPEED Family, Network: Intel I350 Gigabit Connection

OS: CentOS 6.8, Kernel: 2.6.32-642.13.1.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4

Compiler Notes: --build=x86_64-redhat-linux --disable-dssi --disable-libjava-multilib --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-unique-object --enable-java-awt=gtk --enable-java-maintainer-mode --enable-languages=c,c++,objc,obj-c++,java,fortran,ada --enable-libgcj-multifile --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-cloog --with-ppl --with-tune=generic
Disk Notes: CFQ / barrier=1,data=ordered,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance
System Notes: SELinux: Enabled.

s12

Processor: Intel Xeon E5-2690 v4 @ 3.50GHz (28 Cores), Motherboard: Supermicro X10SRi-F, Chipset: Intel Xeon E7 v4/Xeon, Memory: 64512MB, Disk: 3839GB MR9271-8i, Graphics: ASPEED ASPEED Family, Network: Intel I350 Gigabit Connection

OS: CentOS 6.8, Kernel: 2.6.32-642.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4

Compiler Notes: --build=x86_64-redhat-linux --disable-dssi --disable-libjava-multilib --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-unique-object --enable-java-awt=gtk --enable-java-maintainer-mode --enable-languages=c,c++,objc,obj-c++,java,fortran,ada --enable-libgcj-multifile --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-cloog --with-ppl --with-tune=generic
Disk Notes: CFQ / barrier=1,data=ordered,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance
System Notes: SELinux: Enabled.

s13 a.k.a London

Processor: Intel Xeon E5-2690 v4 @ 3.50GHz (28 Cores), Motherboard: Supermicro X10SRi-F, Chipset: Intel Xeon E7 v4/Xeon, Memory: 64512MB, Disk: 3839GB MR9271-8i, Graphics: ASPEED ASPEED Family, Network: Intel I350 Gigabit Connection

OS: CentOS 6.9, Kernel: 2.6.32-696.1.1.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4

Kernel Notes: ipmi_si.force_kipmid=0
Compiler Notes: --build=x86_64-redhat-linux --disable-dssi --disable-libjava-multilib --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-unique-object --enable-java-awt=gtk --enable-java-maintainer-mode --enable-languages=c,c++,objc,obj-c++,java,fortran,ada --enable-libgcj-multifile --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-cloog --with-ppl --with-tune=generic
Disk Notes: CFQ / barrier=1,data=ordered,noatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance
System Notes: SELinux: Enabled.

s13 - USA

Processor: Intel Xeon E5-2690 v4 @ 2.60GHz (28 Cores), Motherboard: Supermicro X10SRi-F, Chipset: Intel Xeon E7 v4/Xeon, Memory: 64512MB, Disk: 3839GB MR9271-8i, Graphics: ASPEED ASPEED Family, Network: Intel I350 Gigabit Connection

OS: CentOS 6.9, Kernel: 2.6.32-696.10.3.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4

Compiler Notes: --build=x86_64-redhat-linux --disable-dssi --disable-libjava-multilib --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-unique-object --enable-java-awt=gtk --enable-java-maintainer-mode --enable-languages=c,c++,objc,obj-c++,java,fortran,ada --enable-libgcj-multifile --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-cloog --with-ppl --with-tune=generic
Disk Notes: CFQ / barrier=1,data=ordered,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance
System Notes: SELinux: Enabled.

s14

Processor: Intel Xeon E5-2690 v4 @ 3.50GHz (14 Cores / 28 Threads), Motherboard: Supermicro X10SRi-F (2.0b BIOS), Chipset: Intel Xeon E7 v4/Xeon, Memory: 64512MB, Disk: 3839GB MR9271-8i, Graphics: ASPEED ASPEED Family, Network: Intel I350 Gigabit Connection

OS: CentOS 6.9, Kernel: 2.6.32-696.20.1.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4

Kernel Notes: ipmi_si.force_kipmid=0
Compiler Notes: --build=x86_64-redhat-linux --disable-dssi --disable-libjava-multilib --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-unique-object --enable-java-awt=gtk --enable-java-maintainer-mode --enable-languages=c,c++,objc,obj-c++,java,fortran,ada --enable-libgcj-multifile --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-cloog --with-ppl --with-tune=generic
Disk Notes: CFQ / barrier=1,data=ordered,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance

s15

Processor: Intel Xeon Gold 6140 @ 3.70GHz (18 Cores / 36 Threads), Motherboard: Supermicro X11SPL-F v1.01 (2.0b BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 96256MB, Disk: 4798GB MR9271-8i, Graphics: ASPEED ASPEED Family, Network: Intel I210 Gigabit Connection

OS: CentOS 6.10, Kernel: 2.6.32-754.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4

Kernel Notes: ipmi_si.force_kipmid=0
Compiler Notes: --build=x86_64-redhat-linux --disable-dssi --disable-libjava-multilib --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-unique-object --enable-java-awt=gtk --enable-java-maintainer-mode --enable-languages=c,c++,objc,obj-c++,java,fortran,ada --enable-libgcj-multifile --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-cloog --with-ppl --with-tune=generic
Disk Notes: CFQ / barrier=1,data=ordered,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: KPTI + Load fences + IBRS (kernel) Protection

s15-centos7

Processor: Intel Xeon Gold 6140 @ 3.70GHz (18 Cores / 36 Threads), Motherboard: Supermicro X11SPL-F v1.01 (2.0b BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 6 x 16384 MB DDR4-2666MHz Micron 18ASF2G72PDZ-2G6D1, Disk: 4798GB MR9271-8i, Graphics: ASPEED ASPEED Family, Network: Intel I210 Gigabit

Connection

OS: CentOS Linux 7, Kernel: 3.10.0-862.6.3.el7.x86_64 (x86_64), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: DEADLINE / attr2,inode64,noquota,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: SELinux + KPTI + Load fences + IBRS (kernel) Protection

uk2

Processor: Intel Xeon Gold 6140 @ 3.70GHz (18 Cores / 36 Threads), Motherboard: Supermicro X11SPL-F v1.01 (2.1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 6 x 16384 MB DDR4-2666MHz Samsung M393A2K40CB2-CTD, Disk: 4798GB MR9271-8i, Graphics: ASPEED ASPEED Family, Network: Intel I210 Gigabit Connection

OS: CentOS Linux 7, Kernel: 3.10.0-862.14.4.el7.x86_64 (x86_64), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: DEADLINE / attr2,inode64,noquota,relatime,rw,seclabel
Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: SELinux + KPTI + Load fences __user pointer sanitization + IBRS (kernel) + SSB disabled via prctl and seccomp + PTE Inversion; VMX: SMT vulnerable L1D conditional cache flushes

s16

Processor: Intel Xeon Gold 6140 @ 3.70GHz (18 Cores / 36 Threads), Motherboard: Supermicro X11SPL-F v1.01 (2.1 BIOS), Memory: 6 x 16384 MB DDR4-2666MT/s Micron 18ASF2G72PDZ-2G6E1, Disk: 4798GB MR9361-8i, Graphics: astdrmfb

OS: CentOS Linux 7, Kernel: 3.10.0-957.1.3.el7.x86_64 (x86_64), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 1024x768

Kernel Notes: ipmi_si.force_kipmid=0
Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: DEADLINE / attr2,inode64,noquota,relatime,rw,seclabel,sunit=128,swidth=512
Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: SELinux + KPTI + Load fences __user pointer sanitization + IBRS (kernel) + SSB disabled via prctl and seccomp + PTE Inversion; VMX: SMT vulnerable L1D conditional cache flushes

s17

Processor: Intel Xeon Gold 6140 @ 3.70GHz (18 Cores / 36 Threads), Motherboard: Supermicro X11SPL-F v1.01 (2.1 BIOS), Memory: 6 x 16384 MB DDR4-2666MT/s Micron 18ASF2G72PDZ-2G6D1, Disk: 4798GB MR9361-8i, Graphics: astdrmfb

OS: CentOS Linux 7, Kernel: 3.10.0-957.10.1.el7.x86_64 (x86_64), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin

--enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: DEADLINE / attr2,inode64,noquota,relatime,rw,seclabel,sunit=128,swidth=512
Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: SELinux + KPTI + Load fences __user pointer sanitization + IBRS (kernel) + SSB disabled via prctl and seccomp + PTE Inversion; VMX: SMT vulnerable L1D conditional cache flushes

uk3

Processor: Intel Xeon Gold 6140 @ 3.70GHz (18 Cores / 36 Threads), Motherboard: Supermicro X11SPL-F v1.01 (3.0b BIOS), Memory: 6 x 16384 MB DDR4-2666MT/s Samsung M393A2K40CB2-CTD, Disk: 4798GB MR9361-8i, Graphics: astdrmfb

OS: CentOS Linux 7, Kernel: 3.10.0-957.10.1.el7.x86_64 (x86_64), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: DEADLINE / attr2,inode64,noquota,relatime,rw,seclabel,sunit=128,swidth=512
Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: SELinux + KPTI + Load fences __user pointer sanitization + IBRS (kernel) + SSB disabled via prctl and seccomp + PTE Inversion; VMX: SMT vulnerable L1D conditional cache flushes

s18

s19

Processor: Intel Xeon Gold 6238 @ 3.70GHz (22 Cores / 44 Threads), Motherboard: Supermicro X11SPL-F v1.01 (3.1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 6 x 16384 MB DDR4-2934MT/s 18ASF2G72PDZ-2G9E1, Disk: 4798GB MR9361-8i, Graphics: ASPEED, Network: 2 x Intel I210

OS: CentOS Linux 7, Kernel: 3.10.0-957.21.3.el7.x86_64 (x86_64), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 1024x768

Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: DEADLINE / attr2,inode64,noquota,relatime,rw,seclabel,sunit=128,swidth=512
Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: SELinux + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of Load fences __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB

Phoronix Test Suite

complete-last

	Intel Xeon E5-2680 v4	Intel Xeon E5-2680 v4 27-09-16	Intel Xeon E5-2680 v4 27-09-16 - all	b1	s12	s13 a.k.a London	s13 - USA	s14	s15	s15-centos 7	uk2	s16	s17	uk3	s18	s19
AIO-Stress - Rand Write (MB/s)	2832		2979	2679	3109	3084	3102	3098	3455	3572	3623	3654	3577	3573	4075	4073
Normalized	69.5%		73.1%	65.74%	76.29%	75.68%	76.12%	76.02%	84.79%	87.66%	88.91%	89.67%	87.78%	87.68%	100%	99.95%
Standard Deviation	4.5%		2.2%	0.7%	0.2%	1.9%	2.3%	1.4%	2.1%	1.3%	0.6%	1.6%	0.6%	2.9%	2.7%	1%
IOzone - 1MB - 2GB - Read Performance	6469		6791	6862	7149	3670	3561	4105	4054	3861	4137	4433	4407	4388	4625	4545
Normalized	90.49%		94.99%	95.99%	100%	51.34%	49.81%	57.42%	56.71%	54.01%	57.87%	62.01%	61.64%	61.38%	64.69%	63.58%
Standard Deviation	4.9%		2%	2.6%	1.2%	95.2%	95.3%	80%	96.6%	95.8%	93.1%	70.4%	70%	69.4%	66.1%	66.6%
IOzone - 1MB - 4GB - Read Performance	6855		6820	6566	7106	3854	3636	4059	4118	3895	4215	4449	4344	4335	4568	4621
Normalized	96.47%		95.98%	92.4%	100%	54.24%	51.17%	57.12%	57.95%	54.81%	59.32%	62.61%	61.13%	61%	64.28%	65.03%
Standard Deviation	0.4%		0.8%	4.9%	1.9%	97.8%	97.4%	79.8%	98.2%	96.6%	93.8%	70%	69.1%	68.7%	66.3%	67%
IOzone - 1MB - 8GB - Read Performance	6216		6932	6503	7126	3881	3654	3821	4142	3884	4122	4425	4396	4426	4568	4526
Normalized	87.23%		97.28%	91.26%	100%	54.46%	51.28%	53.62%	58.13%	54.5%	57.84%	62.1%	61.69%	62.11%	64.1%	63.51%
Standard Deviation	1%		0.9%	0.3%	0.4%	94.9%	94.3%	90.7%	99.5%	96.8%	93.8%	71.9%	71.6%	71.7%	69.6%	69.6%
IOzone - 4Kb - 2GB - Read Performance (MB/s)	6208		6342	6084	6559	3566	3361	3129	2153	2022	2074	2333	2310	2333	3767	3737
Normalized	94.65%		96.69%	92.76%	100%	54.37%	51.24%	47.71%	32.83%	30.83%	31.62%	35.57%	35.22%	35.57%	57.43%	56.98%
Standard Deviation	1.7%		0.2%	1.8%	0.6%	93.6%	94.6%	74.5%	87.4%	85.6%	83.7%	53.7%	53.2%	53.5%	62.8%	63.4%
IOzone - 4Kb - 4GB - Read Performance (MB/s)	6244		6333	6117	6588	3494	3380	3128	2118	2025	2067	2329	2341	2341	3751	3716
Normalized	94.78%		96.13%	92.85%	100%	53.04%	51.31%	47.48%	32.15%	30.74%	31.38%	35.35%	35.53%	35.53%	56.94%	56.41%
Standard Deviation	1.4%		1.4%	2.6%	0.3%	98.4%	96.6%	74.9%	91.1%	86.8%	84.4%	52.8%	53.4%	53.2%	63.7%	63.3%

Phoronix Test Suite

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IOzone - 4Kb - 8GB - Read Performance (MB/s)	6323	6347	6185	**6556**	3638	3434	3011	2116	**1984**	2038	2363	2362	2349	3734	3724
Normalized	96.45%	96.81%	94.34%	100%	55.49%	52.38%	45.93%	32.28%	30.26%	31.09%	36.04%	36.03%	35.83%	56.96%	56.8%
Standard Deviation	0.5%	0.6%	0.6%	0.6%	94.2%	94%	81.6%	90.5%	86.5%	84%	55.2%	55.4%	55.3%	66.1%	66.4%
IOzone - 1MB - 2GB - Write Performance	505	511	704	532	513	513	1110	469	475	**445**	1438	1474	1481	**1646**	1611
Normalized	30.68%	31.04%	42.77%	32.32%	31.17%	31.17%	67.44%	28.49%	28.86%	27.04%	87.36%	89.55%	89.98%	100%	97.87%
Standard Deviation	4.1%	3.6%	3.4%	6.1%	11.8%	8.9%	2.1%	4.3%	4.6%	3.6%	3.3%	2.6%	1.9%	2%	0.4%
IOzone - 1MB - 4GB - Write Performance	435	435	705	410	411	410	1104	**406**	457	434	1484	1482	1485	**1631**	1602
Normalized	26.67%	26.67%	43.23%	25.14%	25.2%	25.14%	67.69%	24.89%	28.02%	26.61%	90.99%	90.86%	91.05%	100%	98.22%
Standard Deviation	12.4%	15.8%	1.2%	7.1%	11.7%	9.3%	0.8%	8.2%	3.1%	3.3%	2.9%	3.3%	3.2%	0.5%	2.8%
IOzone - 1MB - 8GB - Write Performance	485	478	600	518	500	509	733	**382**	447	418	1382	1390	1397	**1504**	1481
Normalized	32.25%	31.78%	39.89%	34.44%	33.24%	33.84%	48.74%	25.4%	29.72%	27.79%	91.89%	92.42%	92.89%	100%	98.47%
Standard Deviation	4.4%	3.7%	3.2%	2%	4.8%	3.1%	28%	5.8%	1.5%	2.2%	1.2%	1.3%	1.2%	0.7%	0.3%
IOzone - 4Kb - 2GB - Write Performance (MB/s)	495	487	664	521	513	492	1054	428	434	**409**	1141	1137	1150	**1462**	1434
Normalized	33.86%	33.31%	45.42%	35.64%	35.09%	33.65%	72.09%	29.27%	29.69%	27.98%	78.04%	77.77%	78.66%	100%	98.08%
Standard Deviation	3.3%	3.8%	2.6%	4%	3.3%	13.7%	2.7%	4.6%	4.5%	3.4%	2.5%	1.9%	1.6%	1.5%	0.2%
IOzone - 4Kb - 4GB - Write Performance (MB/s)	401	**357**	675	396	394	424	1017	368	422	401	1159	1156	1162	1429	**1447**
Normalized	27.71%	24.67%	46.65%	27.37%	27.23%	29.3%	70.28%	25.43%	29.16%	27.71%	80.1%	79.89%	80.3%	98.76%	100%
Standard Deviation	11.8%	10.7%	2.4%	1.4%	3.2%	12.7%	1.1%	3.5%	3.1%	3.1%	2.7%	2.9%	2.9%	2.6%	0.1%
IOzone - 4Kb - 8GB - Write Performance (MB/s)	484	471	615	484	506	507	952	**352**	410	392	1116	1107	1103	**1337**	1332
Normalized	36.2%	35.23%	46%	36.2%	37.85%	37.92%	71.2%	26.33%	30.67%	29.32%	83.47%	82.8%	82.5%	100%	99.63%
Standard Deviation	1.5%	3.2%	0.3%	5.2%	1.4%	1.8%	18%	4.2%	1.7%	1.3%	0.3%	0.1%	1.3%	0.4%	0.2%

complete-last

IOzone - 64Kb - 2GB - Read Performance (MB/s)	7771	7725	7340	**8063**	4312	**4157**	4557	4222	4184	4209	4554	4668	4573	4879	4793
Normalized	96.38%	95.81%	91.03%	100%	53.48%	51.56%	56.52%	52.36%	51.89%	52.2%	56.48%	57.89%	56.72%	60.51%	59.44%
Standard Deviation	2%	2.3%	2.8%	0.6%	95.7%	95.3%	81.1%	97.3%	96.8%	93.3%	71.1%	71.6%	70.5%	67.5%	67.7%
IOzone - 64Kb - 4GB - Read Performance (MB/s)	7869	7722	7065	**8002**	4328	**4118**	4545	4278	4184	4191	4574	4726	4579	4926	4965
Normalized	98.34%	96.5%	88.29%	100%	54.09%	51.46%	56.8%	53.46%	52.29%	52.37%	57.16%	59.06%	57.22%	61.56%	62.05%
Standard Deviation	0.3%	1.5%	3.3%	0.9%	99.2%	98.5%	81.9%	99.4%	97.4%	93.7%	70.5%	71.4%	70.4%	68.3%	69.1%
IOzone - 64Kb - 8GB - Read Performance (MB/s)	7877	7794	7276	**8073**	4307	**4093**	4373	4255	4181	4179	4590	4628	4597	4817	4771
Normalized	97.57%	96.54%	90.13%	100%	53.35%	50.7%	54.17%	52.71%	51.79%	51.77%	56.86%	57.33%	56.94%	59.67%	59.1%
Standard Deviation	0%	1.7%	3.2%	1.6%	95.9%	95.7%	88.9%	100%	97.8%	93.9%	72.5%	72.7%	72.6%	70.4%	70.7%
IOzone - 1MB - 512MB - Read Performance (MB/s)	6629	6541	6479	**6785**	4003	**3708**	4077	3951	4062	4186	4258	4346	4317	4766	4671
Normalized	97.7%	96.4%	95.49%	100%	59%	54.65%	60.09%	58.23%	59.87%	61.69%	62.76%	64.05%	63.63%	70.24%	68.84%
Standard Deviation	1.2%	0.6%	1.9%	0.5%	88.4%	87%	75.8%	89.1%	80.5%	78.5%	72%	71.2%	71.1%	62.1%	62.8%
IOzone - 4Kb - 512MB - Read Performance (MB/s)	6120	6064	5932	**6316**	3716	3458	3171	2188	**2181**	2222	2293	2319	2303	3883	3767
Normalized	96.9%	96.01%	93.92%	100%	58.83%	54.75%	50.21%	34.64%	34.53%	35.18%	36.3%	36.72%	36.46%	61.48%	59.64%
Standard Deviation	0.8%	0.1%	1.3%	0.5%	88%	86.5%	71.1%	77.3%	63%	63.6%	56.8%	55.9%	55.3%	57%	59.2%
IOzone - 64Kb - 2GB - Write Performance (MB/s)	509	514	678	519	536	533	1190	467	477	**446**	1474	1488	1488	**1644**	1629
Normalized	30.96%	31.27%	41.24%	31.57%	32.6%	32.42%	72.38%	28.41%	29.01%	27.13%	89.66%	90.51%	90.51%	100%	99.09%
Standard Deviation	4%	3.1%	8.4%	11.2%	3.3%	4.2%	2.9%	4.6%	5.7%	3.7%	2.5%	2.7%	3%	2.9%	0.7%

complete-last

IOzone - 64Kb - 4GB - Write Performance (MB/s)	384	371	726	430	411	410	1145	410	461	434	1516	1497	1509	1684	1654
Normalized	22.8%	22.03%	43.11%	25.53%	24.41%	24.35%	67.99%	24.35%	27.38%	25.77%	90.02%	88.9%	89.61%	100%	98.22%
Standard Deviation	13.5%	5%	1.9%	12.5%	4.4%	9.2%	1.3%	7.7%	3.1%	3%	3%	3.2%	3.3%	0.8%	0.7%
IOzone - 64Kb - 8GB - Write Performance (MB/s)	501	492	636	518	511	506	741	384	448	424	1413	1412	1409	1532	1509
Normalized	32.7%	32.11%	41.51%	33.81%	33.36%	33.03%	48.37%	25.07%	29.24%	27.68%	92.23%	92.17%	91.97%	100%	98.5%
Standard Deviation	2%	2.9%	15.9%	2.1%	2.8%	4.6%	29.4%	0.5%	1.9%	1.7%	1.9%	1.6%	1.6%	0.3%	0.4%
IOzone - 1MB - 512MB - Write Performance (MB/s)	724	746	805	747	747	751	1244	736	1063	1039	1282	1323	1335	2007	1894
Normalized	36.07%	37.17%	40.11%	37.22%	37.22%	37.42%	61.98%	36.67%	52.96%	51.77%	63.88%	65.92%	66.52%	100%	94.37%
Standard Deviation	16%	13.1%	12.4%	14.3%	14.2%	13.8%	5.5%	17.9%	2.2%	3.1%	12%	10.6%	11.1%	2%	0.8%
IOzone - 4Kb - 512MB - Write Performance (MB/s)	706	689	811	718	698	718	1112	628	917	861	1021	1049	1061	1719	1669
Normalized	41.07%	40.08%	47.18%	41.77%	40.61%	41.77%	64.69%	36.53%	53.34%	50.09%	59.39%	61.02%	61.72%	100%	97.09%
Standard Deviation	12.9%	15.2%	0.5%	13.4%	15.1%	13.3%	3.6%	17.6%	3.3%	2.3%	9.5%	8.3%	8.2%	0.8%	0.4%
IOzone - 64Kb - 512MB - Read Performance (MB/s)	7401	7498	7264	7713	4446	4130	4561	4055	4279	4334	4581	4445	4581	5332	5214
Normalized	95.95%	97.21%	94.18%	100%	57.64%	53.55%	59.13%	52.57%	55.48%	56.19%	59.39%	57.63%	59.39%	69.13%	67.6%
Standard Deviation	0.7%	1.4%	2.6%	1.7%	90.2%	89.1%	79%	90.1%	80.6%	78.9%	74.3%	71.8%	72.6%	65%	64%

complete-last

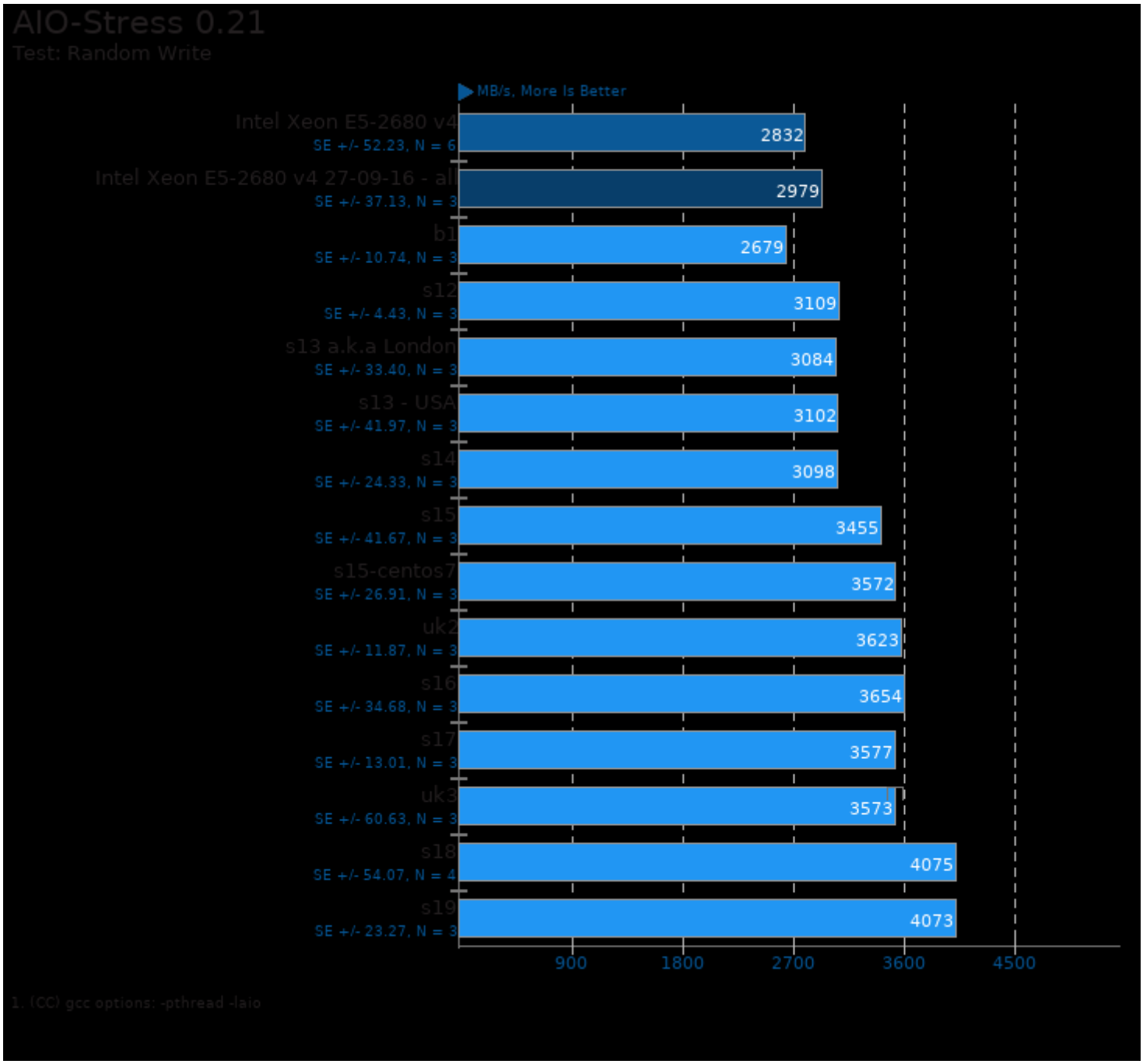
IOzone - 64Kb - 512MB - Write Performance (MB/s)	751	750	864	835	760	756	1253	732	1113	1043	1288	1341	1359	2032	1964
Normalized	36.96%	36.91%	42.52%	41.09%	37.4%	37.2%	61.66%	36.02%	54.77%	51.33%	63.39%	65.99%	66.88%	100%	96.65%
Standard Deviation	13.9%	13.9%	1%	18.1%	13.5%	14%	3.7%	18.6%	3.3%	3.2%	12.3%	11%	11%	0.9%	1.6%
RAMspeed SMP - Add - Integer (MB/s)	18940		15994	21135	20973	20606	20638	29712	31035	30115	31186				
Normalized	60.73%		51.29%	67.77%	67.25%	66.07%	66.18%	95.27%	99.52%	96.57%	100%				
RAMspeed SMP - Copy - Integer (MB/s)	18810		16081	21444	21096	20572	20841	31873	30746	31262	31073				
Normalized	59.02%		50.45%	67.28%	66.19%	64.54%	65.39%	100%	96.46%	98.08%	97.49%				
RAMspeed SMP - Scale - Integer (MB/s)	18838		16168	21622	21197	20706	20839	31703	30722	32126	31104				
Normalized	58.64%		50.33%	67.3%	65.98%	64.45%	64.87%	98.68%	95.63%	100%	96.82%				
RAMspeed SMP - Triad - Integer (MB/s)	18959		16036	21599	20981	20736	20448	31730	30674	31296	30819				
Normalized	59.75%		50.54%	68.07%	66.12%	65.35%	64.44%	100%	96.67%	98.63%	97.13%				
RAMspeed SMP - Average - Integer (MB/s)	18889		16060	21400	21215	20723	20530	31450	31255	30931	30554				
Normalized	60.06%		51.07%	68.04%	67.46%	65.89%	65.28%	100%	99.38%	98.35%	97.15%				
RAMspeed SMP - Add - Floating Point (MB/s)	19768		17959	21813	21370	20850	20740	28585	28263	29606	28508				
Normalized	66.77%		60.66%	73.68%	72.18%	70.42%	70.05%	96.55%	95.46%	100%	96.29%				
RAMspeed SMP - Copy - Floating Point (MB/s)	16706		15315	18422	18022	17587	17524	26420	26101	27086	26324				
Normalized	61.68%		56.54%	68.01%	66.54%	64.93%	64.7%	97.54%	96.36%	100%	97.19%				

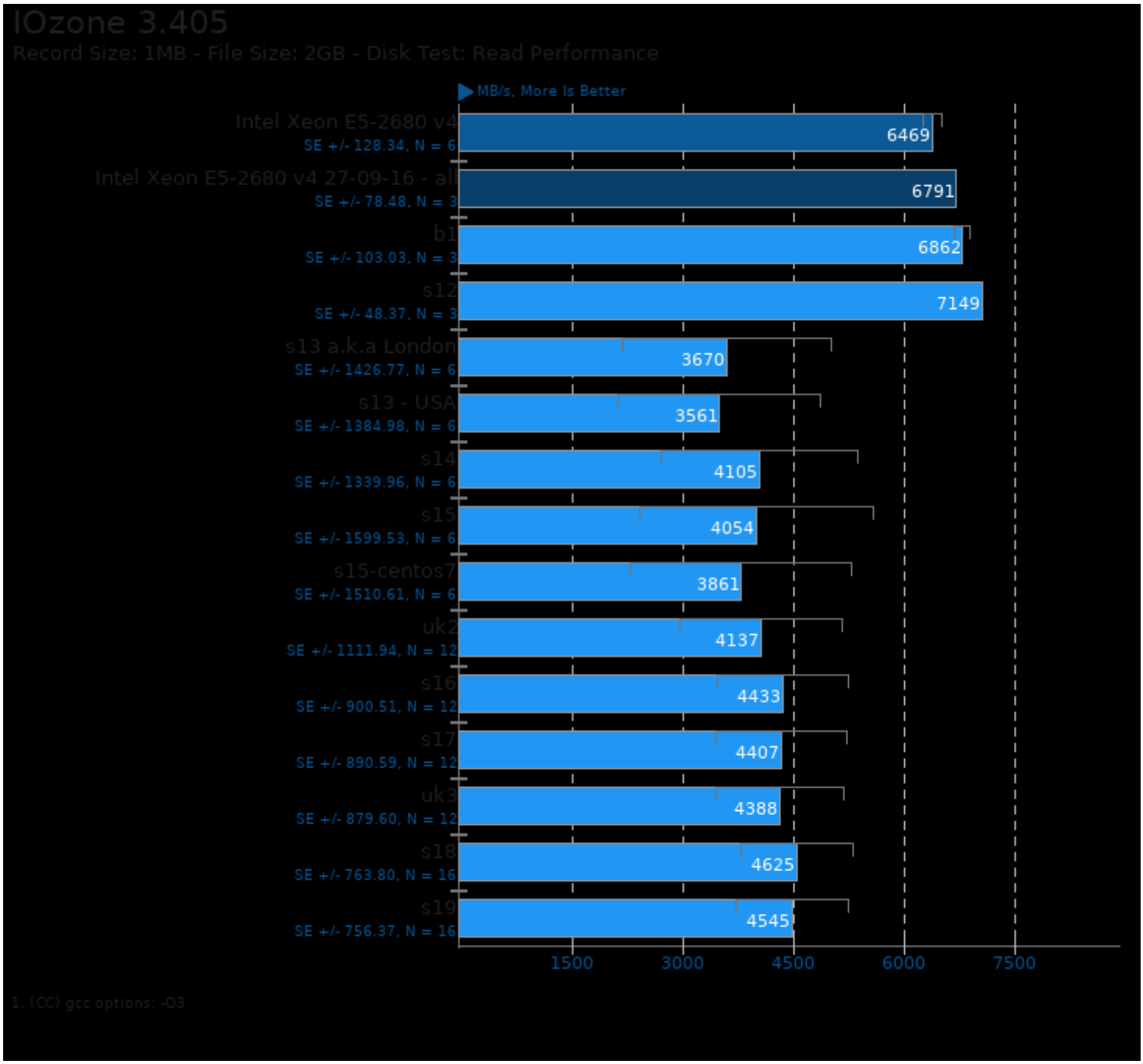
complete-last

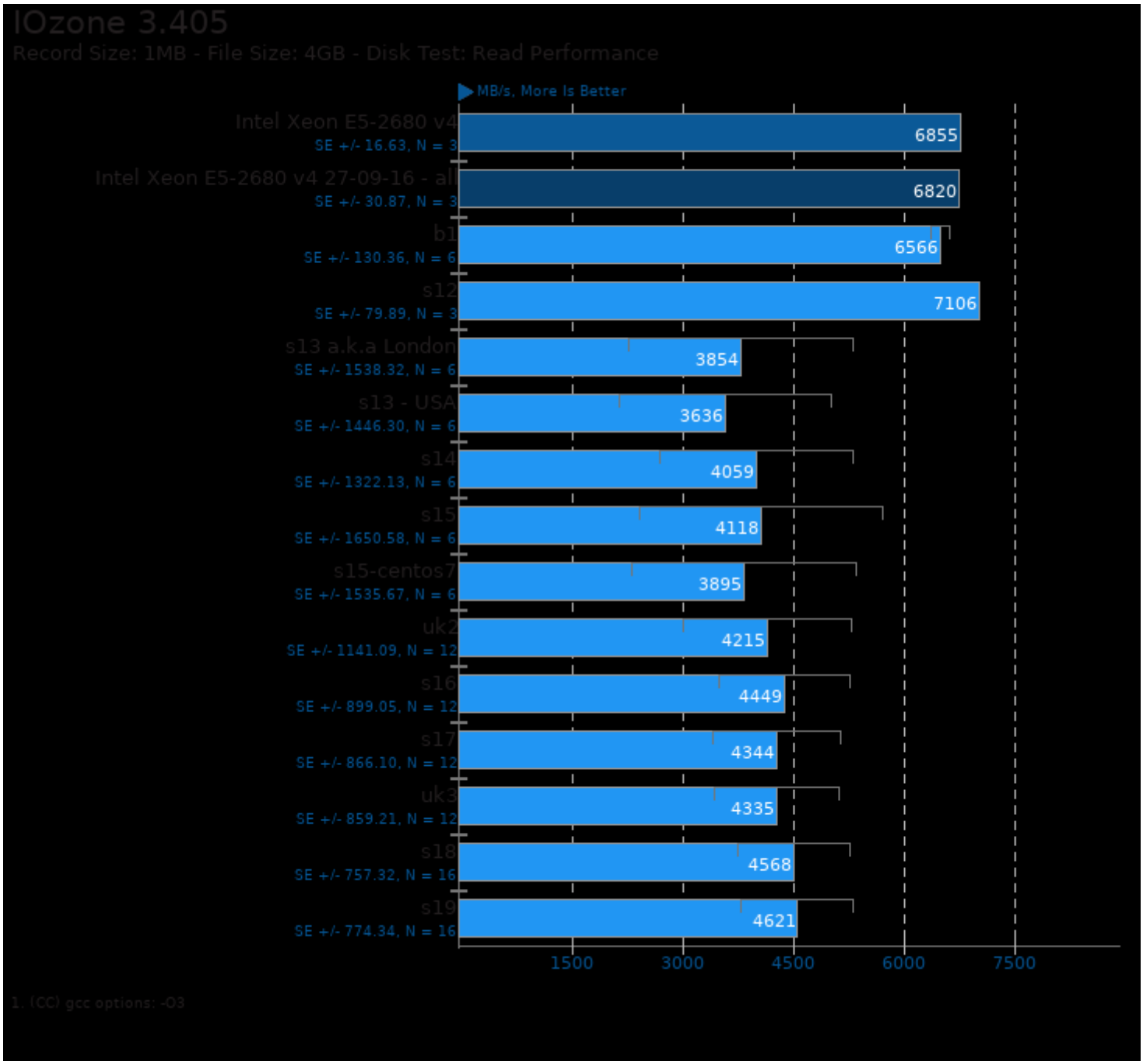
RAMspeed SMP - Scale - Floating Point (MB/s)	16727			15180	18413	18243	17838	17815	26166	26147	28020	27229					
Normalized	59.7%			54.18%	65.71%	65.11%	63.66%	63.58%	93.38%	93.32%	100%	97.18%					
RAMspeed SMP - Triad - Floating Point (MB/s)	19785			17892	21931	21415	21038	20769	28392	28145	30030	29195					
Normalized	65.88%			59.58%	73.03%	71.31%	70.06%	69.16%	94.55%	93.72%	100%	97.22%					
RAMspeed SMP - Average - Floating Point (MB/s)	18186			16481	20149	19719	19231	19131	27012	26735	28520	28187					
Normalized	63.77%			57.79%	70.65%	69.14%	67.43%	67.08%	94.71%	93.74%	100%	98.83%					
FFTE - N.6.1.C.F.R (MFLOPS)	5737	5695	5736	5217	6066	6089											
Normalized	94.22%	93.52%	94.21%	85.68%	99.63%	100%											
Standard Deviation	0.2%	1.1%	0%	2.3%	0.8%	0%											
Timed PHP Compilation - Time To Compile	13.13	13.08	13.07	17.09	12.18	12.24	12.21	12.56	11.30	12.19	12.14	12.08	12.26	12.02	11.06	10.96	
Normalized	83.47%	83.79%	83.86%	64.13%	89.98%	89.54%	89.76%	87.26%	96.99%	89.91%	90.28%	90.73%	89.4%	91.18%	99.1%	100%	
Standard Deviation	0.7%	0.2%	0.4%	0.2%	0.1%	0.1%	0.8%	0.3%	0.4%	1.1%	0.9%	0.4%	0.7%	0.1%	1.1%	0.3%	
C-Ray - Total Time (sec)	14.03	14.00	13.98	23.77	12.68	12.68	12.68	12.69	10.38	5.59	5.57	5.55	5.57	5.56	4.81	4.83	
Normalized	34.28%	34.36%	34.41%	20.24%	37.93%	37.93%	37.93%	37.9%	46.34%	86.05%	86.36%	86.67%	86.36%	86.51%	100%	99.59%	
Standard Deviation	0.4%	0.2%	0%	0%	0.1%	0.1%	0%	0.1%	0.1%	0.3%	0.2%	0.3%	0.1%	0.2%	0.1%	0.3%	
Parallel BZIP2 Compression - 2.F.C	3.64	3.73	3.64	5.92	3.34	3.40	3.35	3.37	2.82	2.67	2.67	2.68	2.65	2.69	2.35	2.33	
Normalized	64.01%	62.47%	64.01%	39.36%	69.76%	68.53%	69.55%	69.14%	82.62%	87.27%	87.27%	86.94%	87.92%	86.62%	99.15%	100%	
Standard Deviation	0.1%	4.4%	0.1%	5.7%	0.1%	5.5%	0.1%	1.6%	6%	1.6%	1.9%	1.9%	1.8%	3.4%	2.3%	1.3%	
Gzip Compression - 2.F.C	11.94	11.92	11.92	13.49	11.18	11.27	11.20	11.24	10.63	11.16	11.13	11.27	11.30	11.08	11.13	11.12	
Normalized	89.03%	89.18%	89.18%	78.8%	95.08%	94.32%	94.91%	94.57%	100%	95.25%	95.51%	94.32%	94.07%	95.94%	95.51%	95.59%	
Standard Deviation	0.6%	0.4%	0.2%	1%	0.1%	0.9%	0.2%	0.2%	0.5%	1.4%	2.6%	2%	1.7%	2.2%	1.9%	3%	
Minion - Graceful	71.85			77.07	68.88	69.15	68.58	69.22	55.27	53.62	52.96	56.21	53.49	54.41	55.14	54.53	
Normalized	73.71%			68.72%	76.89%	76.59%	77.22%	76.51%	95.82%	98.77%	100%	94.22%	99.01%	97.34%	96.05%	97.12%	

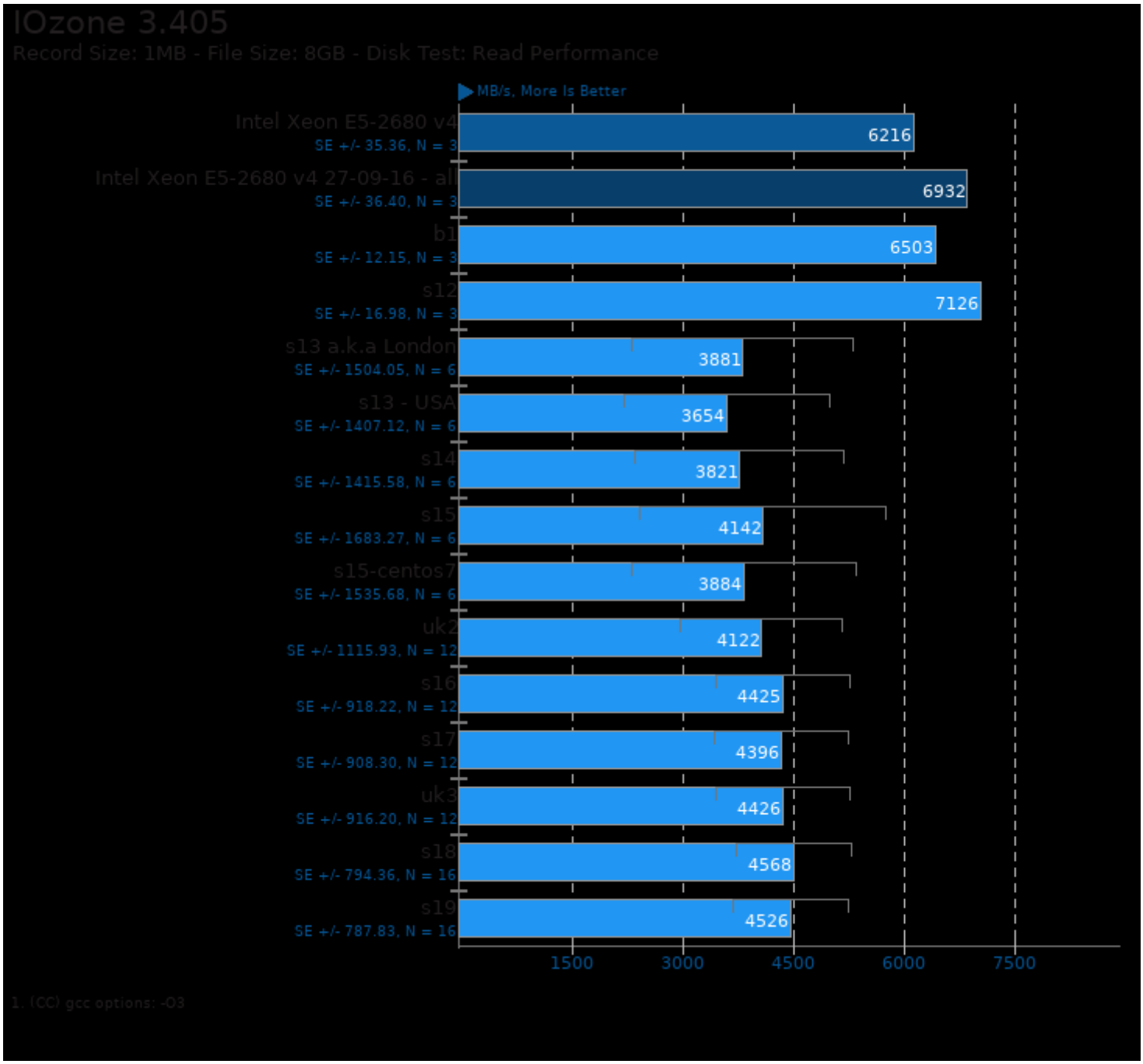
complete-last

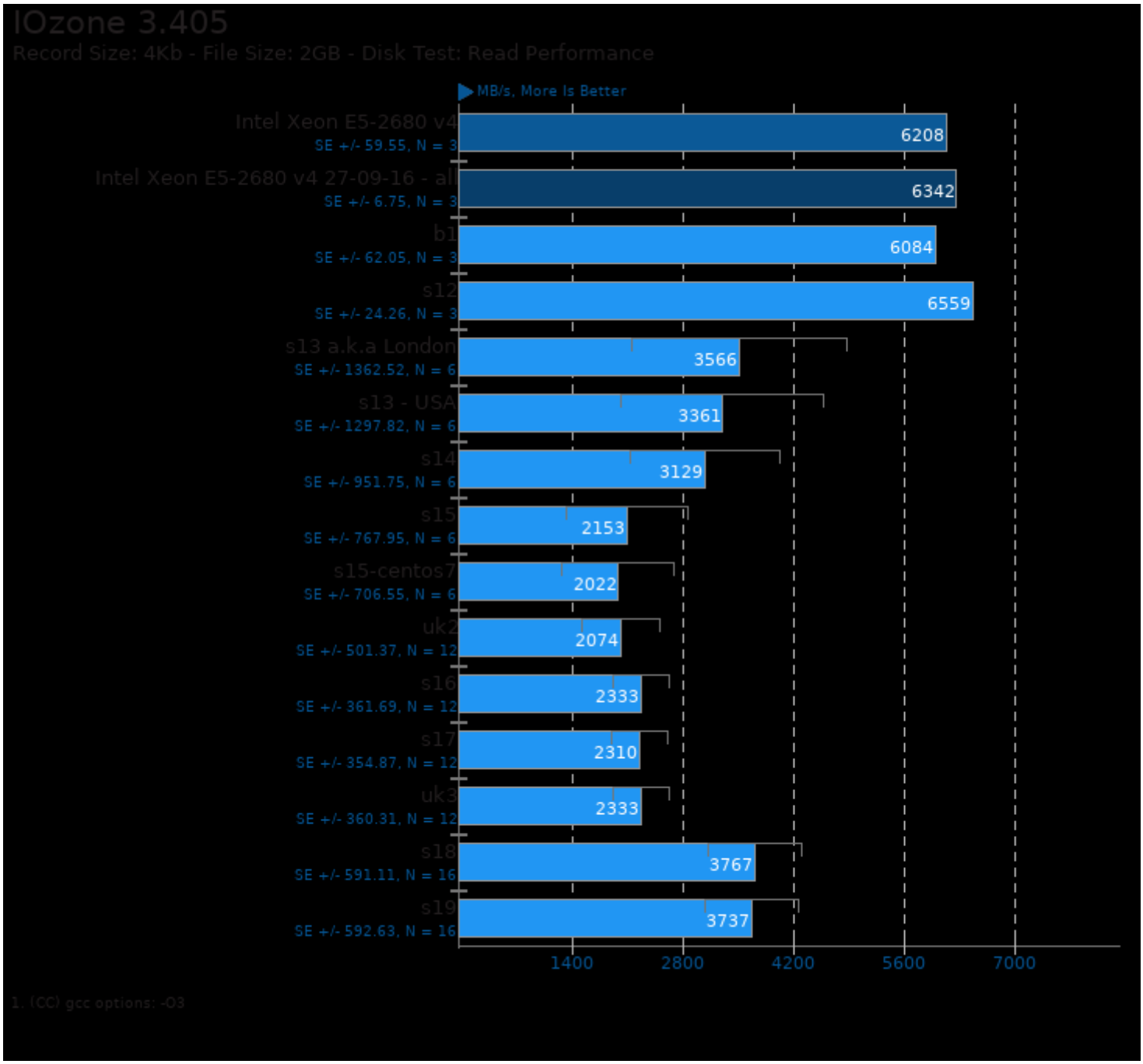
Standard Deviation	1.1%			0.4%	0.4%	0.9%	0.6%	0.4%	1.4%	2.1%	1.3%	4.3%	2.2%	1.2%	0.6%	1.3%
Minion - Solitaire	**101.50**			99.28	93.63	95.66	93.30	95.92	69.90	65.13	65.65	65.81	65.48	**64.45**	66.48	66.57
Normalized	63.5%			64.92%	68.83%	67.37%	69.08%	67.19%	92.2%	98.96%	98.17%	97.93%	98.43%	100%	96.95%	96.82%
Standard Deviation	0.9%			0.7%	0.4%	0.8%	0.6%	0.7%	1.3%	1.9%	1.9%	2.8%	2.4%	2.2%	4.4%	2.4%
Minion - Quasigroup (sec)	157			**168**	151	152	152	152	123	118	**117**	118	118	**117**	118	118
Normalized	74.52%			69.64%	77.48%	76.97%	76.97%	76.97%	95.12%	99.15%	100%	99.15%	99.15%	100%	99.15%	99.15%
Standard Deviation	1.7%			1.9%	0.2%	1.1%	0.5%	2%	0.7%	0.1%	0.2%	0.3%	0.5%	1.2%	0.2%	0.5%
OpenSSL - R.4.b.P (Signs/sec)	1855	1856	1855	**1095**	2047	2046	2046	2047	2544	2541	2541	2542	2542	2542	**2904**	2902
Normalized	63.88%	63.91%	63.88%	37.71%	70.49%	70.45%	70.45%	70.49%	87.6%	87.5%	87.5%	87.53%	87.53%	87.53%	100%	99.93%
Standard Deviation	0%	0%	0%	0.1%	0.1%	0%	0.1%	0.1%	0%	0%	0%	0%	0%	0%	0%	0.1%
Apache Benchmark - S.W.P.S (Reqs/sec)	28983	29306	29221	23073	**30465**	29794	29057	27508	20704	21834	15079	**13880**	19860	19706	23799	24300
Normalized	95.14%	96.2%	95.92%	75.74%	100%	97.8%	95.38%	90.29%	67.96%	71.67%	49.5%	45.56%	65.19%	64.68%	78.12%	79.76%
Standard Deviation	0.3%	0.3%	0.5%	0.6%	1.7%	0.8%	1.3%	0.4%	1.1%	0.5%	0.5%	0.5%	0.2%	0.3%	0.6%	0.6%
PHPBench - P.B.S	102246	102546	102548	**95753**	108637	108146	108705	107735	120972	147015	147416	146543	145563	146651	152832	**153945**
Normalized	66.42%	66.61%	66.61%	62.2%	70.57%	70.25%	70.61%	69.98%	78.58%	95.5%	95.76%	95.19%	94.56%	95.26%	99.28%	100%
Standard Deviation	0.5%	0.2%	0.4%	0.3%	0.5%	0.7%	0.1%	0.6%	0.5%	0.2%	0.5%	0.2%	0.7%	0.2%	0.6%	0.1%

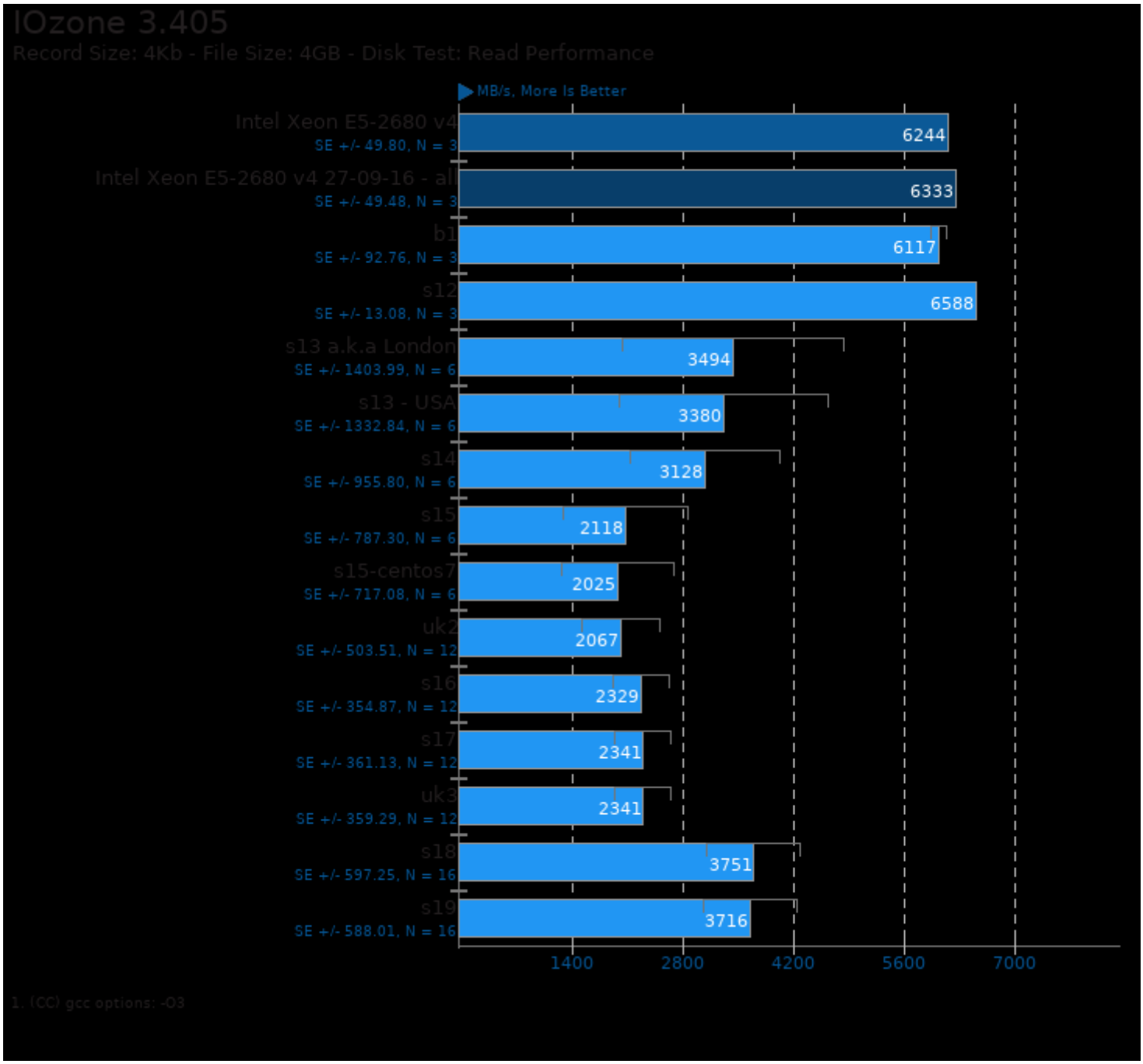

AIO-Stress 0.21
Test: Random Write
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 52.23, N = 6
2832
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 37.13, N = 3
2979
b1
SE +/- 10.74, N = 3
2679
s12
SE +/- 4.43, N = 3
3109
s13 a.k.a London
SE +/- 33.40, N = 3
3084
s13 - USA
SE +/- 41.97, N = 3
3102
s14
SE +/- 24.33, N = 3
3098
s15
SE +/- 41.67, N = 3
3455
s15-centos7
SE +/- 26.91, N = 3
3572
uk2
SE +/- 11.87, N = 3
3623
s16
SE +/- 34.68, N = 3
3654
s17
SE +/- 13.01, N = 3
3577
uk3
SE +/- 60.63, N = 3
3573
s18
SE +/- 54.07, N = 4
4075
s19
SE +/- 23.27, N = 3
4073
900
1800
2700
3600
4500
1. (CC) gcc options: -pthread -laio

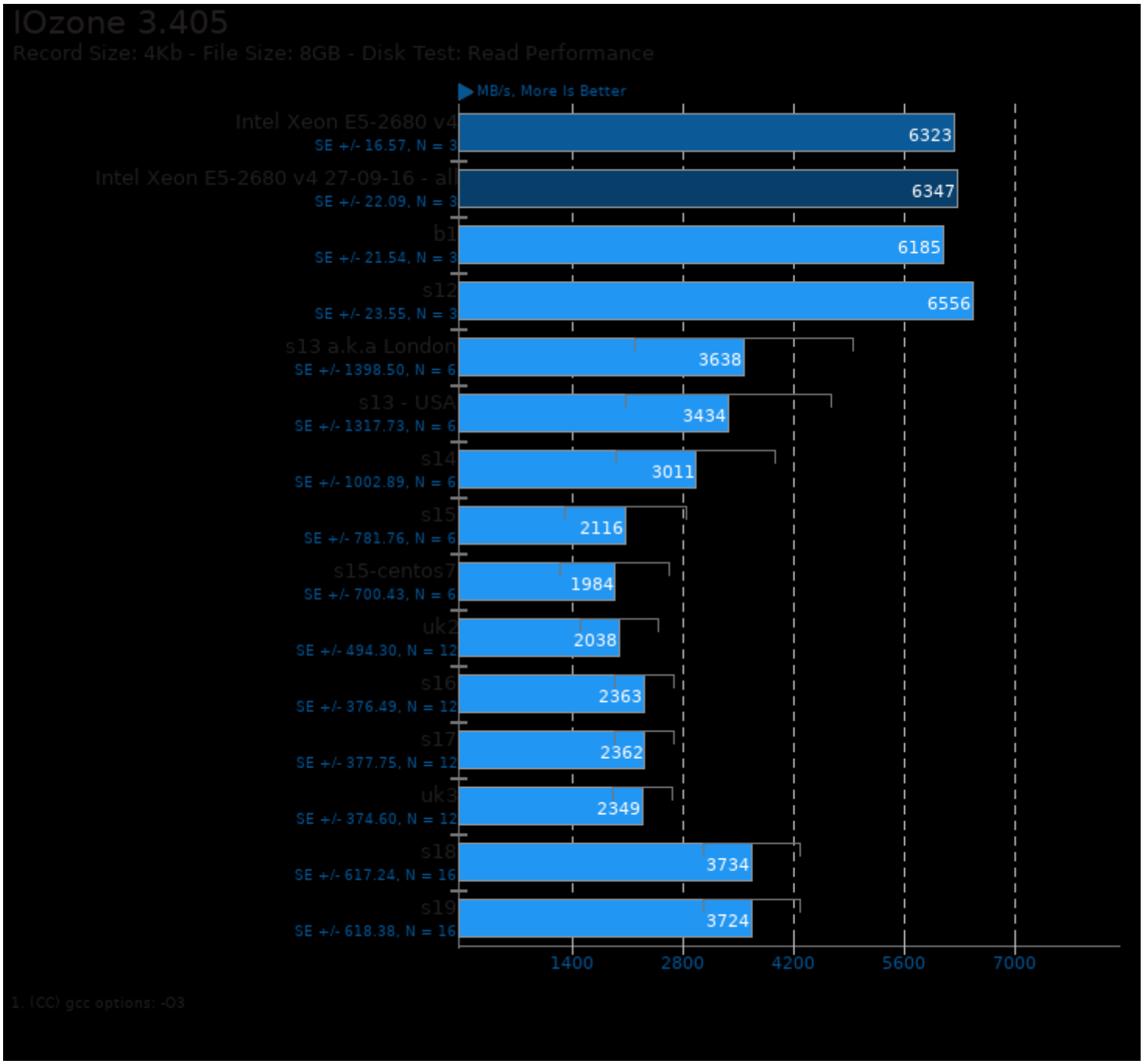

IOzone 3.405
Record Size: 1MB - File Size: 2GB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 128.34, N = 6
6469
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 78.48, N = 3
6791
b1
SE +/- 103.03, N = 3
6862
s12
SE +/- 48.37, N = 3
7149
s13 a.k.a London
SE +/- 1426.77, N = 6
3670
s13 - USA
SE +/- 1384.98, N = 6
3561
s14
SE +/- 1339.96, N = 6
4105
s15
SE +/- 1599.53, N = 6
4054
s15-centos7
SE +/- 1510.61, N = 6
3861
uk2
SE +/- 1111.94, N = 12
4137
s16
SE +/- 900.51, N = 12
4433
s17
SE +/- 890.59, N = 12
4407
uk3
SE +/- 879.60, N = 12
4388
s18
SE +/- 763.80, N = 16
4625
s19
SE +/- 756.37, N = 16
4545
1500
3000
4500
6000
7500
1. (CC) gcc options: -O3

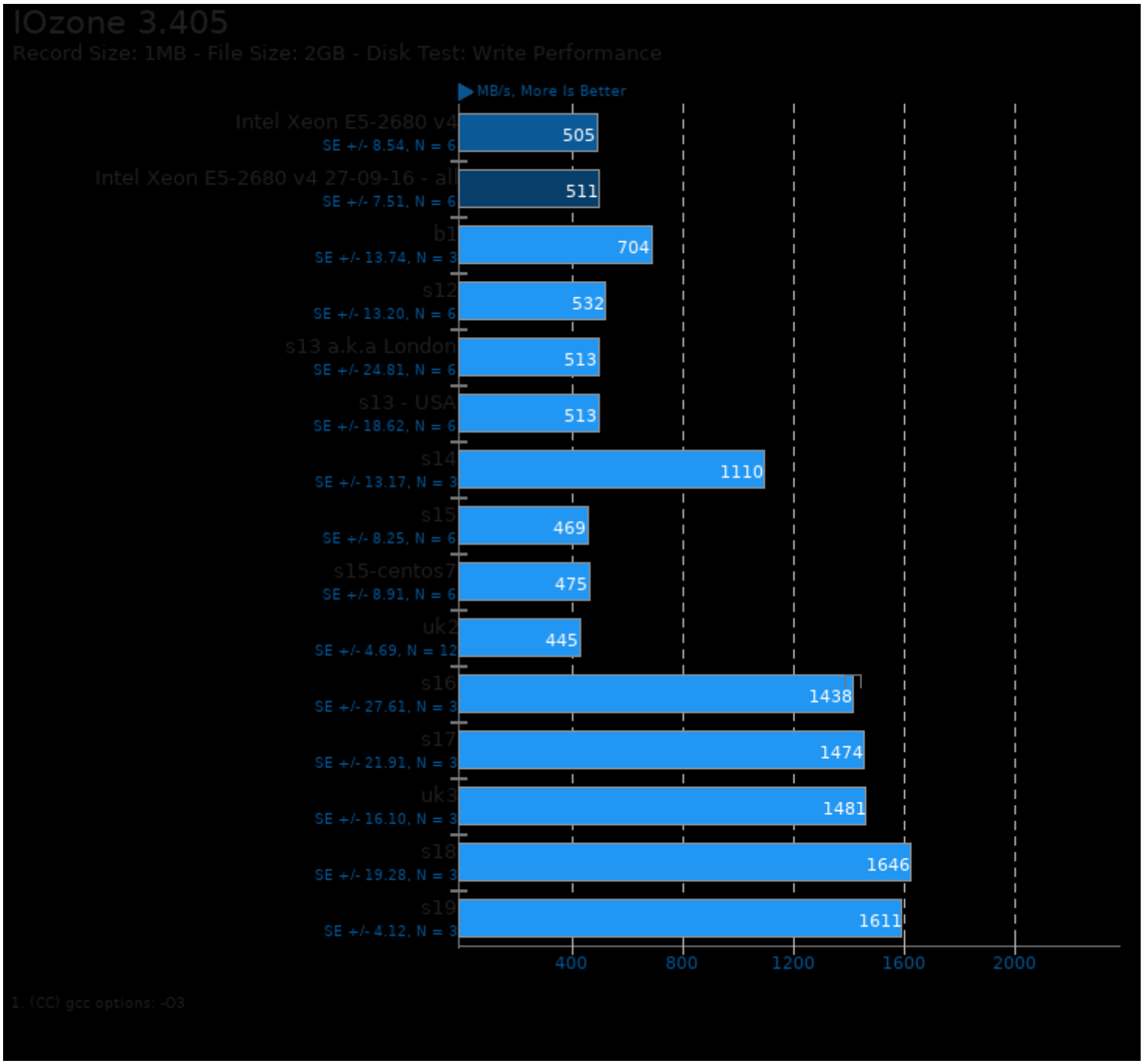

IOzone 3.405
Record Size: 1MB - File Size: 4GB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 16.63, N = 3
6855
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 30.87, N = 3
6820
b1
SE +/- 130.36, N = 6
6566
s12
SE +/- 79.89, N = 3
7106
s13 a.k.a London
SE +/- 1538.32, N = 6
3854
s13 - USA
SE +/- 1446.30, N = 6
3636
s14
SE +/- 1322.13, N = 6
4059
s15
SE +/- 1650.58, N = 6
4118
s15-centos7
SE +/- 1535.67, N = 6
3895
uk2
SE +/- 1141.09, N = 12
4215
s16
SE +/- 899.05, N = 12
4449
s17
SE +/- 866.10, N = 12
4344
uk3
SE +/- 859.21, N = 12
4335
s18
SE +/- 757.32, N = 16
4568
s19
SE +/- 774.34, N = 16
4621
1500
3000
4500
6000
7500
1. (CC) gcc options: -O3

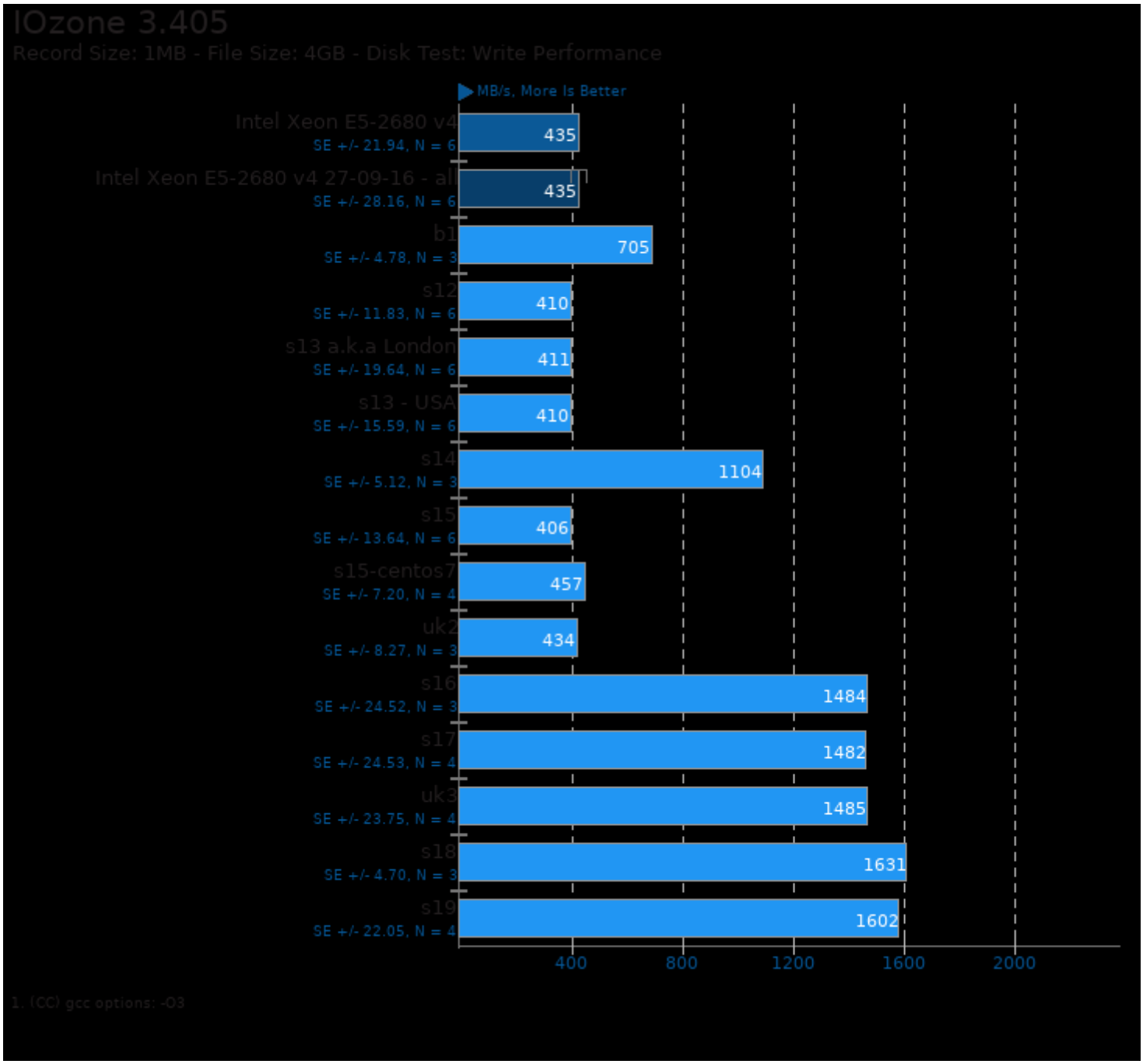

IOzone 3.405
Record Size: 1MB - File Size: 8GB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 35.36, N = 3
6216
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 36.40, N = 3
6932
b1
SE +/- 12.15, N = 3
6503
s12
SE +/- 16.98, N = 3
7126
s13 a.k.a London
SE +/- 1504.05, N = 6
3881
s13 - USA
SE +/- 1407.12, N = 6
3654
s14
SE +/- 1415.58, N = 6
3821
s15
SE +/- 1683.27, N = 6
4142
s15-centos7
SE +/- 1535.68, N = 6
3884
uk2
SE +/- 1115.93, N = 12
4122
s16
SE +/- 918.22, N = 12
4425
s17
SE +/- 908.30, N = 12
4396
uk3
SE +/- 916.20, N = 12
4426
s18
SE +/- 794.36, N = 16
4568
s19
SE +/- 787.83, N = 16
4526
1500
3000
4500
6000
7500
1. (CC) gcc options: -O3

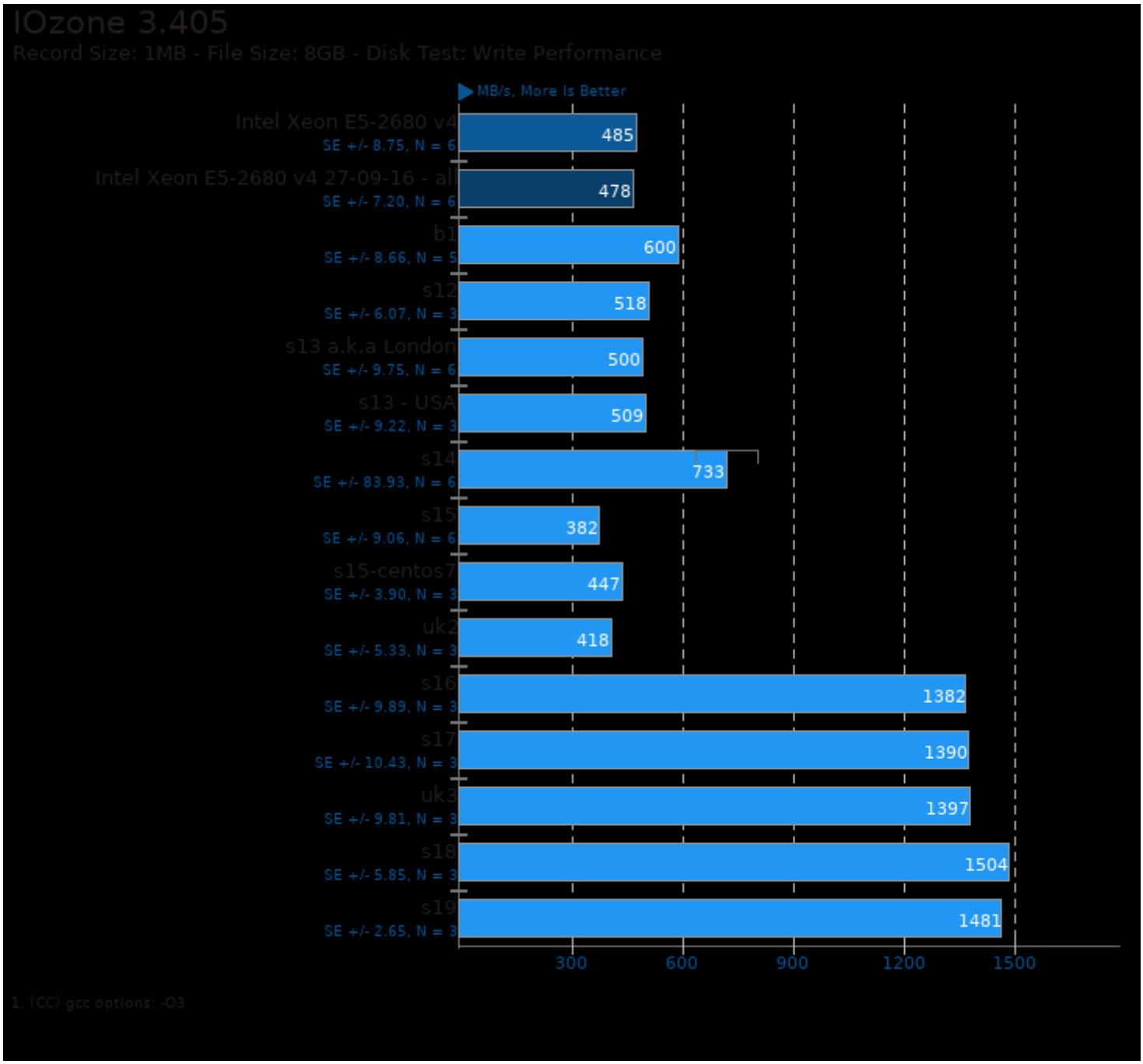

IOzone 3.405
Record Size: 4Kb - File Size: 2GB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 59.55, N = 3
6208
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 6.75, N = 3
6342
b1
SE +/- 62.05, N = 3
6084
s12
SE +/- 24.26, N = 3
6559
s13 a.k.a London
SE +/- 1362.52, N = 6
3566
s13 - USA
SE +/- 1297.82, N = 6
3361
s14
SE +/- 951.75, N = 6
3129
s15
SE +/- 767.95, N = 6
2153
s15-centos7
SE +/- 706.55, N = 6
2022
uk2
SE +/- 501.37, N = 12
2074
s16
SE +/- 361.69, N = 12
2333
s17
SE +/- 354.87, N = 12
2310
uk3
SE +/- 360.31, N = 12
2333
s18
SE +/- 591.11, N = 16
3767
s19
SE +/- 592.63, N = 16
3737
1400
2800
4200
5600
7000
1. (CC) gcc options: -O3

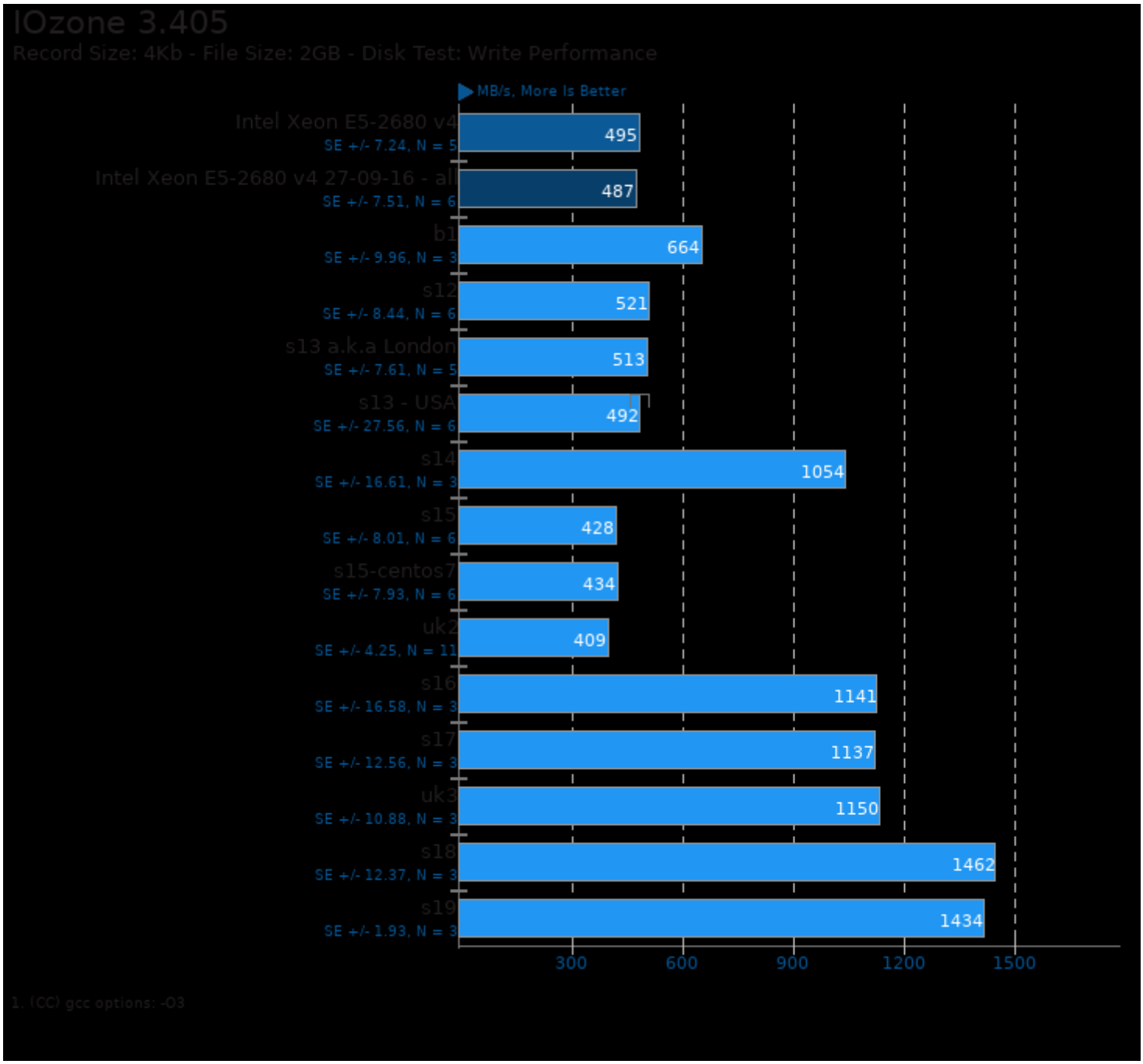

IOzone 3.405
Record Size: 4Kb - File Size: 4GB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 49.80, N = 3
6244
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 49.48, N = 3
6333
b1
SE +/- 92.76, N = 3
6117
s12
SE +/- 13.08, N = 3
6588
s13 a.k.a London
SE +/- 1403.99, N = 6
3494
s13 - USA
SE +/- 1332.84, N = 6
3380
s14
SE +/- 955.80, N = 6
3128
s15
SE +/- 787.30, N = 6
2118
s15-centos7
SE +/- 717.08, N = 6
2025
uk2
SE +/- 503.51, N = 12
2067
s16
SE +/- 354.87, N = 12
2329
s17
SE +/- 361.13, N = 12
2341
uk3
SE +/- 359.29, N = 12
2341
s18
SE +/- 597.25, N = 16
3751
s19
SE +/- 588.01, N = 16
3716
1400
2800
4200
5600
7000
1. (CC) gcc options: -O3

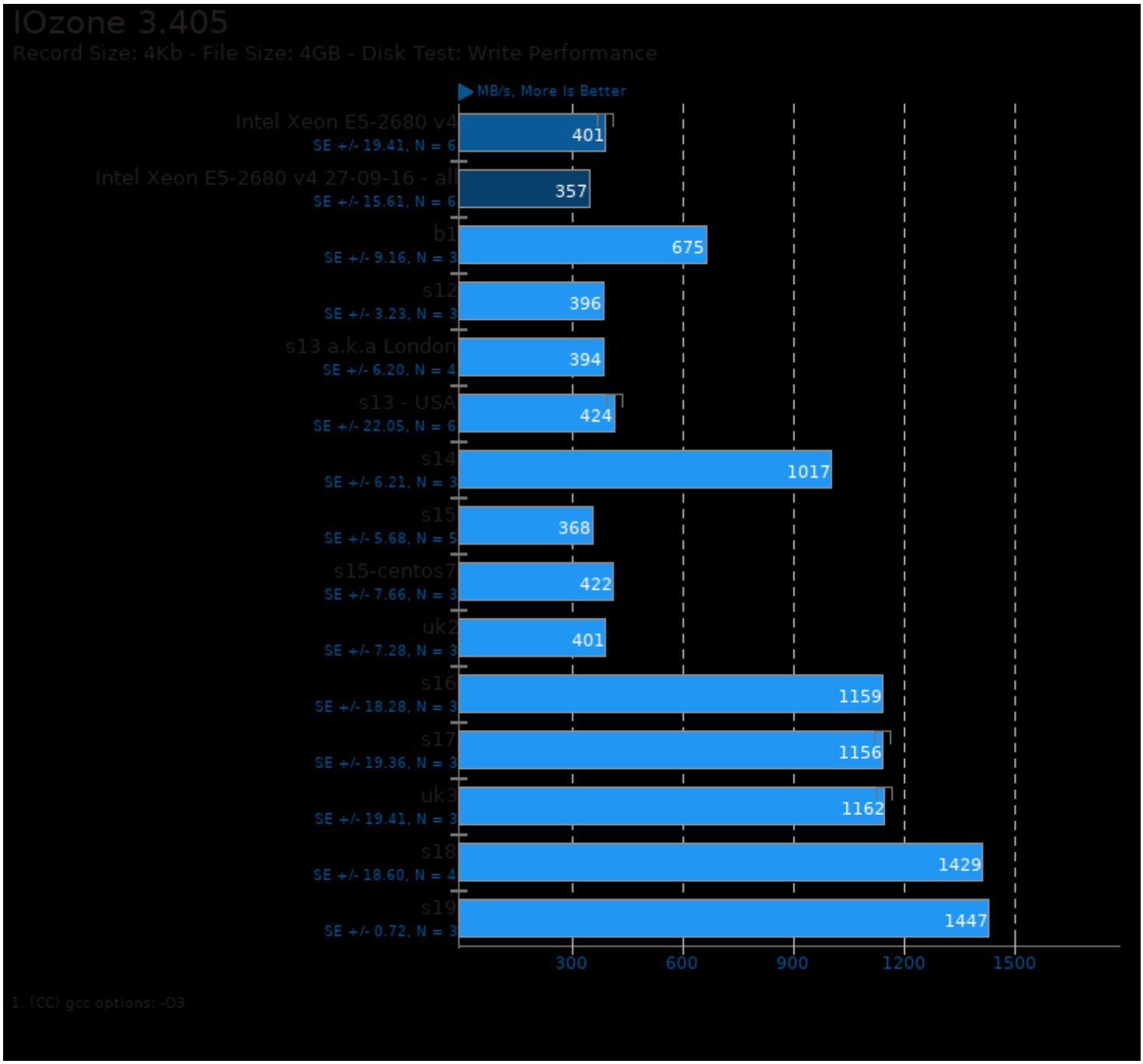

IOzone 3.405
Record Size: 4Kb - File Size: 8GB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 16.57, N = 3
6323
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 22.09, N = 3
6347
b1
SE +/- 21.54, N = 3
6185
s12
SE +/- 23.55, N = 3
6556
s13 a.k.a London
SE +/- 1398.50, N = 6
3638
s13 - USA
SE +/- 1317.73, N = 6
3434
s14
SE +/- 1002.89, N = 6
3011
s15
SE +/- 781.76, N = 6
2116
s15-centos7
SE +/- 700.43, N = 6
1984
uk2
SE +/- 494.30, N = 12
2038
s16
SE +/- 376.49, N = 12
2363
s17
SE +/- 377.75, N = 12
2362
uk3
SE +/- 374.60, N = 12
2349
s18
SE +/- 617.24, N = 16
3734
s19
SE +/- 618.38, N = 16
3724
1400
2800
4200
5600
7000
1. (CC) gcc options: -O3

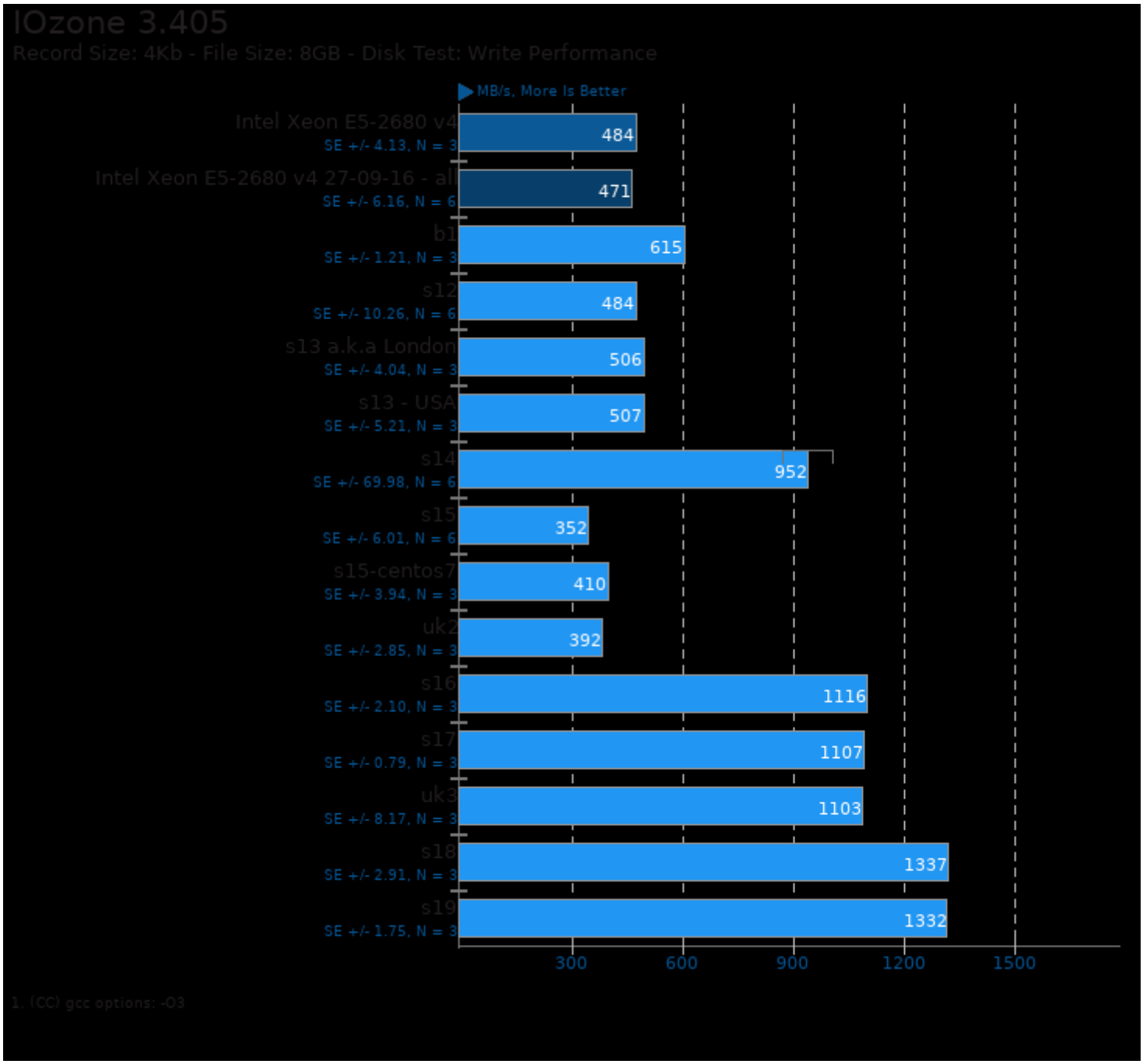

IOzone 3.405
Record Size: 1MB - File Size: 2GB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 8.54, N = 6
505
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 7.51, N = 6
511
b1
SE +/- 13.74, N = 3
704
s12
SE +/- 13.20, N = 6
532
s13 a.k.a London
SE +/- 24.81, N = 6
513
s13 - USA
SE +/- 18.62, N = 6
513
s14
SE +/- 13.17, N = 3
1110
s15
SE +/- 8.25, N = 6
469
s15-centos7
SE +/- 8.91, N = 6
475
uk2
SE +/- 4.69, N = 12
445
s16
SE +/- 27.61, N = 3
1438
s17
SE +/- 21.91, N = 3
1474
uk3
SE +/- 16.10, N = 3
1481
s18
SE +/- 19.28, N = 3
1646
s19
SE +/- 4.12, N = 3
1611
400
800
1200
1600
2000
1. (CC) gcc options: -O3

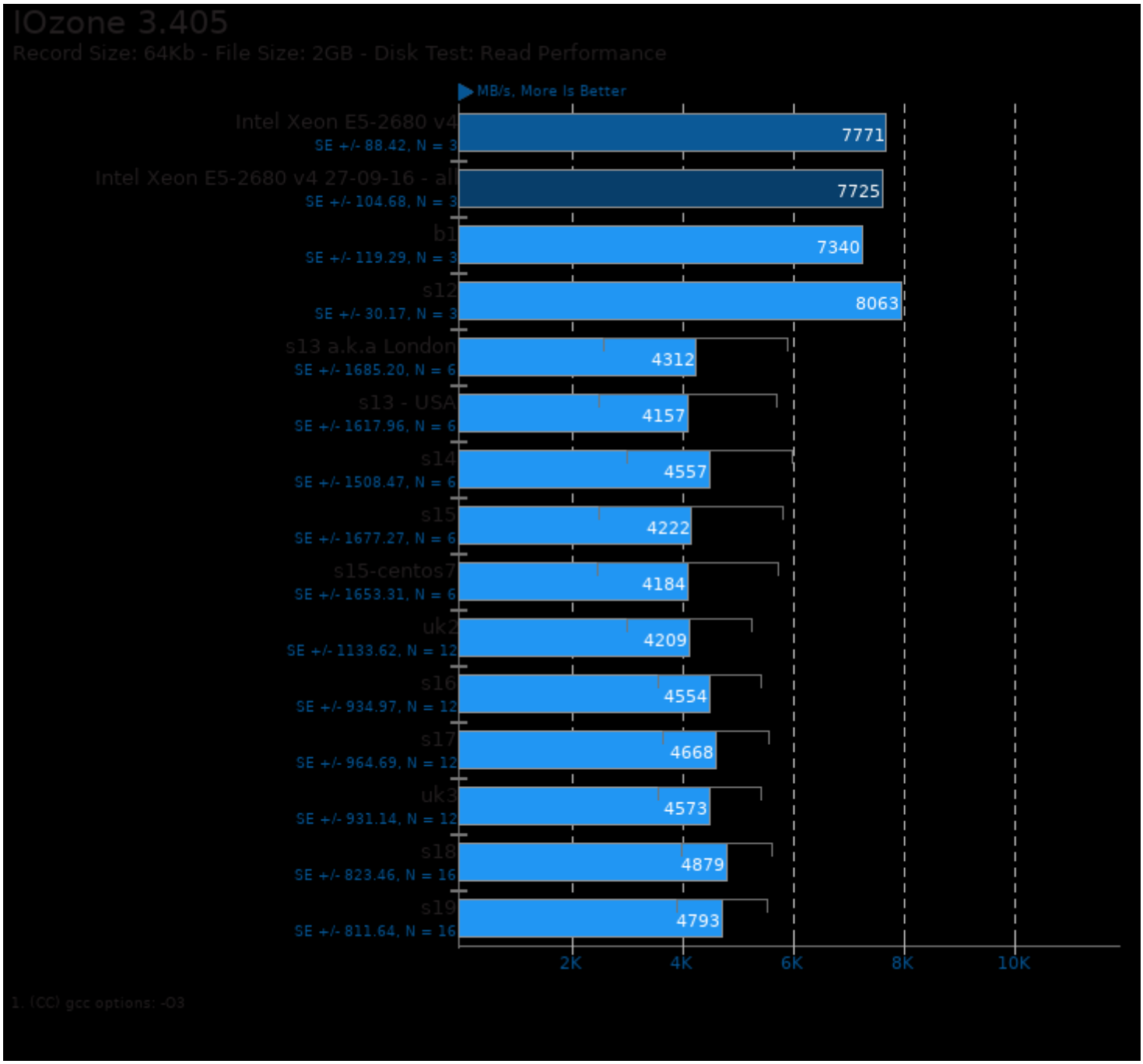

IOzone 3.405
Record Size: 1MB - File Size: 4GB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 21.94, N = 6
435
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 28.16, N = 6
435
b1
SE +/- 4.78, N = 3
705
s12
SE +/- 11.83, N = 6
410
s13 a.k.a London
SE +/- 19.64, N = 6
411
s13 - USA
SE +/- 15.59, N = 6
410
s14
SE +/- 5.12, N = 3
1104
s15
SE +/- 13.64, N = 6
406
s15-centos7
SE +/- 7.20, N = 4
457
uk2
SE +/- 8.27, N = 3
434
s16
SE +/- 24.52, N = 3
1484
s17
SE +/- 24.53, N = 4
1482
uk3
SE +/- 23.75, N = 4
1485
s18
SE +/- 4.70, N = 3
1631
s19
SE +/- 22.05, N = 4
1602
400
800
1200
1600
2000
1. (CC) gcc options: -O3

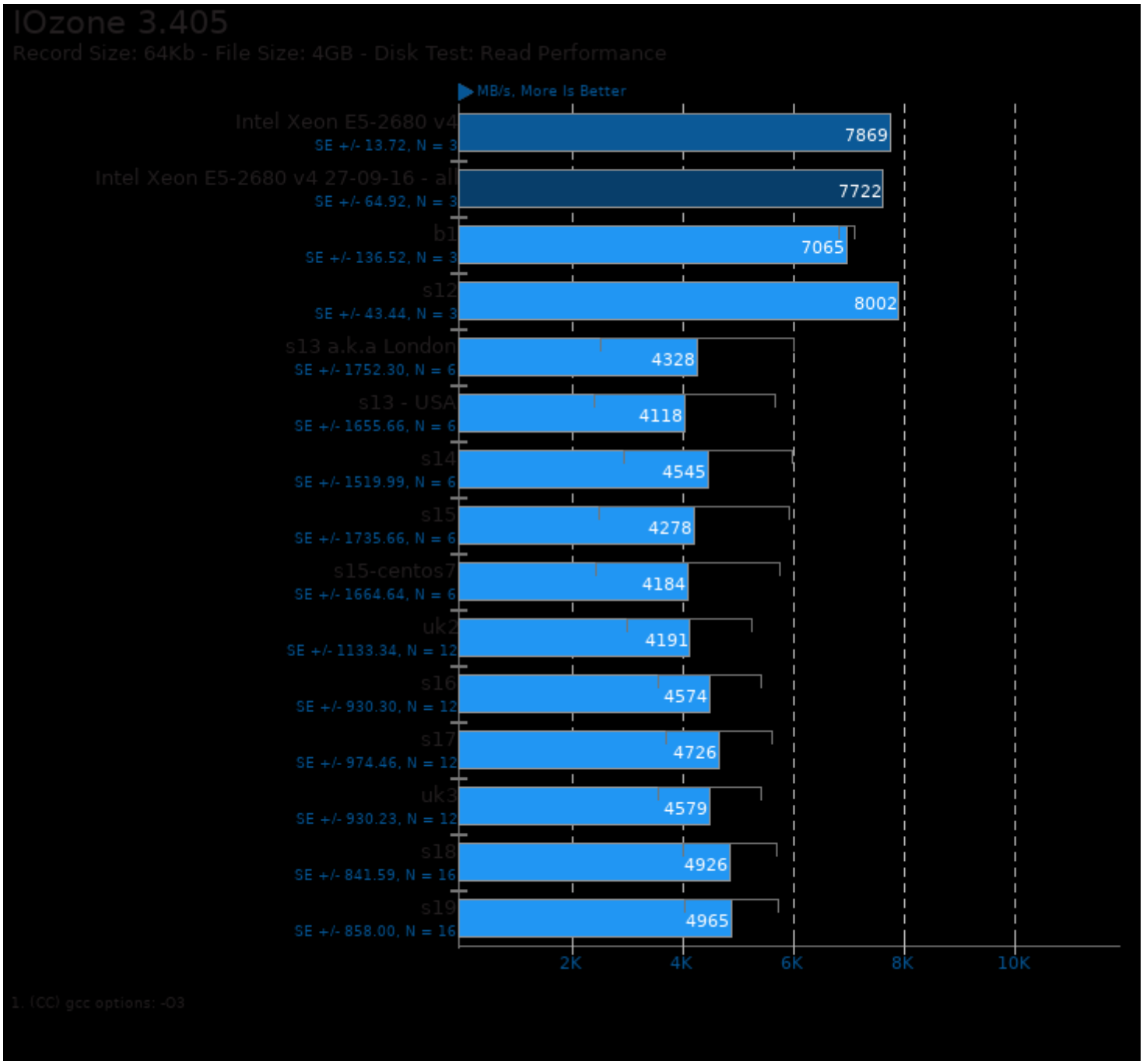

IOzone 3.405
Record Size: 1MB - File Size: 8GB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 8.75, N = 6
485
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 7.20, N = 6
478
b1
SE +/- 8.66, N = 5
600
s12
SE +/- 6.07, N = 3
518
s13 a.k.a London
SE +/- 9.75, N = 6
500
s13 - USA
SE +/- 9.22, N = 3
509
s14
SE +/- 83.93, N = 6
733
s15
SE +/- 9.06, N = 6
382
s15-centos7
SE +/- 3.90, N = 3
447
uk2
SE +/- 5.33, N = 3
418
s16
SE +/- 9.89, N = 3
1382
s17
SE +/- 10.43, N = 3
1390
uk3
SE +/- 9.81, N = 3
1397
s18
SE +/- 5.85, N = 3
1504
s19
SE +/- 2.65, N = 3
1481
300
600
900
1200
1500
1. (CC) gcc options: -O3

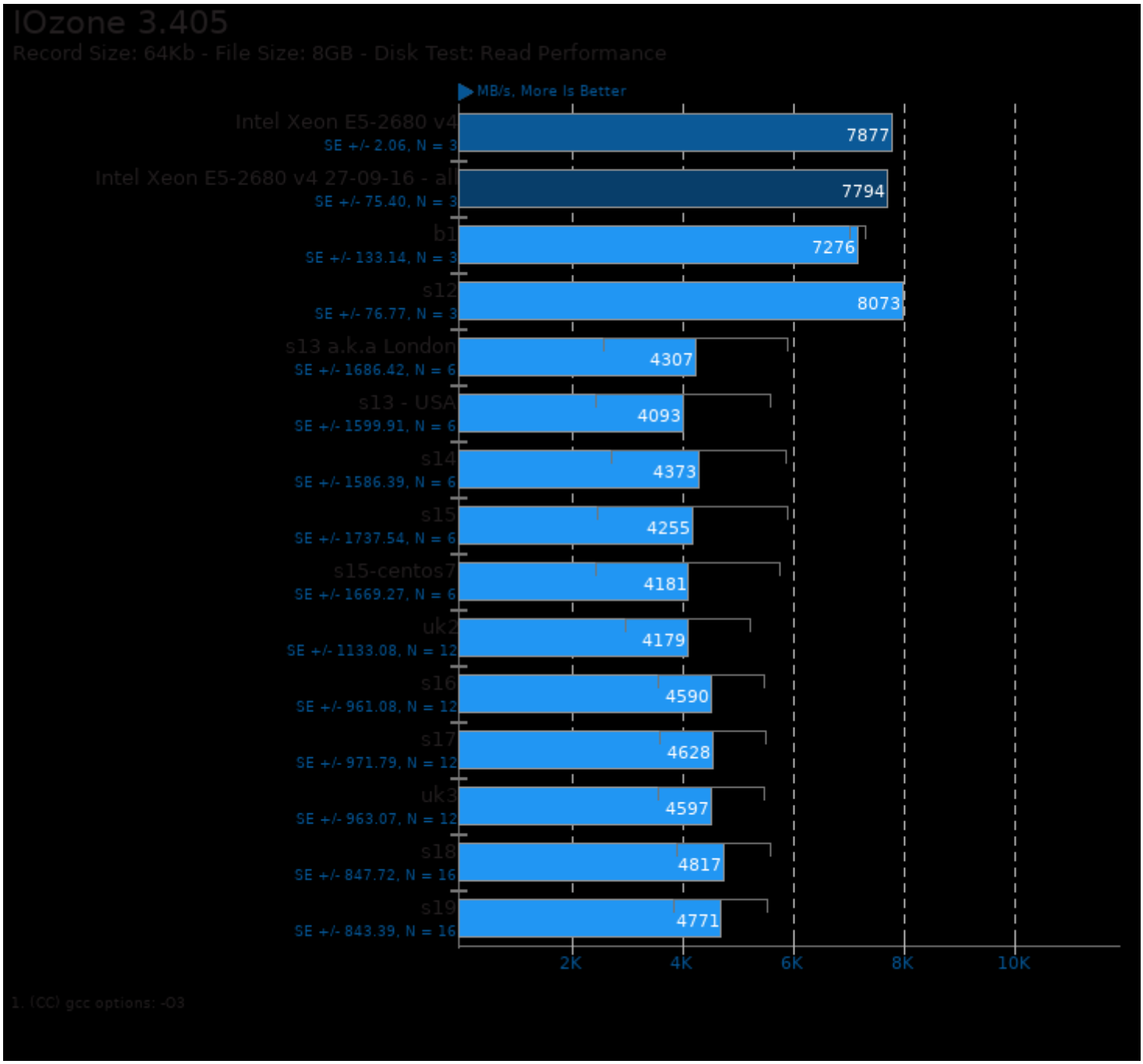

IOzone 3.405
Record Size: 4Kb - File Size: 2GB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 7.24, N = 5
495
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 7.51, N = 6
487
b1
SE +/- 9.96, N = 3
664
s12
SE +/- 8.44, N = 6
521
s13 a.k.a London
SE +/- 7.61, N = 5
513
s13 - USA
SE +/- 27.56, N = 6
492
s14
SE +/- 16.61, N = 3
1054
s15
SE +/- 8.01, N = 6
428
s15-centos7
SE +/- 7.93, N = 6
434
uk2
SE +/- 4.25, N = 11
409
s16
SE +/- 16.58, N = 3
1141
s17
SE +/- 12.56, N = 3
1137
uk3
SE +/- 10.88, N = 3
1150
s18
SE +/- 12.37, N = 3
1462
s19
SE +/- 1.93, N = 3
1434
300
600
900
1200
1500
1. (CC) gcc options: -O3

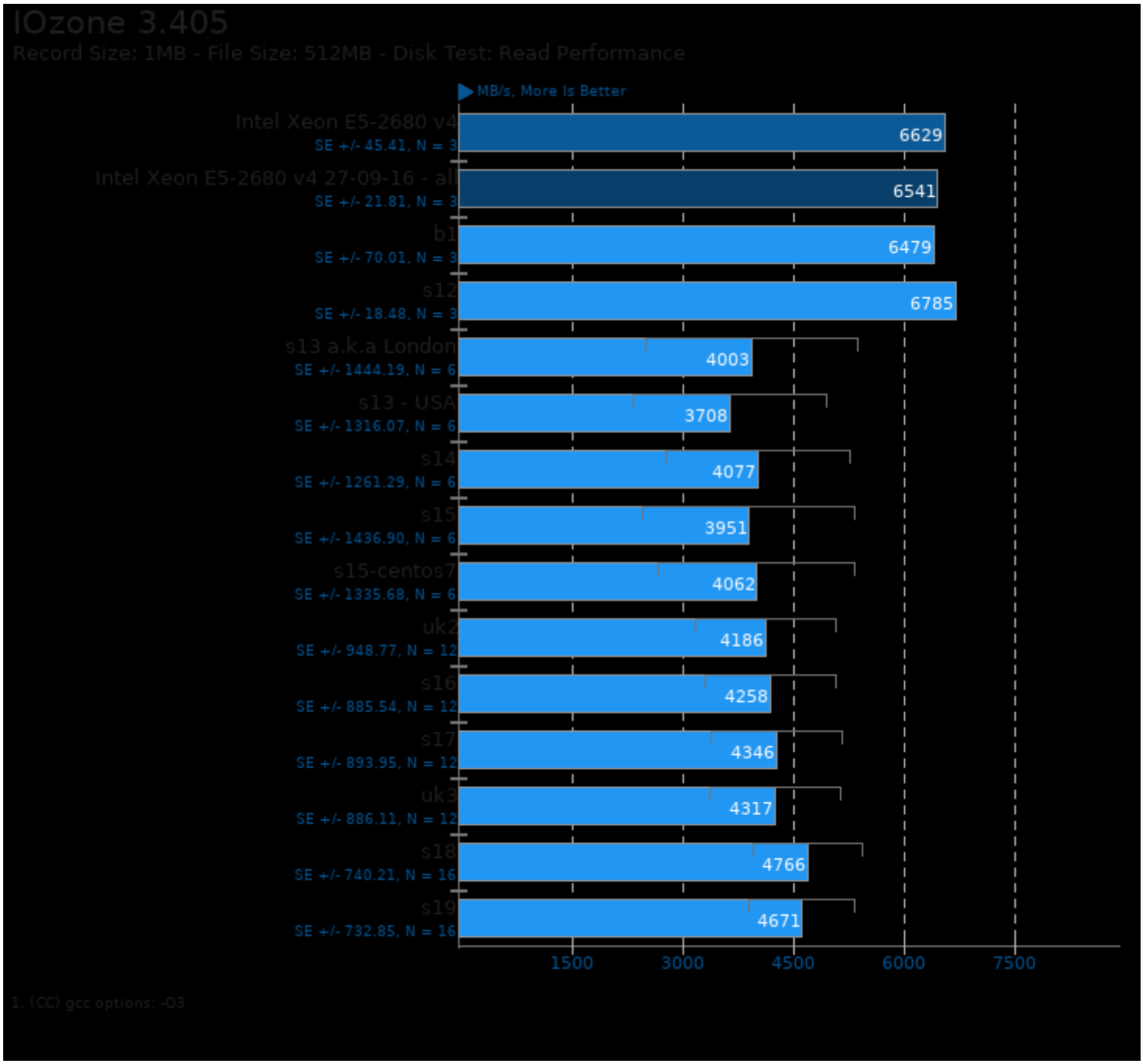

IOzone 3.405
Record Size: 4Kb - File Size: 4GB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 19.41, N = 6
401
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 15.61, N = 6
357
b1
SE +/- 9.16, N = 3
675
s12
SE +/- 3.23, N = 3
396
s13 a.k.a London
SE +/- 6.20, N = 4
394
s13 - USA
SE +/- 22.05, N = 6
424
s14
SE +/- 6.21, N = 3
1017
s15
SE +/- 5.68, N = 5
368
s15-centos7
SE +/- 7.66, N = 3
422
uk2
SE +/- 7.28, N = 3
401
s16
SE +/- 18.28, N = 3
1159
s17
SE +/- 19.36, N = 3
1156
uk3
SE +/- 19.41, N = 3
1162
s18
SE +/- 18.60, N = 4
1429
s19
SE +/- 0.72, N = 3
1447
300
600
900
1200
1500
1. (CC) gcc options: -O3

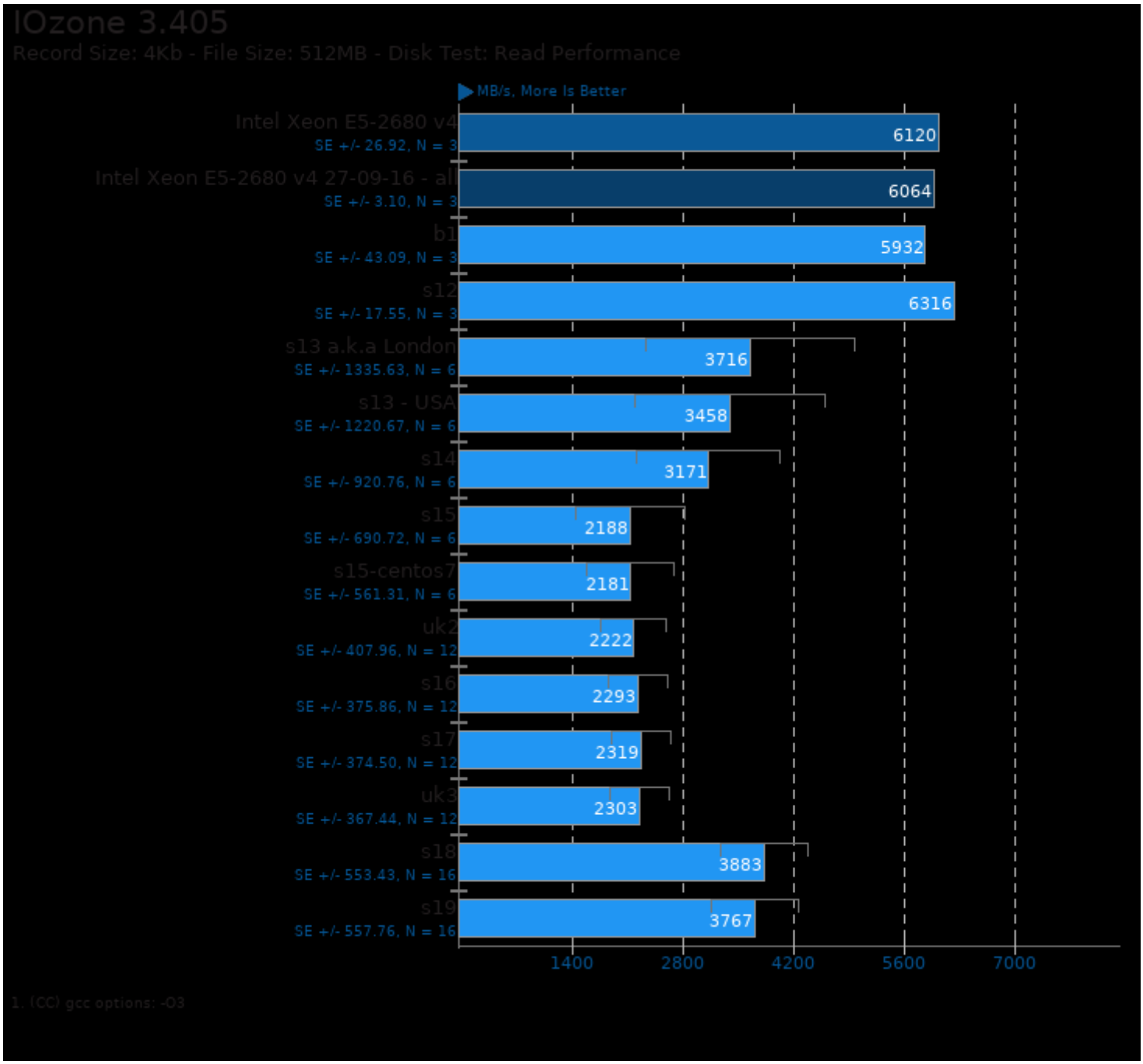

IOzone 3.405
Record Size: 4Kb - File Size: 8GB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 4.13, N = 3
484
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 6.16, N = 6
471
b1
SE +/- 1.21, N = 3
615
s12
SE +/- 10.26, N = 6
484
s13 a.k.a London
SE +/- 4.04, N = 3
506
s13 - USA
SE +/- 5.21, N = 3
507
s14
SE +/- 69.98, N = 6
952
s15
SE +/- 6.01, N = 6
352
s15-centos7
SE +/- 3.94, N = 3
410
uk2
SE +/- 2.85, N = 3
392
s16
SE +/- 2.10, N = 3
1116
s17
SE +/- 0.79, N = 3
1107
uk3
SE +/- 8.17, N = 3
1103
s18
SE +/- 2.91, N = 3
1337
s19
SE +/- 1.75, N = 3
1332
300
600
900
1200
1500
1. (CC) gcc options: -O3

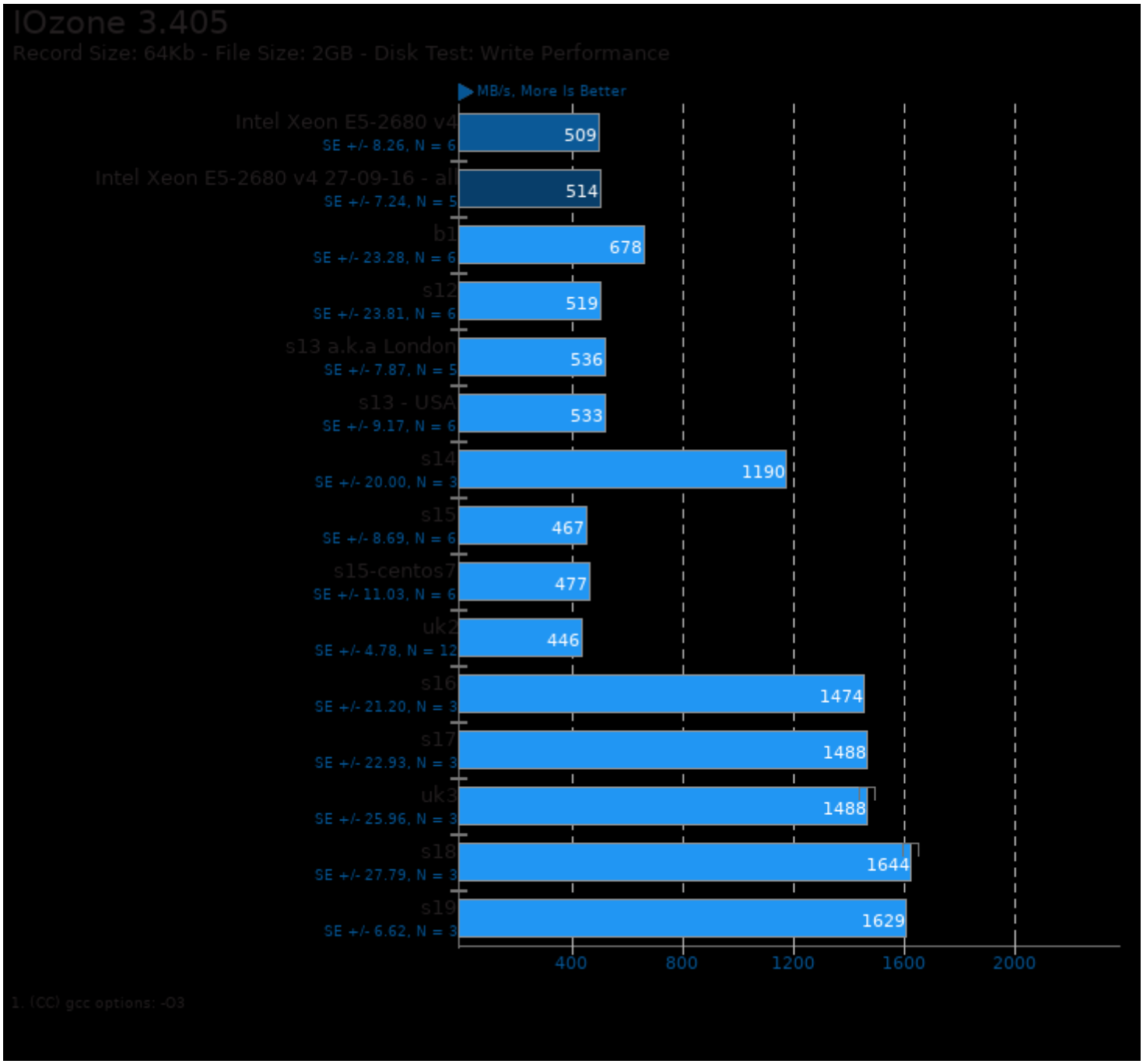

IOzone 3.405
Record Size: 64Kb - File Size: 2GB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 88.42, N = 3
7771
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 104.68, N = 3
7725
b1
SE +/- 119.29, N = 3
7340
s12
SE +/- 30.17, N = 3
8063
s13 a.k.a London
SE +/- 1685.20, N = 6
4312
s13 - USA
SE +/- 1617.96, N = 6
4157
s14
SE +/- 1508.47, N = 6
4557
s15
SE +/- 1677.27, N = 6
4222
s15-centos7
SE +/- 1653.31, N = 6
4184
uk2
SE +/- 1133.62, N = 12
4209
s16
SE +/- 934.97, N = 12
4554
s17
SE +/- 964.69, N = 12
4668
uk3
SE +/- 931.14, N = 12
4573
s18
SE +/- 823.46, N = 16
4879
s19
SE +/- 811.64, N = 16
4793
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3


IOzone 3.405
Record Size: 64Kb - File Size: 4GB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 13.72, N = 3
7869
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 64.92, N = 3
7722
b1
SE +/- 136.52, N = 3
7065
s12
SE +/- 43.44, N = 3
8002
s13 a.k.a London
SE +/- 1752.30, N = 6
4328
s13 - USA
SE +/- 1655.66, N = 6
4118
s14
SE +/- 1519.99, N = 6
4545
s15
SE +/- 1735.66, N = 6
4278
s15-centos7
SE +/- 1664.64, N = 6
4184
uk2
SE +/- 1133.34, N = 12
4191
s16
SE +/- 930.30, N = 12
4574
s17
SE +/- 974.46, N = 12
4726
uk3
SE +/- 930.23, N = 12
4579
s18
SE +/- 841.59, N = 16
4926
s19
SE +/- 858.00, N = 16
4965
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3

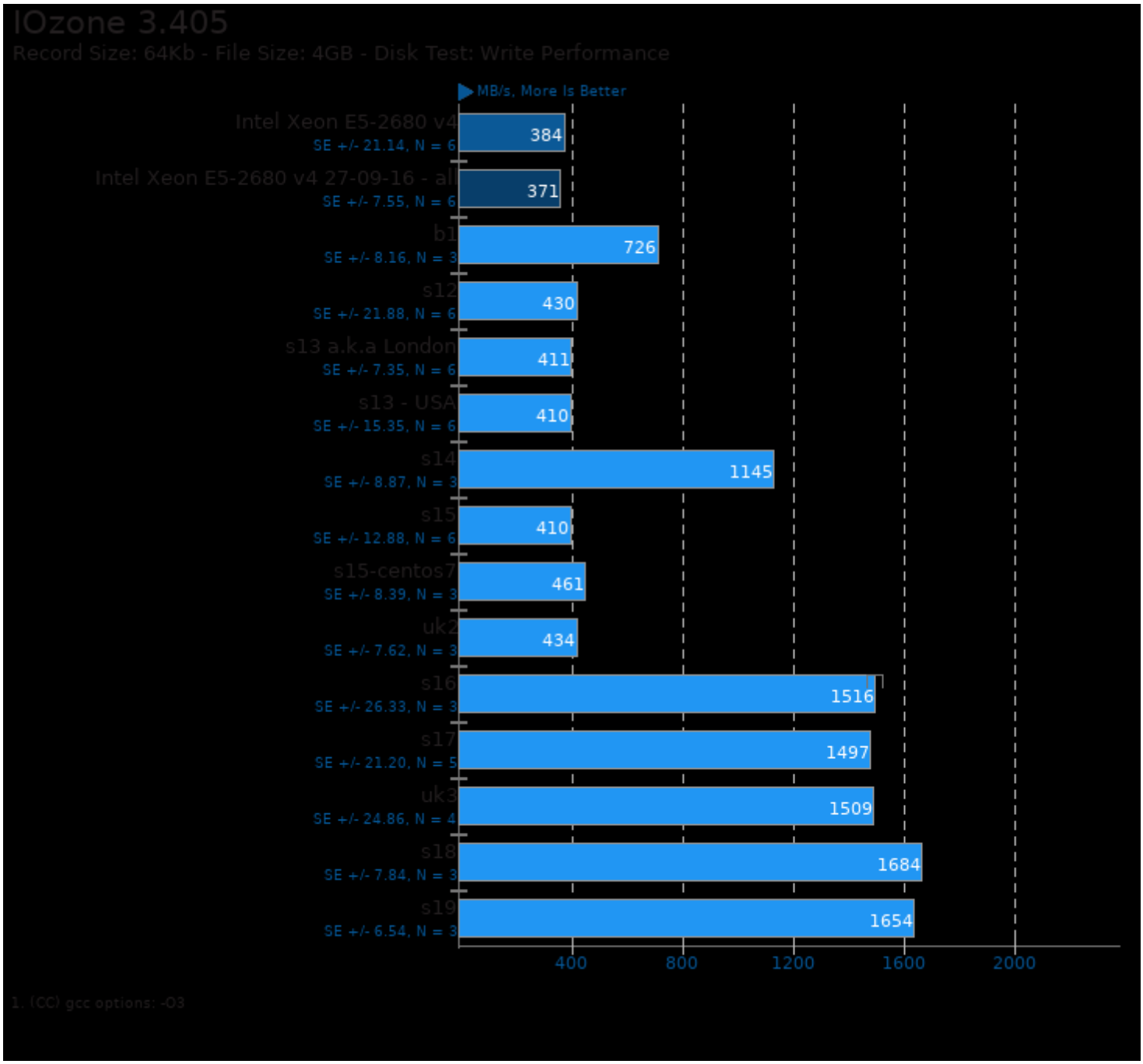

IOzone 3.405
Record Size: 64Kb - File Size: 8GB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 2.06, N = 3
7877
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 75.40, N = 3
7794
b1
SE +/- 133.14, N = 3
7276
s12
SE +/- 76.77, N = 3
8073
s13 a.k.a London
SE +/- 1686.42, N = 6
4307
s13 - USA
SE +/- 1599.91, N = 6
4093
s14
SE +/- 1586.39, N = 6
4373
s15
SE +/- 1737.54, N = 6
4255
s15-centos7
SE +/- 1669.27, N = 6
4181
uk2
SE +/- 1133.08, N = 12
4179
s16
SE +/- 961.08, N = 12
4590
s17
SE +/- 971.79, N = 12
4628
uk3
SE +/- 963.07, N = 12
4597
s18
SE +/- 847.72, N = 16
4817
s19
SE +/- 843.39, N = 16
4771
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3

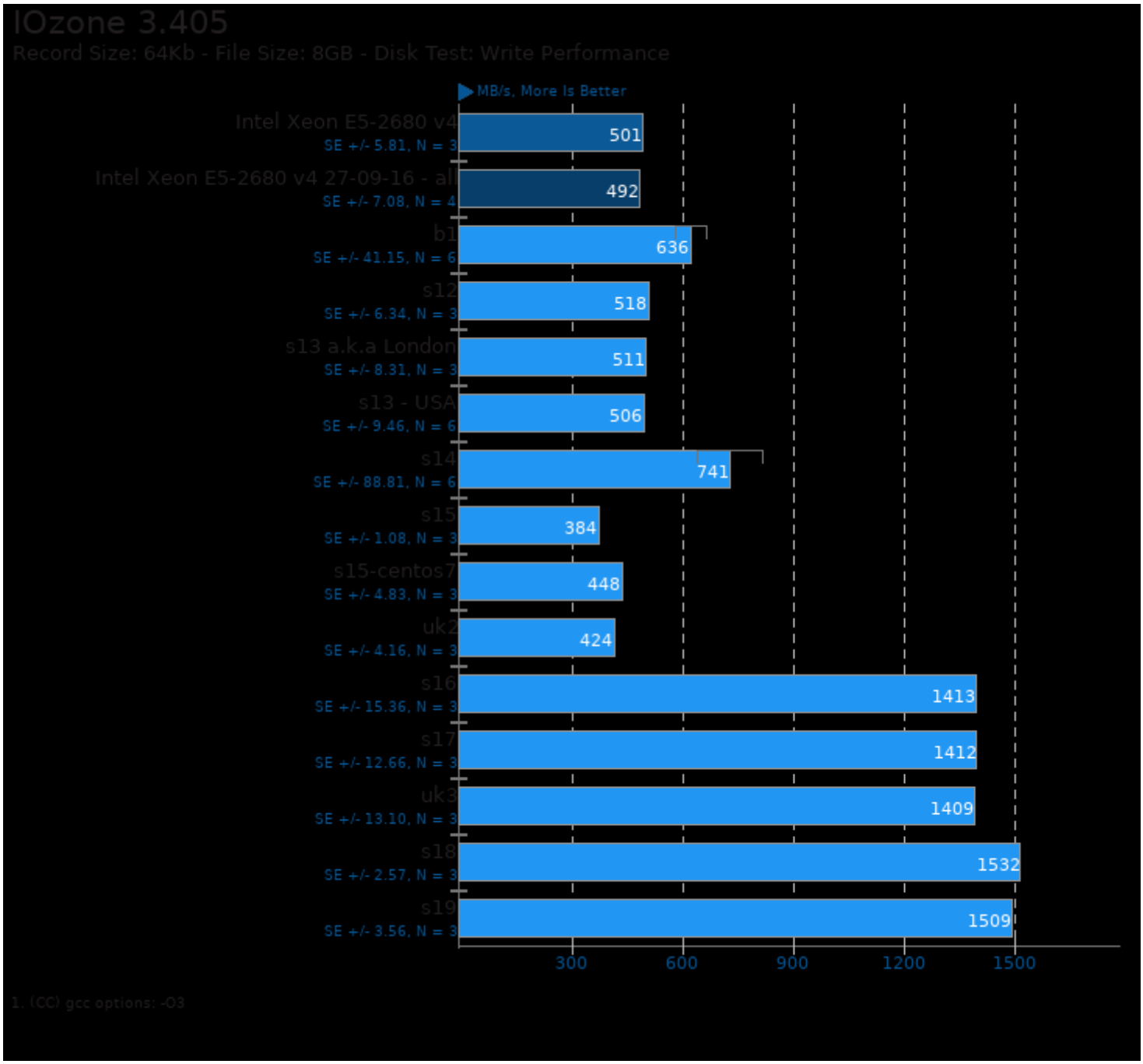

IOzone 3.405
Record Size: 1MB - File Size: 512MB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 45.41, N = 3
6629
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 21.81, N = 3
6541
b1
SE +/- 70.01, N = 3
6479
s12
SE +/- 18.48, N = 3
6785
s13 a.k.a London
SE +/- 1444.19, N = 6
4003
s13 - USA
SE +/- 1316.07, N = 6
3708
s14
SE +/- 1261.29, N = 6
4077
s15
SE +/- 1436.90, N = 6
3951
s15-centos7
SE +/- 1335.68, N = 6
4062
uk2
SE +/- 948.77, N = 12
4186
s16
SE +/- 885.54, N = 12
4258
s17
SE +/- 893.95, N = 12
4346
uk3
SE +/- 886.11, N = 12
4317
s18
SE +/- 740.21, N = 16
4766
s19
SE +/- 732.85, N = 16
4671
1500
3000
4500
6000
7500
1. (CC) gcc options: -O3

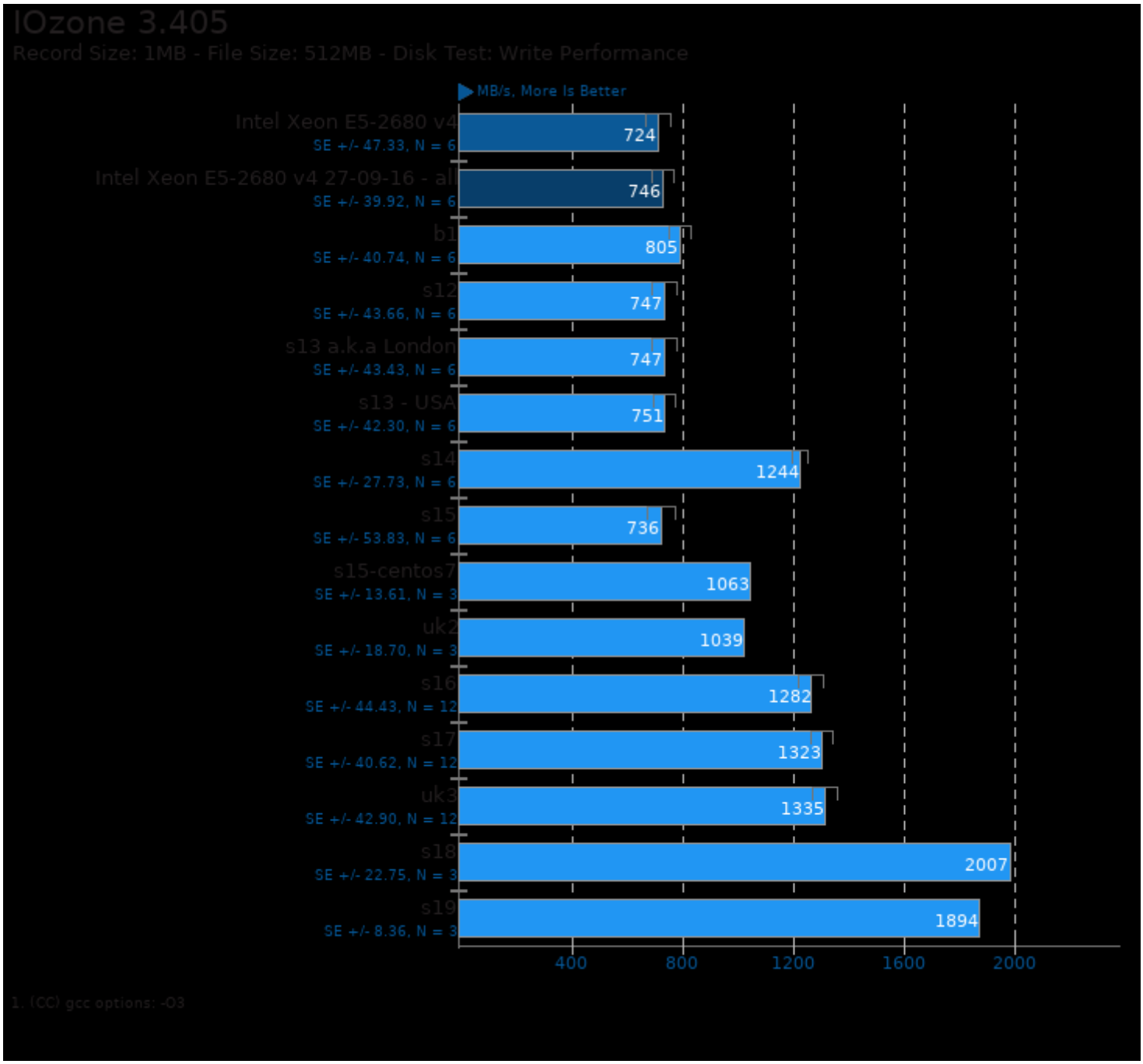

IOzone 3.405
Record Size: 4Kb - File Size: 512MB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 26.92, N = 3
6120
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 3.10, N = 3
6064
b1
SE +/- 43.09, N = 3
5932
s12
SE +/- 17.55, N = 3
6316
s13 a.k.a London
SE +/- 1335.63, N = 6
3716
s13 - USA
SE +/- 1220.67, N = 6
3458
s14
SE +/- 920.76, N = 6
3171
s15
SE +/- 690.72, N = 6
2188
s15-centos7
SE +/- 561.31, N = 6
2181
uk2
SE +/- 407.96, N = 12
2222
s16
SE +/- 375.86, N = 12
2293
s17
SE +/- 374.50, N = 12
2319
uk3
SE +/- 367.44, N = 12
2303
s18
SE +/- 553.43, N = 16
3883
s19
SE +/- 557.76, N = 16
3767
1400
2800
4200
5600
7000
1. (CC) gcc options: -O3

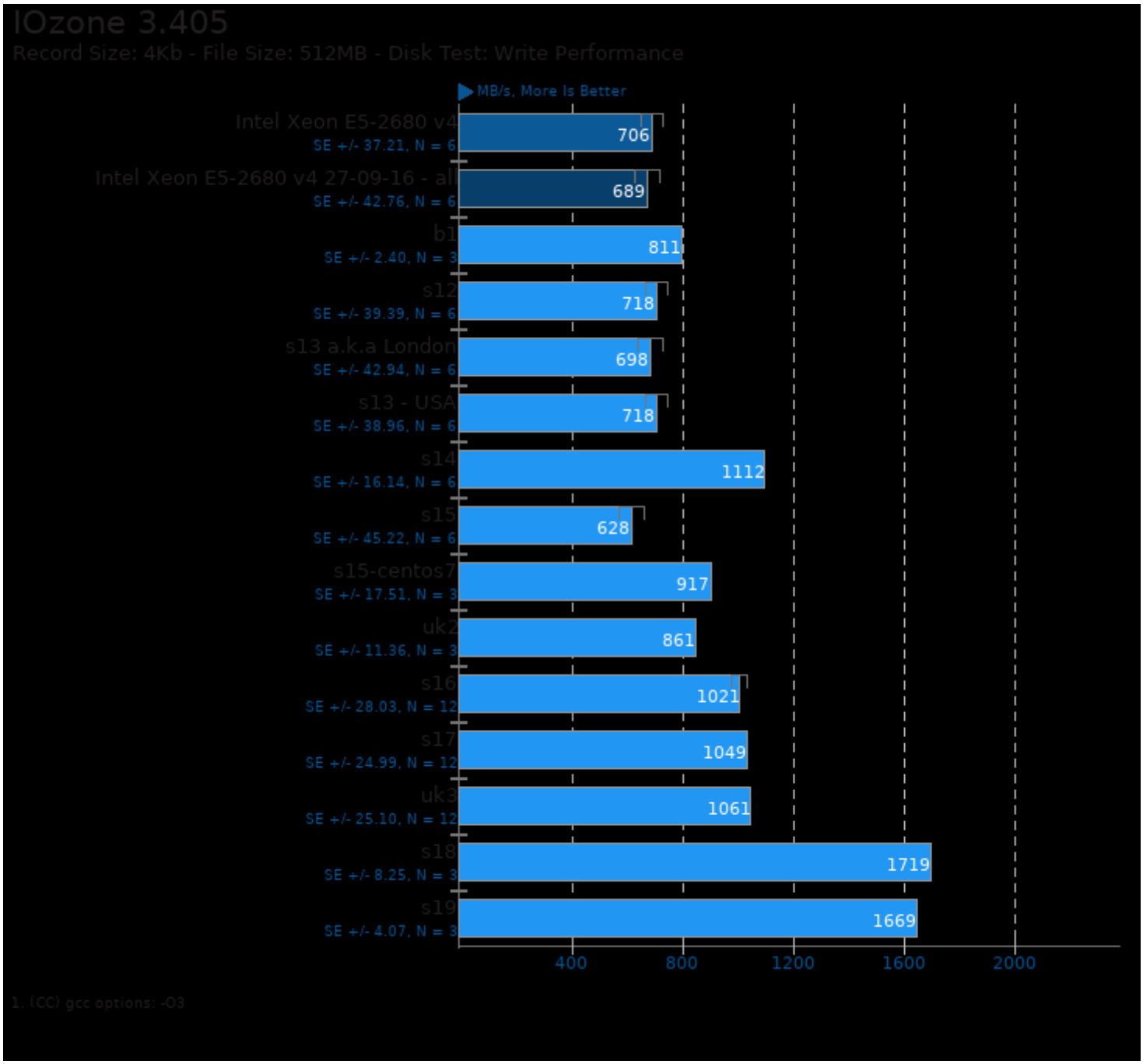

IOzone 3.405
Record Size: 64Kb - File Size: 2GB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 8.26, N = 6
509
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 7.24, N = 5
514
b1
SE +/- 23.28, N = 6
678
s12
SE +/- 23.81, N = 6
519
s13 a.k.a London
SE +/- 7.87, N = 5
536
s13 - USA
SE +/- 9.17, N = 6
533
s14
SE +/- 20.00, N = 3
1190
s15
SE +/- 8.69, N = 6
467
s15-centos7
SE +/- 11.03, N = 6
477
uk2
SE +/- 4.78, N = 12
446
s16
SE +/- 21.20, N = 3
1474
s17
SE +/- 22.93, N = 3
1488
uk3
SE +/- 25.96, N = 3
1488
s18
SE +/- 27.79, N = 3
1644
s19
SE +/- 6.62, N = 3
1629
400
800
1200
1600
2000
1. (CC) gcc options: -O3

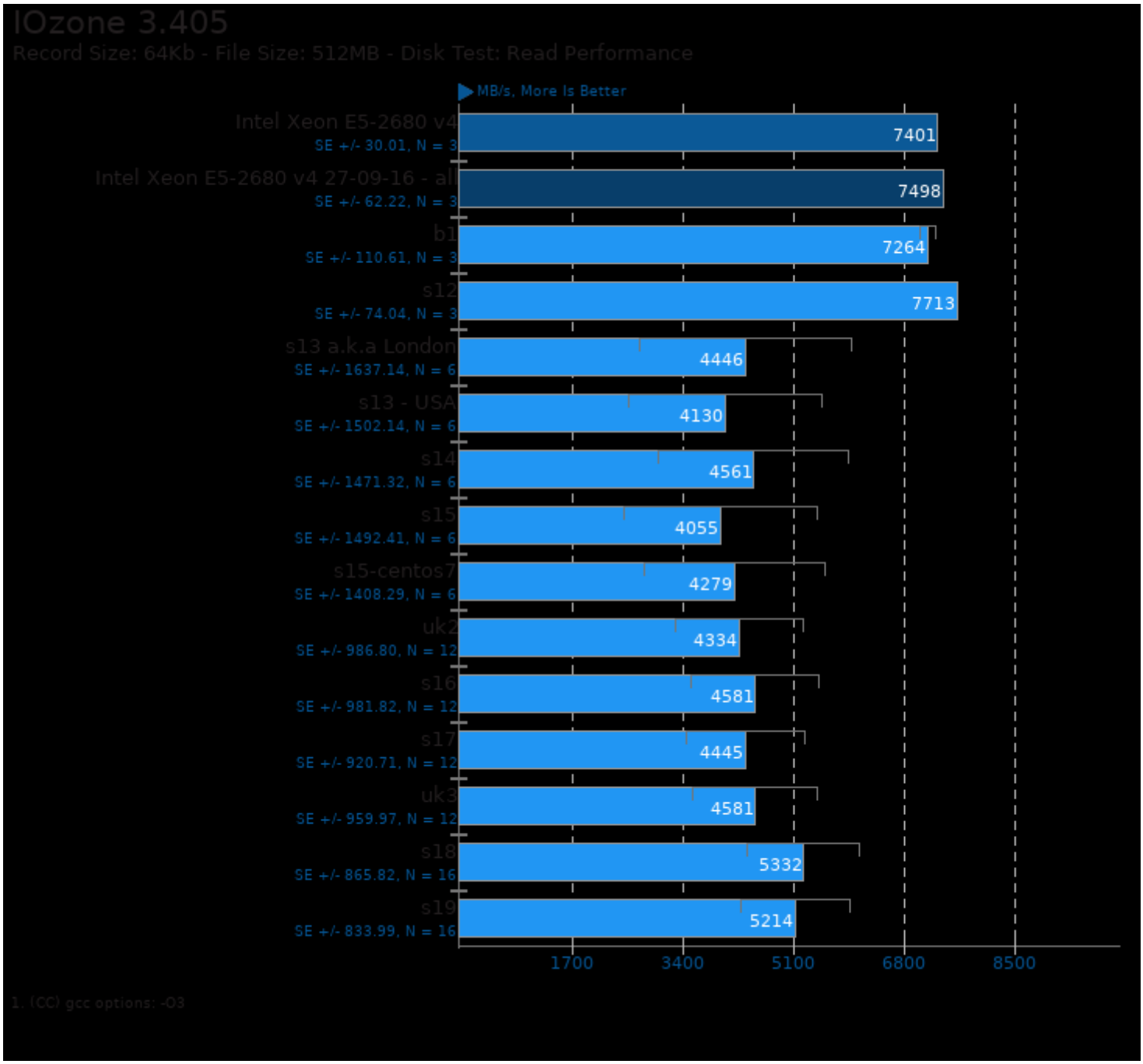
complete-last

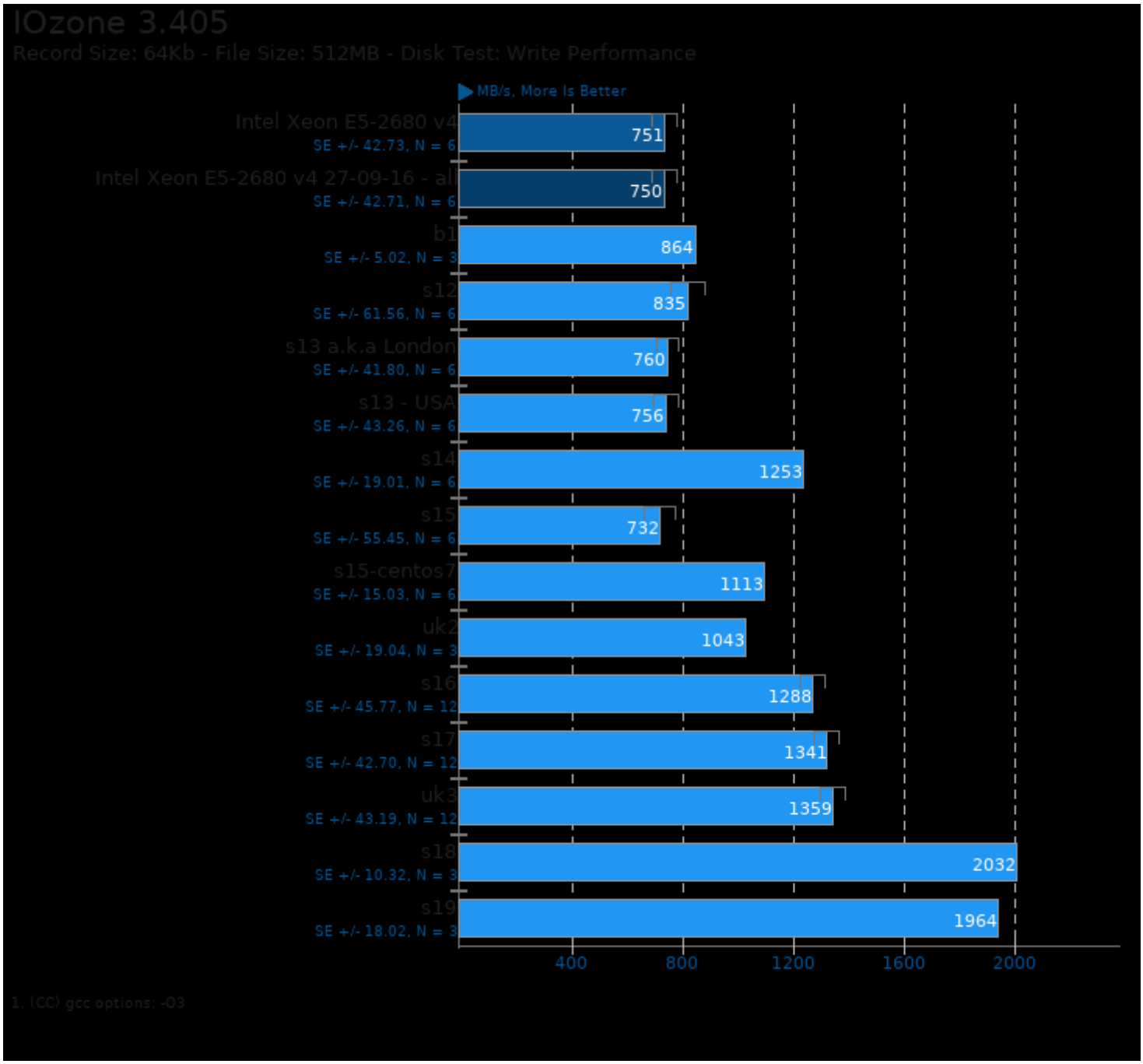


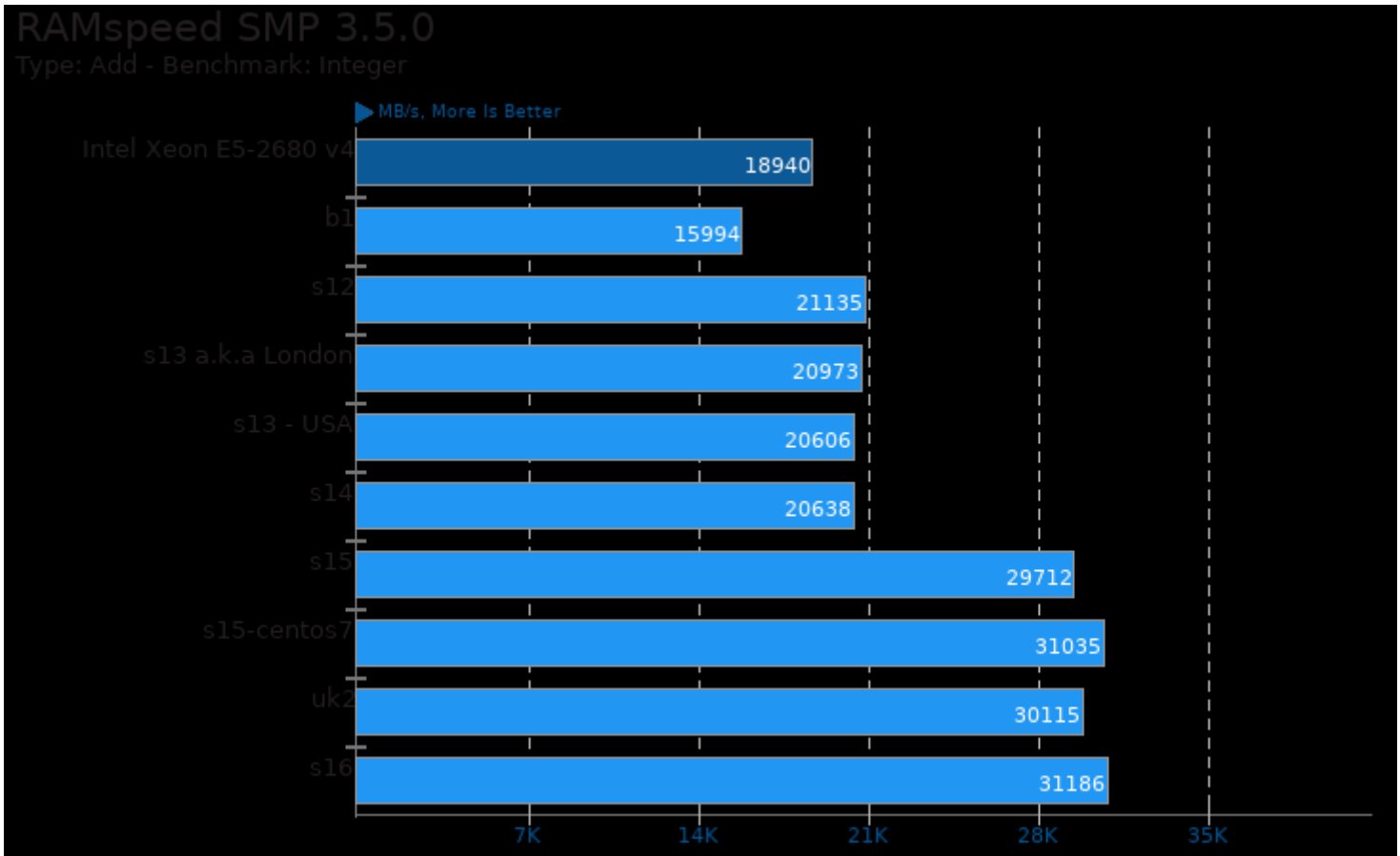

IOzone 3.405
Record Size: 64Kb - File Size: 8GB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 5.81, N = 3
501
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 7.08, N = 4
492
b1
SE +/- 41.15, N = 6
636
s12
SE +/- 6.34, N = 3
518
s13 a.k.a London
SE +/- 8.31, N = 3
511
s13 - USA
SE +/- 9.46, N = 6
506
s14
SE +/- 88.81, N = 6
741
s15
SE +/- 1.08, N = 3
384
s15-centos7
SE +/- 4.83, N = 3
448
uk2
SE +/- 4.16, N = 3
424
s16
SE +/- 15.36, N = 3
1413
s17
SE +/- 12.66, N = 3
1412
uk3
SE +/- 13.10, N = 3
1409
s18
SE +/- 2.57, N = 3
1532
s19
SE +/- 3.56, N = 3
1509
300
600
900
1200
1500
1. (CC) gcc options: -O3

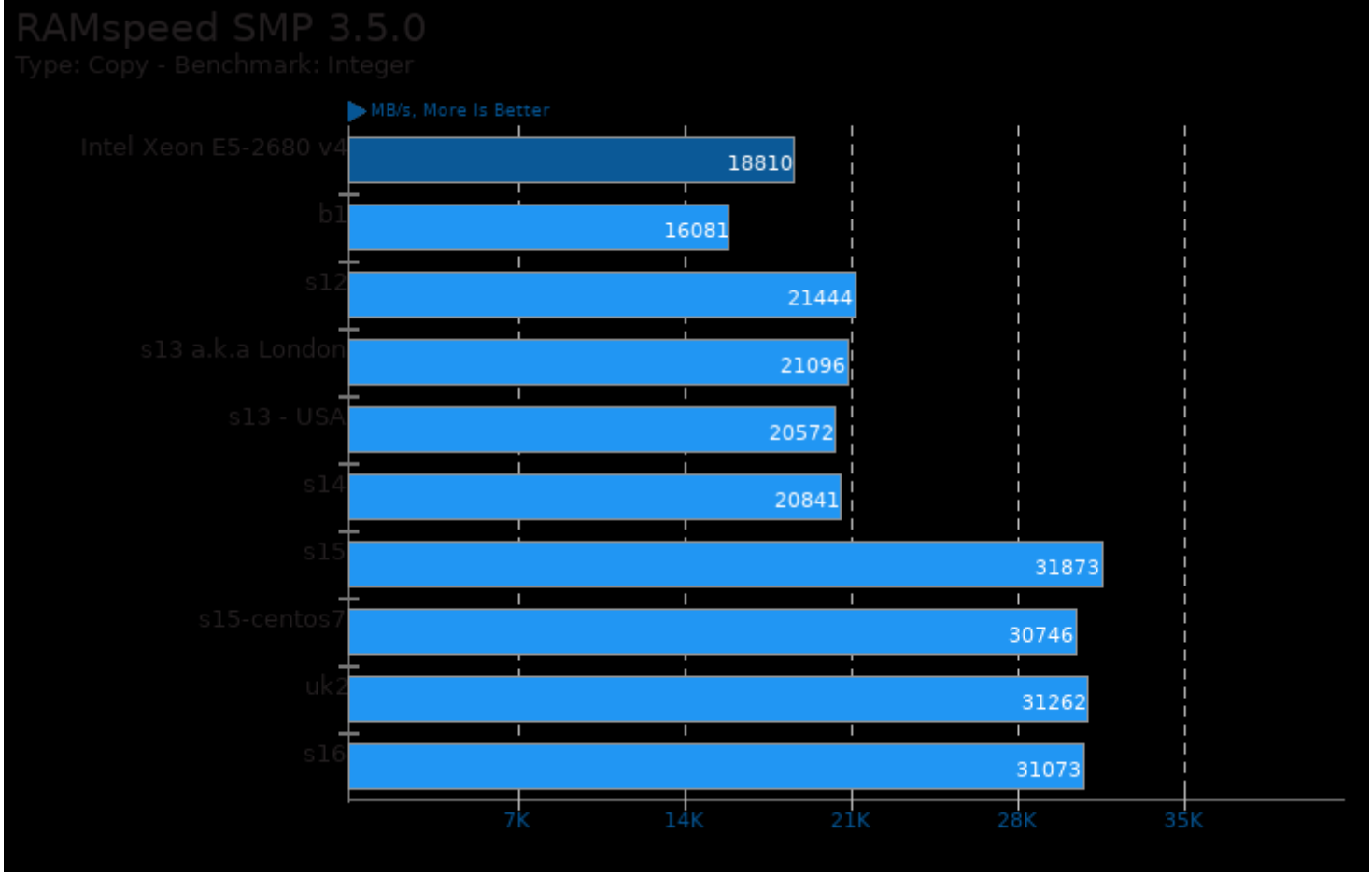

IOzone 3.405
Record Size: 1MB - File Size: 512MB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 47.33, N = 6
724
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 39.92, N = 6
746
b1
SE +/- 40.74, N = 6
805
s12
SE +/- 43.66, N = 6
747
s13 a.k.a London
SE +/- 43.43, N = 6
747
s13 - USA
SE +/- 42.30, N = 6
751
s14
SE +/- 27.73, N = 6
1244
s15
SE +/- 53.83, N = 6
736
s15-centos7
SE +/- 13.61, N = 3
1063
uk2
SE +/- 18.70, N = 3
1039
s16
SE +/- 44.43, N = 12
1282
s17
SE +/- 40.62, N = 12
1323
uk3
SE +/- 42.90, N = 12
1335
s18
SE +/- 22.75, N = 3
2007
s19
SE +/- 8.36, N = 3
1894
400
800
1200
1600
2000
1. (CC) gcc options: -O3

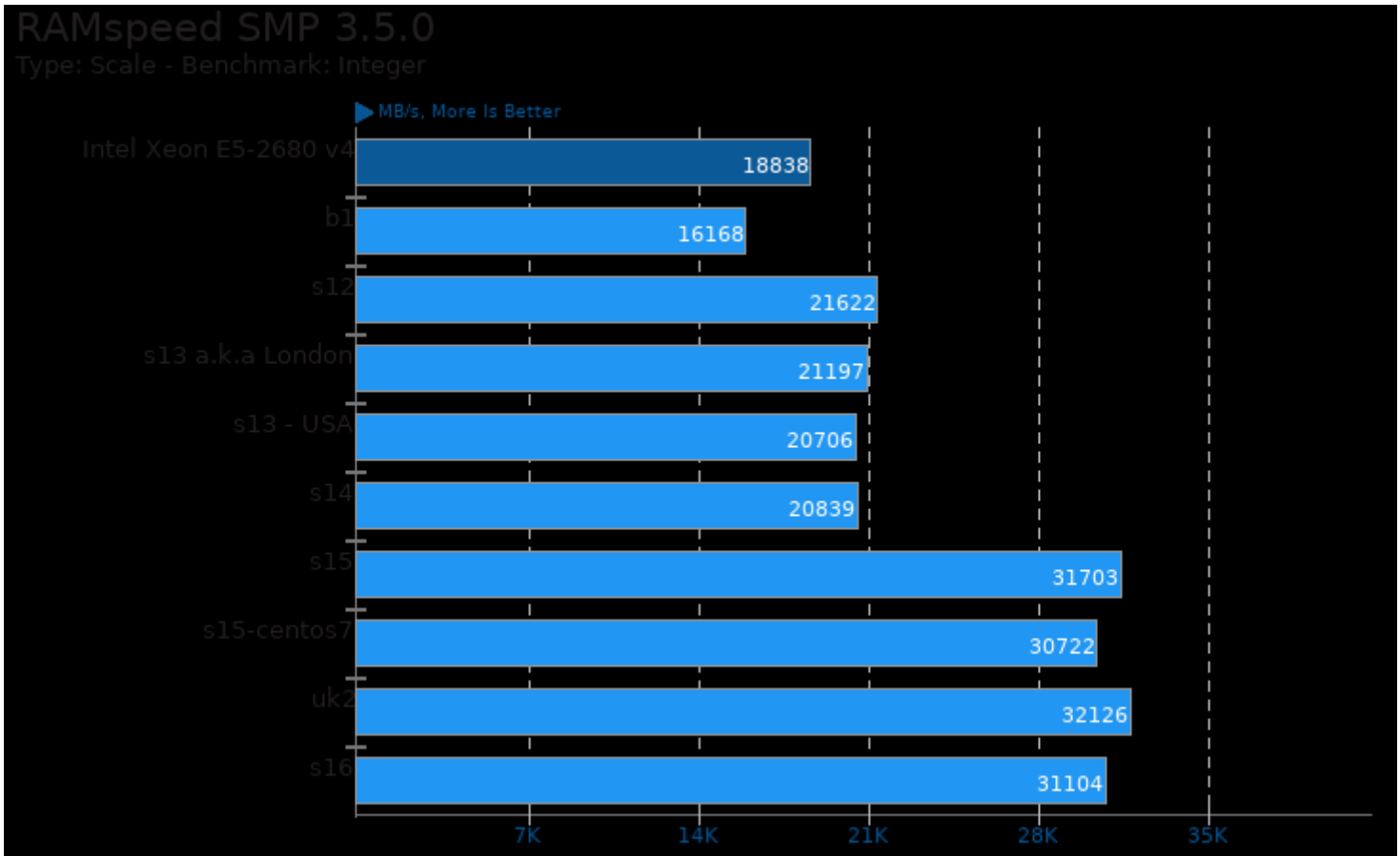

IOzone 3.405
Record Size: 4Kb - File Size: 512MB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 37.21, N = 6
706
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 42.76, N = 6
689
b1
SE +/- 2.40, N = 3
811
s12
SE +/- 39.39, N = 6
718
s13 a.k.a London
SE +/- 42.94, N = 6
698
s13 - USA
SE +/- 38.96, N = 6
718
s14
SE +/- 16.14, N = 6
1112
s15
SE +/- 45.22, N = 6
628
s15-centos7
SE +/- 17.51, N = 3
917
uk2
SE +/- 11.36, N = 3
861
s16
SE +/- 28.03, N = 12
1021
s17
SE +/- 24.99, N = 12
1049
uk3
SE +/- 25.10, N = 12
1061
s18
SE +/- 8.25, N = 3
1719
s19
SE +/- 4.07, N = 3
1669
400
800
1200
1600
2000
1. (CC) gcc options: -O3

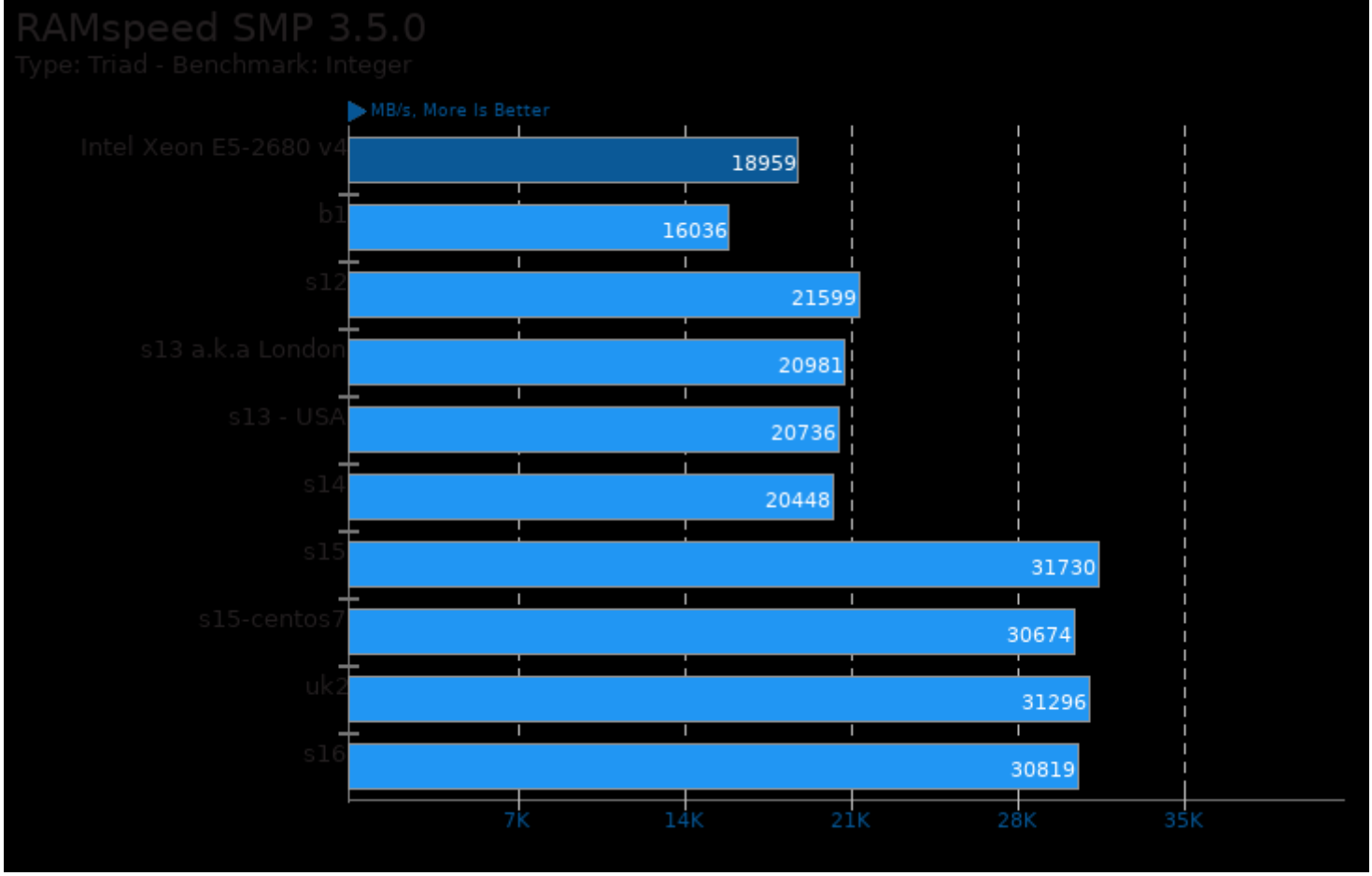

IOzone 3.405
Record Size: 64Kb - File Size: 512MB - Disk Test: Read Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 30.01, N = 3
7401
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 62.22, N = 3
7498
b1
SE +/- 110.61, N = 3
7264
s12
SE +/- 74.04, N = 3
7713
s13 a.k.a London
SE +/- 1637.14, N = 6
4446
s13 - USA
SE +/- 1502.14, N = 6
4130
s14
SE +/- 1471.32, N = 6
4561
s15
SE +/- 1492.41, N = 6
4055
s15-centos7
SE +/- 1408.29, N = 6
4279
uk2
SE +/- 986.80, N = 12
4334
s16
SE +/- 981.82, N = 12
4581
s17
SE +/- 920.71, N = 12
4445
uk3
SE +/- 959.97, N = 12
4581
s18
SE +/- 865.82, N = 16
5332
s19
SE +/- 833.99, N = 16
5214
1700
3400
5100
6800
8500
1. (CC) gcc options: -O3

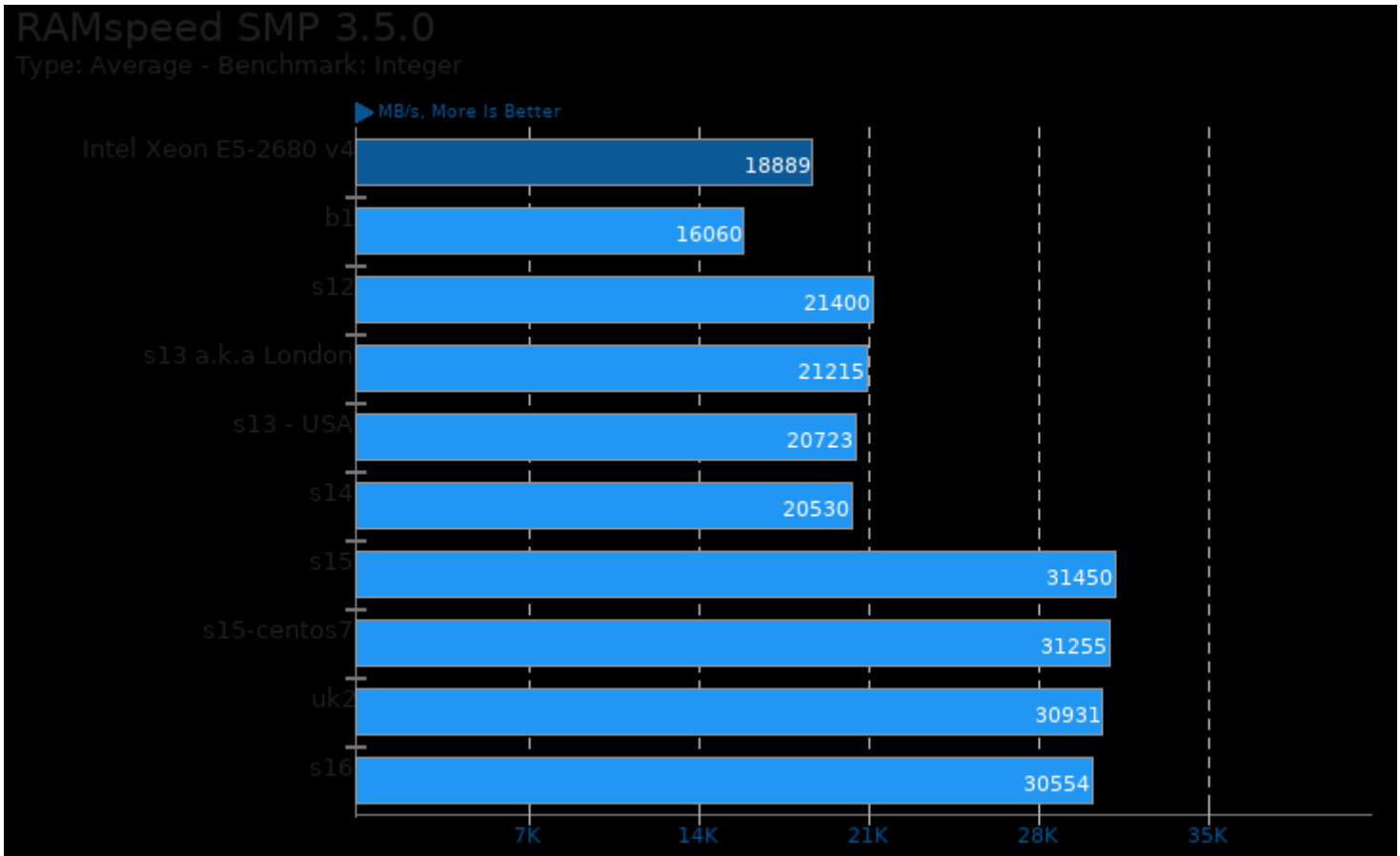

IOzone 3.405
Record Size: 64Kb - File Size: 512MB - Disk Test: Write Performance
MB/s, More Is Better
Intel Xeon E5-2680 v4
SE +/- 42.73, N = 6
751
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 42.71, N = 6
750
b1
SE +/- 5.02, N = 3
864
s12
SE +/- 61.56, N = 6
835
s13 a.k.a London
SE +/- 41.80, N = 6
760
s13 - USA
SE +/- 43.26, N = 6
756
s14
SE +/- 19.01, N = 6
1253
s15
SE +/- 55.45, N = 6
732
s15-centos7
SE +/- 15.03, N = 6
1113
uk2
SE +/- 19.04, N = 3
1043
s16
SE +/- 45.77, N = 12
1288
s17
SE +/- 42.70, N = 12
1341
uk3
SE +/- 43.19, N = 12
1359
s18
SE +/- 10.32, N = 3
2032
s19
SE +/- 18.02, N = 3
1964
400
800
1200
1600
2000
1. (CC) gcc options: -O3

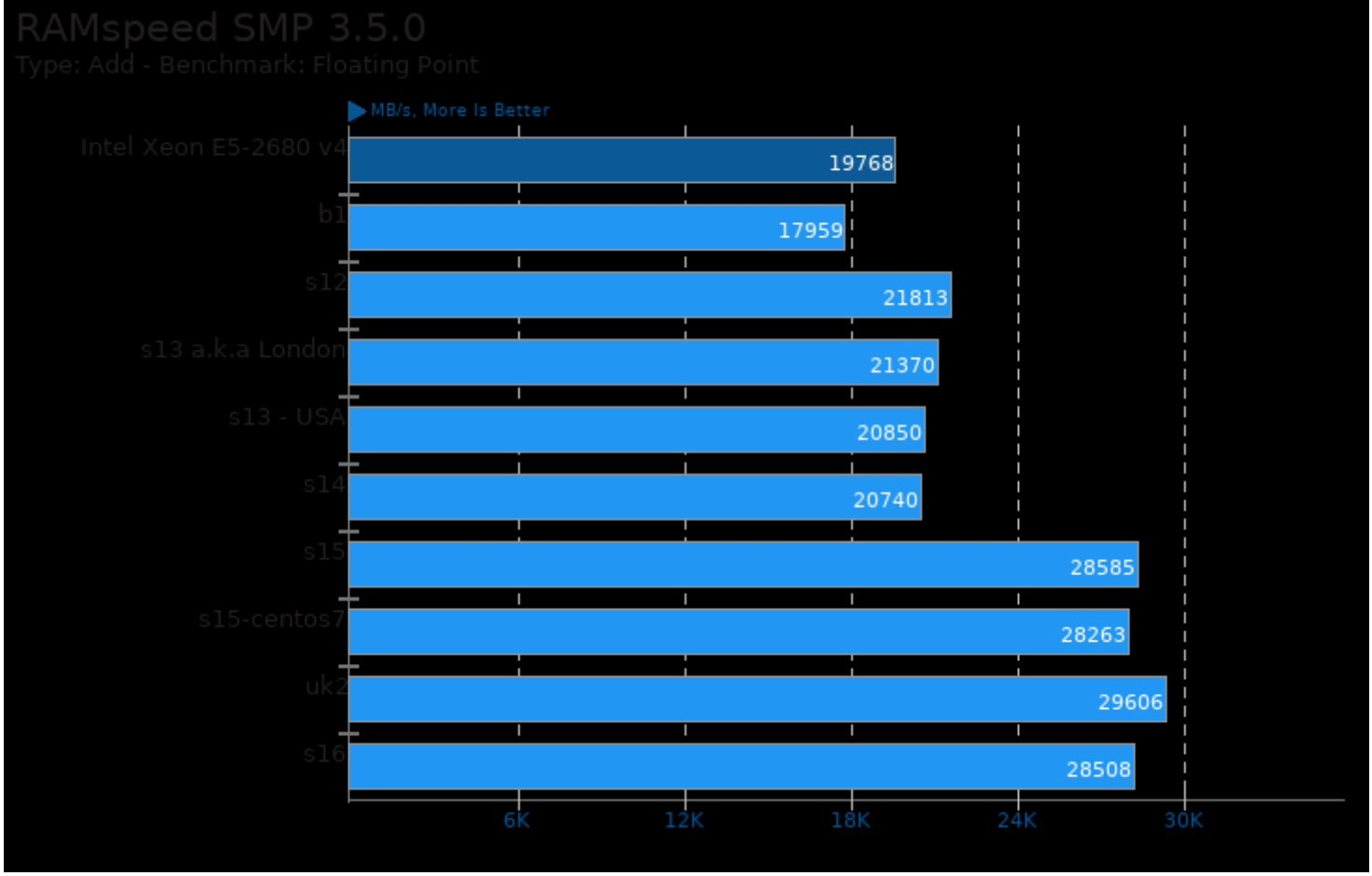

RAMspeed SMP 3.5.0
Type: Add - Benchmark: Integer
MB/s, More Is Better
Intel Xeon E5-2680 v4
18940
b1
15994
s12
21135
s13 a.k.a London
20973
s13 - USA
20606
s14
20638
s15
29712
s15-centos7
31035
uk2
30115
s16
31186
7K
14K
21K
28K
35K

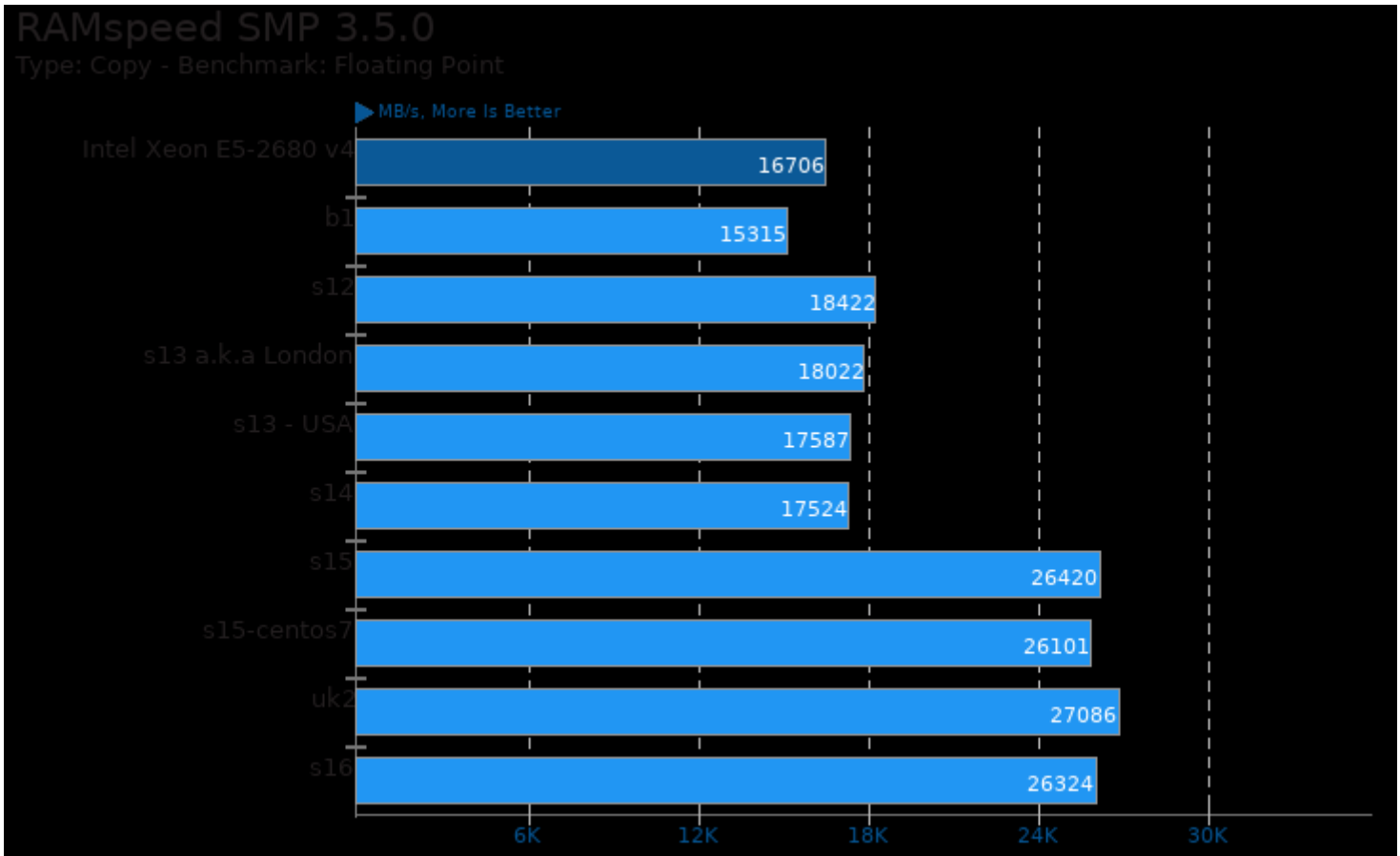

RAMspeed SMP 3.5.0
Type: Copy - Benchmark: Integer
MB/s, More Is Better
Intel Xeon E5-2680 v4
18810
b1
16081
s12
21444
s13 a.k.a London
21096
s13 - USA
20572
s14
20841
s15
31873
s15-centos7
30746
uk2
31262
s16
31073
7K
14K
21K
28K
35K

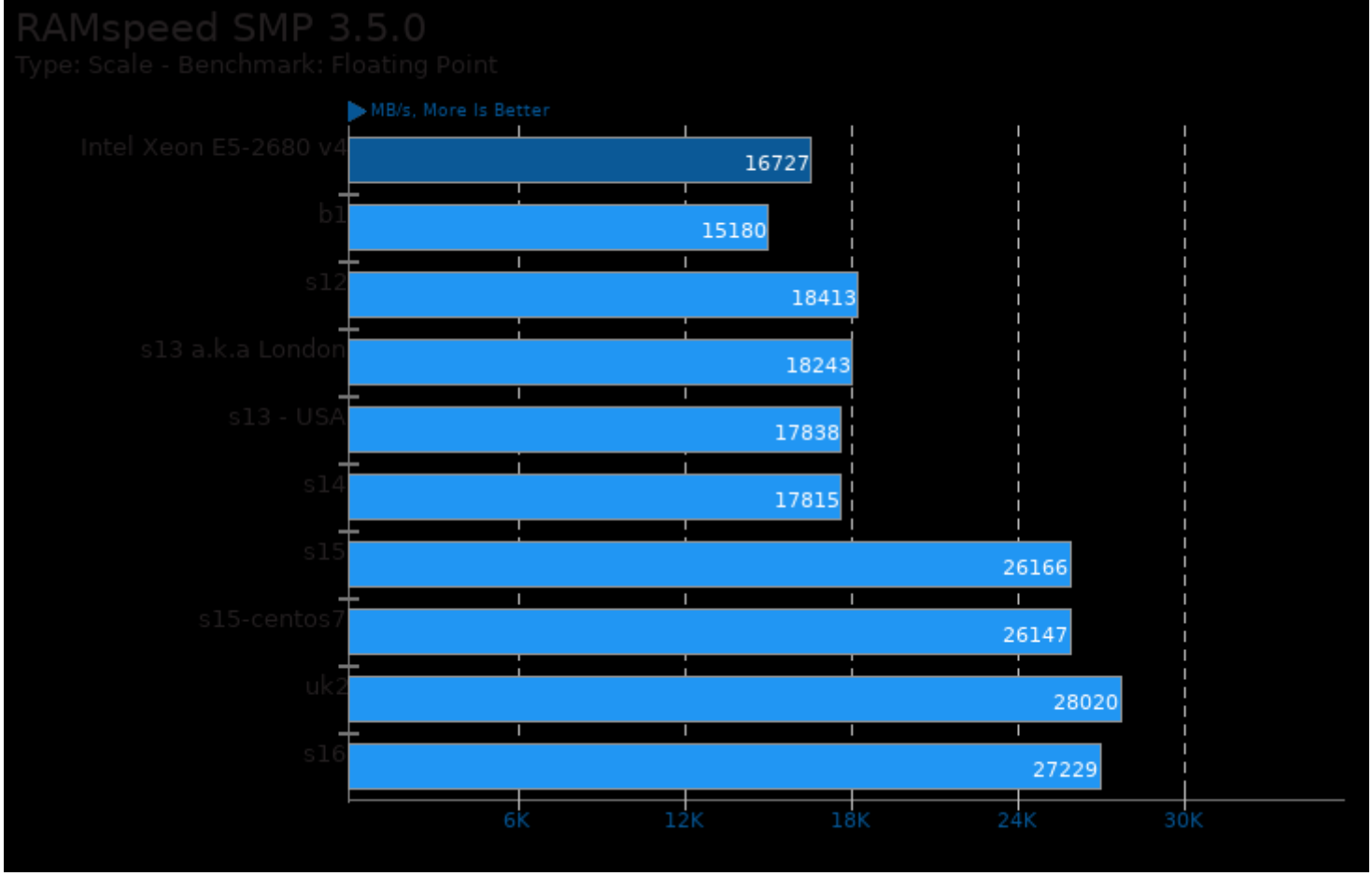

RAMspeed SMP 3.5.0
Type: Scale - Benchmark: Integer
MB/s, More Is Better
Intel Xeon E5-2680 v4
18838
b1
16168
s12
21622
s13 a.k.a London
21197
s13 - USA
20706
s14
20839
s15
31703
s15-centos7
30722
uk2
32126
s16
31104
7K
14K
21K
28K
35K

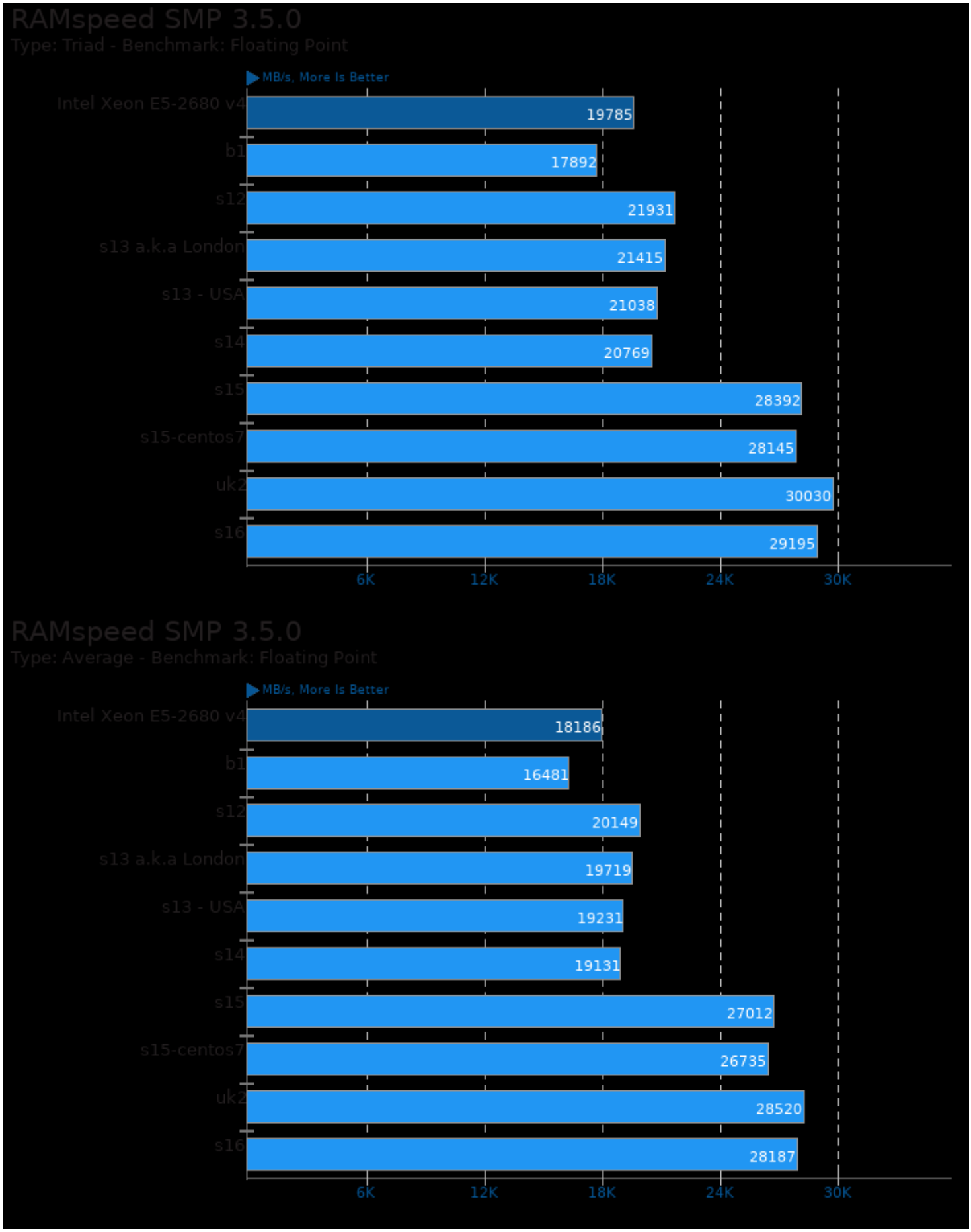

RAMspeed SMP 3.5.0
Type: Triad - Benchmark: Integer
MB/s, More Is Better
Intel Xeon E5-2680 v4
18959
b1
16036
s12
21599
s13 a.k.a London
20981
s13 - USA
20736
s14
20448
s15
31730
s15-centos7
30674
uk2
31296
s16
30819
7K
14K
21K
28K
35K

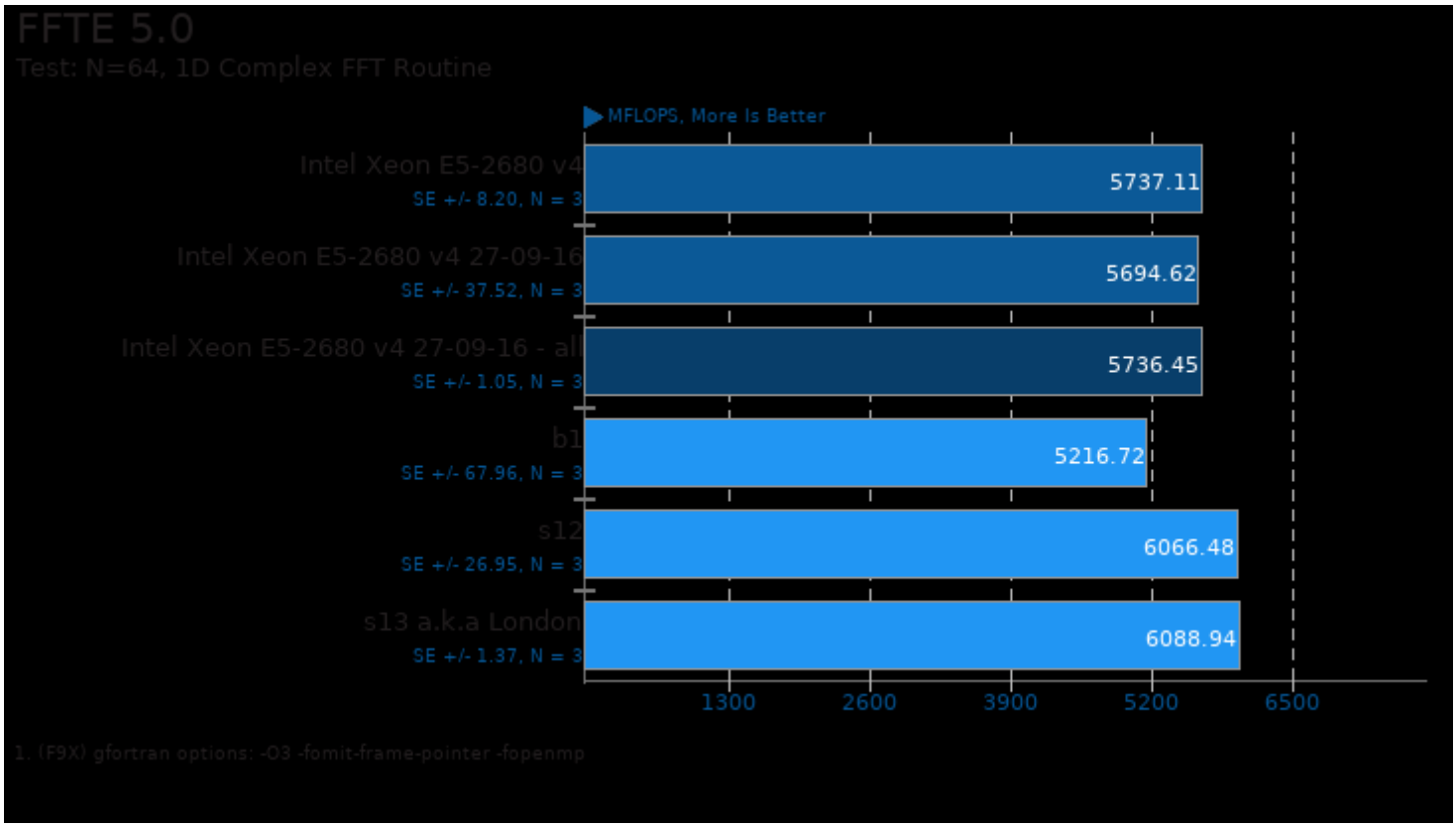

RAMspeed SMP 3.5.0
Type: Average - Benchmark: Integer
MB/s, More Is Better
Intel Xeon E5-2680 v4
18889
b1
16060
s12
21400
s13 a.k.a London
21215
s13 - USA
20723
s14
20530
s15
31450
s15-centos7
31255
uk2
30931
s16
30554
7K
14K
21K
28K
35K

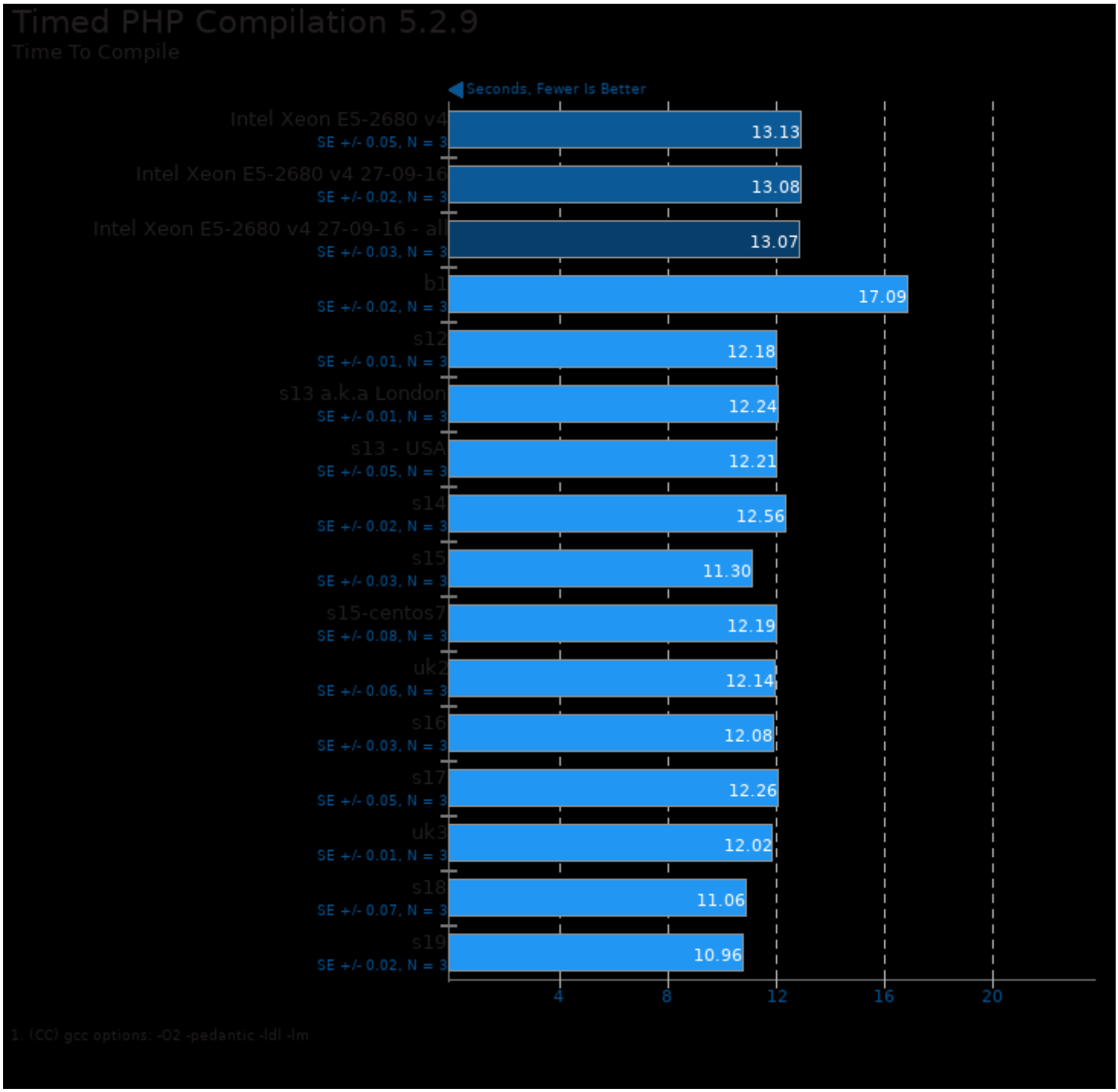

RAMspeed SMP 3.5.0
Type: Add - Benchmark: Floating Point
MB/s, More Is Better
Intel Xeon E5-2680 v4
19768
b1
17959
s12
21813
s13 a.k.a London
21370
s13 - USA
20850
s14
20740
s15
28585
s15-centos7
28263
uk2
29606
s16
28508
6K
12K
18K
24K
30K

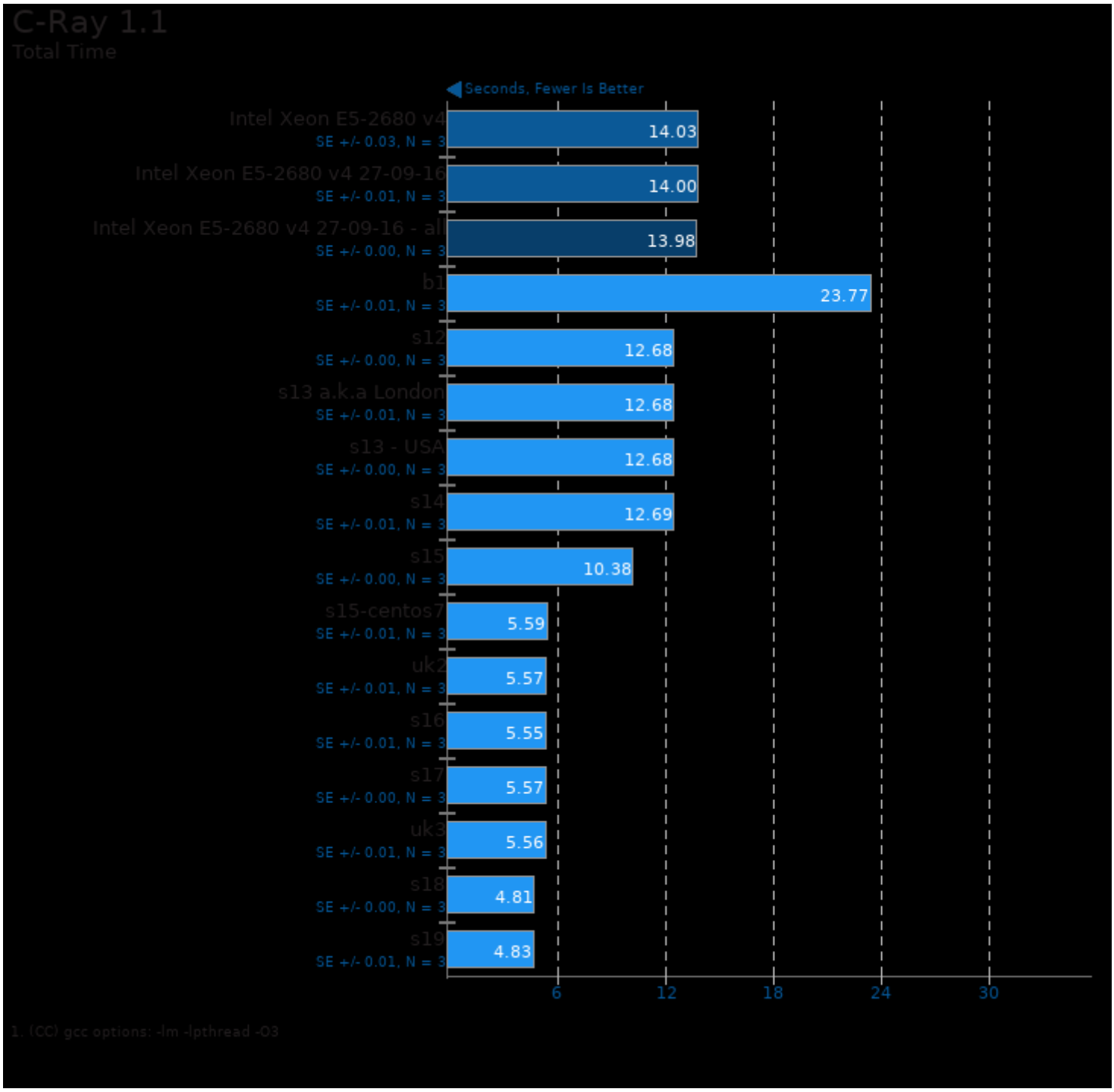

RAMspeed SMP 3.5.0
Type: Copy - Benchmark: Floating Point
MB/s, More Is Better
Intel Xeon E5-2680 v4
16706
b1
15315
s12
18422
s13 a.k.a London
18022
s13 - USA
17587
s14
17524
s15
26420
s15-centos7
26101
uk2
27086
s16
26324
6K
12K
18K
24K
30K

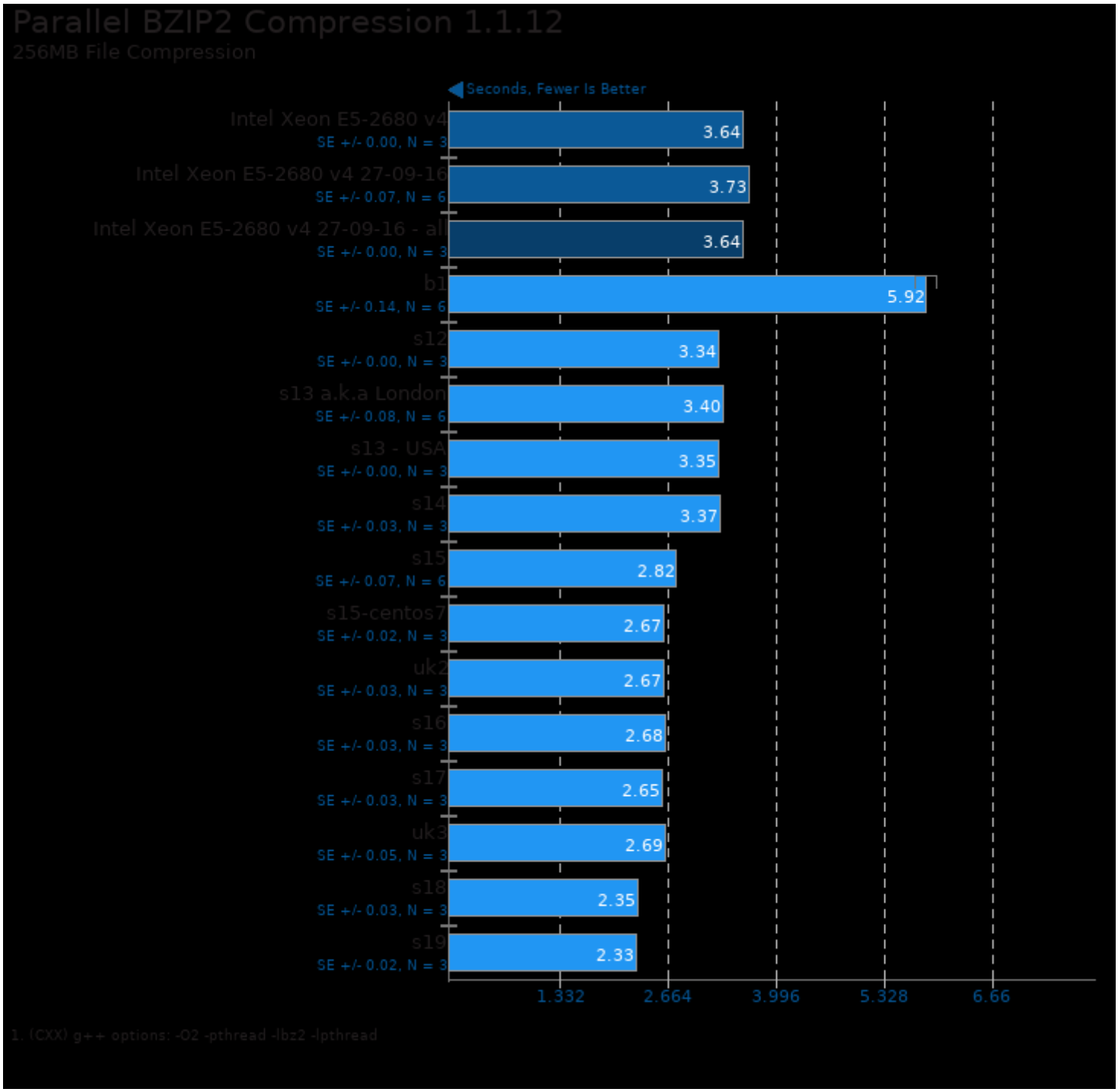

RAMspeed SMP 3.5.0
Type: Scale - Benchmark: Floating Point
MB/s, More Is Better
Intel Xeon E5-2680 v4
16727
b1
15180
s12
18413
s13 a.k.a London
18243
s13 - USA
17838
s14
17815
s15
26166
s15-centos7
26147
uk2
28020
s16
27229
6K
12K
18K
24K
30K

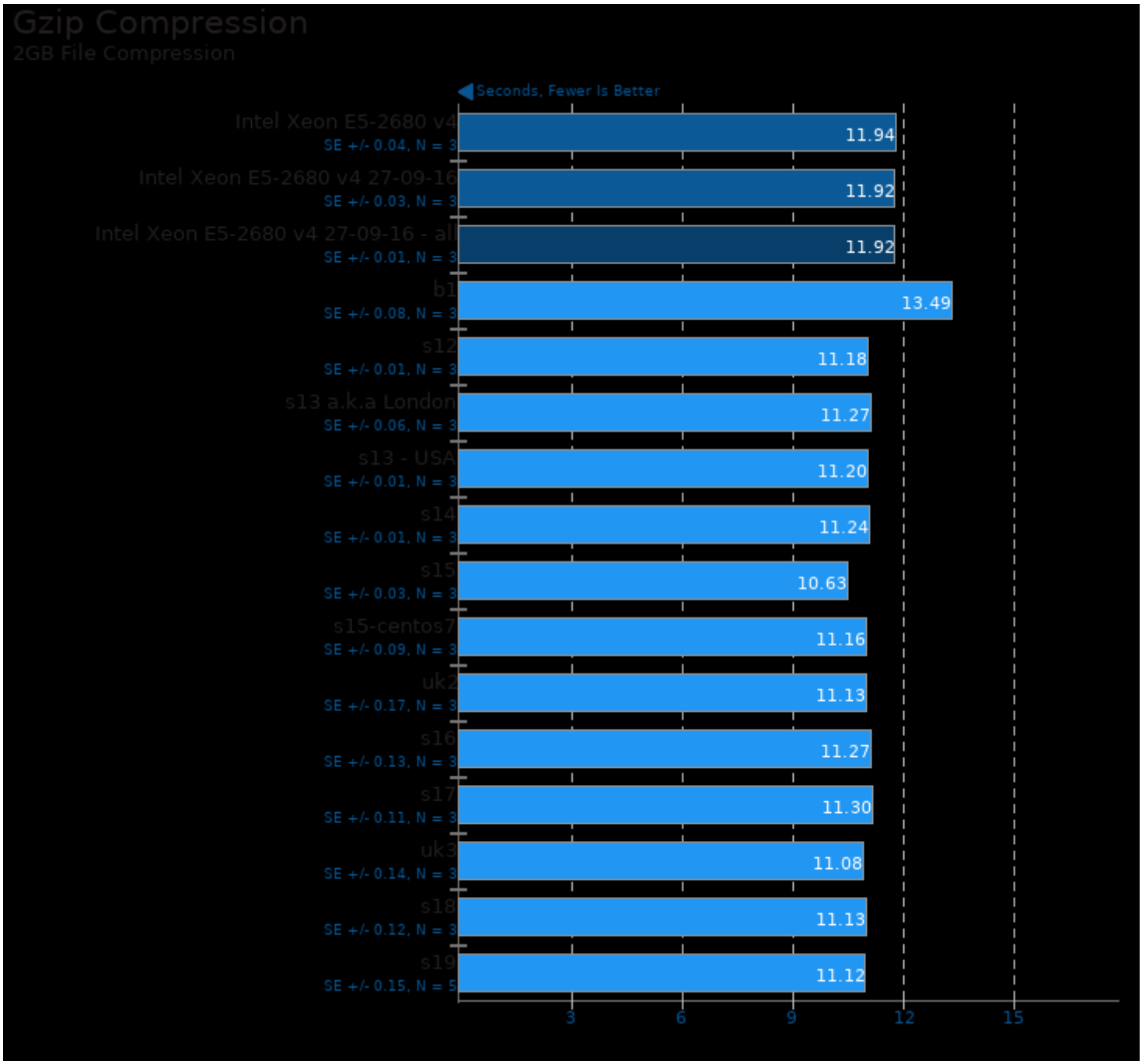

RAMspeed SMP 3.5.0
Type: Triad - Benchmark: Floating Point
MB/s, More Is Better
Intel Xeon E5-2680 v4
19785
b1
17892
s12
21931
s13 a.k.a London
21415
s13 - USA
21038
s14
20769
s15
28392
s15-centos7
28145
uk2
30030
s16
29195
6K
12K
18K
24K
30K
RAMspeed SMP 3.5.0
Type: Average - Benchmark: Floating Point
MB/s, More Is Better
Intel Xeon E5-2680 v4
18186
b1
16481
s12
20149
s13 a.k.a London
19719
s13 - USA
19231
s14
19131
s15
27012
s15-centos7
26735
uk2
28520
s16
28187
6K
12K
18K
24K
30K

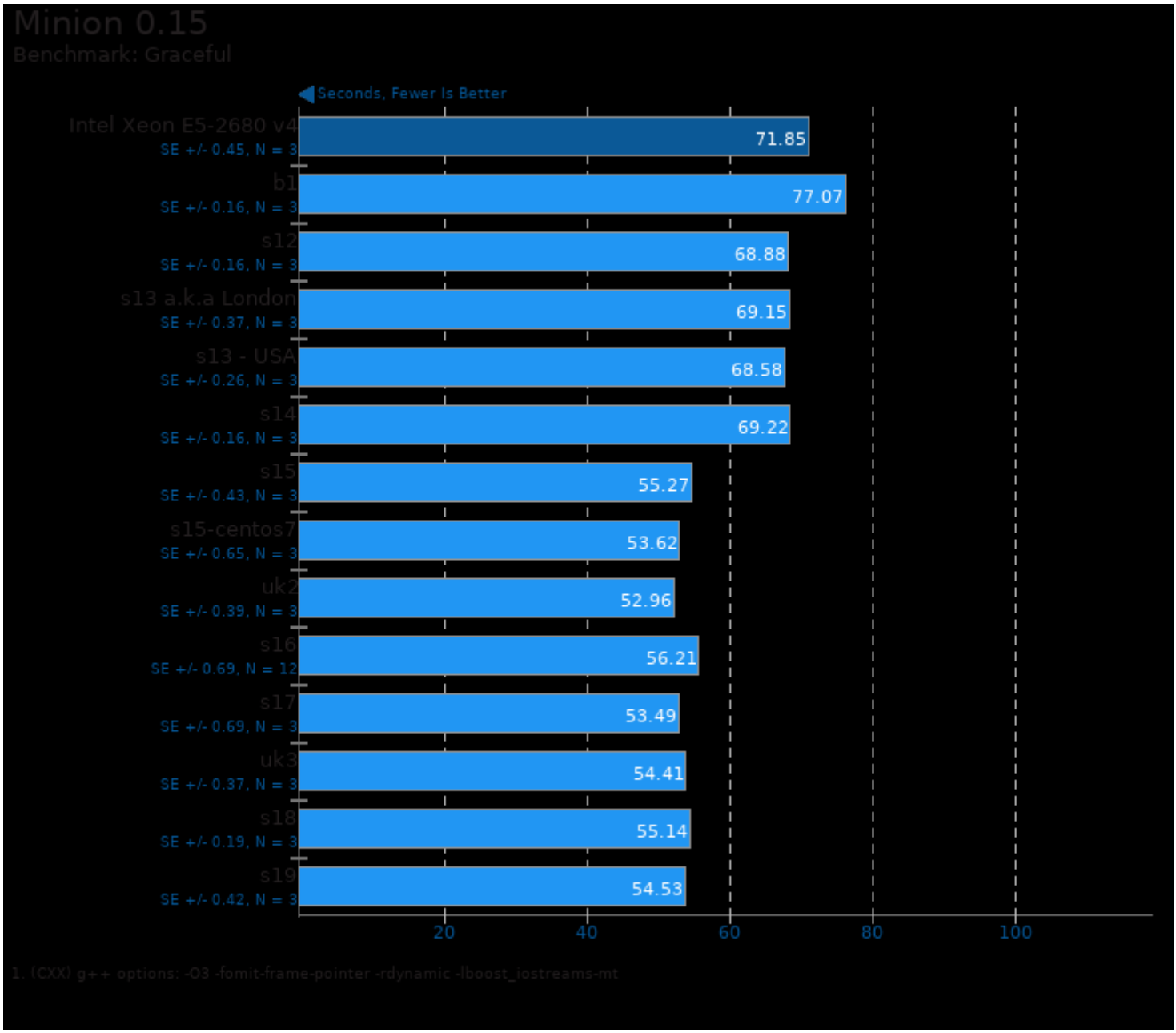

FFTE 5.0
Test: N=64, 1D Complex FFT Routine
MFLOPS, More Is Better
Intel Xeon E5-2680 v4
SE +/- 8.20, N = 3
5737.11
Intel Xeon E5-2680 v4 27-09-16
SE +/- 37.52, N = 3
5694.62
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 1.05, N = 3
5736.45
b1
SE +/- 67.96, N = 3
5216.72
s12
SE +/- 26.95, N = 3
6066.48
s13 a.k.a London
SE +/- 1.37, N = 3
6088.94
1300
2600
3900
5200
6500
1. (F9X) gfortran options: -O3 -fomit-frame-pointer -fopenmp


Timed PHP Compilation 5.2.9
Time To Compile
Seconds, Fewer Is Better
Intel Xeon E5-2680 v4
SE +/- 0.05, N = 3
13.13
Intel Xeon E5-2680 v4 27-09-16
SE +/- 0.02, N = 3
13.08
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 0.03, N = 3
13.07
b1
SE +/- 0.02, N = 3
17.09
s12
SE +/- 0.01, N = 3
12.18
s13 a.k.a London
SE +/- 0.01, N = 3
12.24
s13 - USA
SE +/- 0.05, N = 3
12.21
s14
SE +/- 0.02, N = 3
12.56
s15
SE +/- 0.03, N = 3
11.30
s15-centos7
SE +/- 0.08, N = 3
12.19
uk2
SE +/- 0.06, N = 3
12.14
s16
SE +/- 0.03, N = 3
12.08
s17
SE +/- 0.05, N = 3
12.26
uk3
SE +/- 0.01, N = 3
12.02
s18
SE +/- 0.07, N = 3
11.06
s19
SE +/- 0.02, N = 3
10.96
4
8
12
16
20
1. (CC) gcc options: -O2 -pedantic -ldl -lm

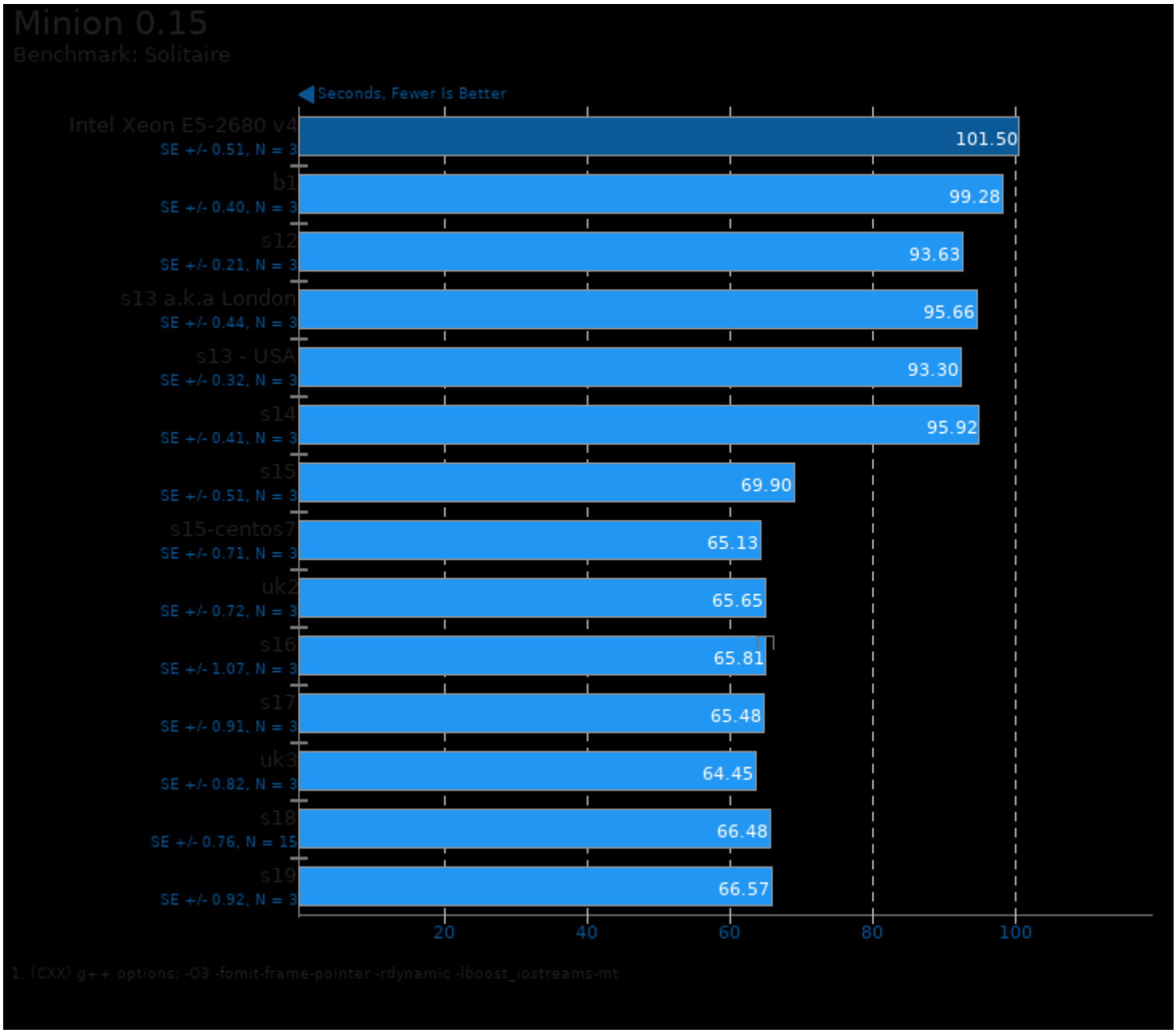

C-Ray 1.1
Total Time
Seconds, Fewer Is Better
Intel Xeon E5-2680 v4
SE +/- 0.03, N = 3
14.03
Intel Xeon E5-2680 v4 27-09-16
SE +/- 0.01, N = 3
14.00
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 0.00, N = 3
13.98
b1
SE +/- 0.01, N = 3
23.77
s12
SE +/- 0.00, N = 3
12.68
s13 a.k.a London
SE +/- 0.01, N = 3
12.68
s13 - USA
SE +/- 0.00, N = 3
12.68
s14
SE +/- 0.01, N = 3
12.69
s15
SE +/- 0.00, N = 3
10.38
s15-centos7
SE +/- 0.01, N = 3
5.59
uk2
SE +/- 0.01, N = 3
5.57
s16
SE +/- 0.01, N = 3
5.55
s17
SE +/- 0.00, N = 3
5.57
uk3
SE +/- 0.01, N = 3
5.56
s18
SE +/- 0.00, N = 3
4.81
s19
SE +/- 0.01, N = 3
4.83
6
12
18
24
30
1. (CC) gcc options: -lm -lpthread -O3


Parallel BZIP2 Compression 1.1.12
256MB File Compression
Seconds, Fewer Is Better
Intel Xeon E5-2680 v4
SE +/- 0.00, N = 3
3.64
Intel Xeon E5-2680 v4 27-09-16
SE +/- 0.07, N = 6
3.73
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 0.00, N = 3
3.64
b1
SE +/- 0.14, N = 6
5.92
s12
SE +/- 0.00, N = 3
3.34
s13 a.k.a London
SE +/- 0.08, N = 6
3.40
s13 - USA
SE +/- 0.00, N = 3
3.35
s14
SE +/- 0.03, N = 3
3.37
s15
SE +/- 0.07, N = 6
2.82
s15-centos7
SE +/- 0.02, N = 3
2.67
uk2
SE +/- 0.03, N = 3
2.67
s16
SE +/- 0.03, N = 3
2.68
s17
SE +/- 0.03, N = 3
2.65
uk3
SE +/- 0.05, N = 3
2.69
s18
SE +/- 0.03, N = 3
2.35
s19
SE +/- 0.02, N = 3
2.33
1.332
2.664
3.996
5.328
6.66
1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread

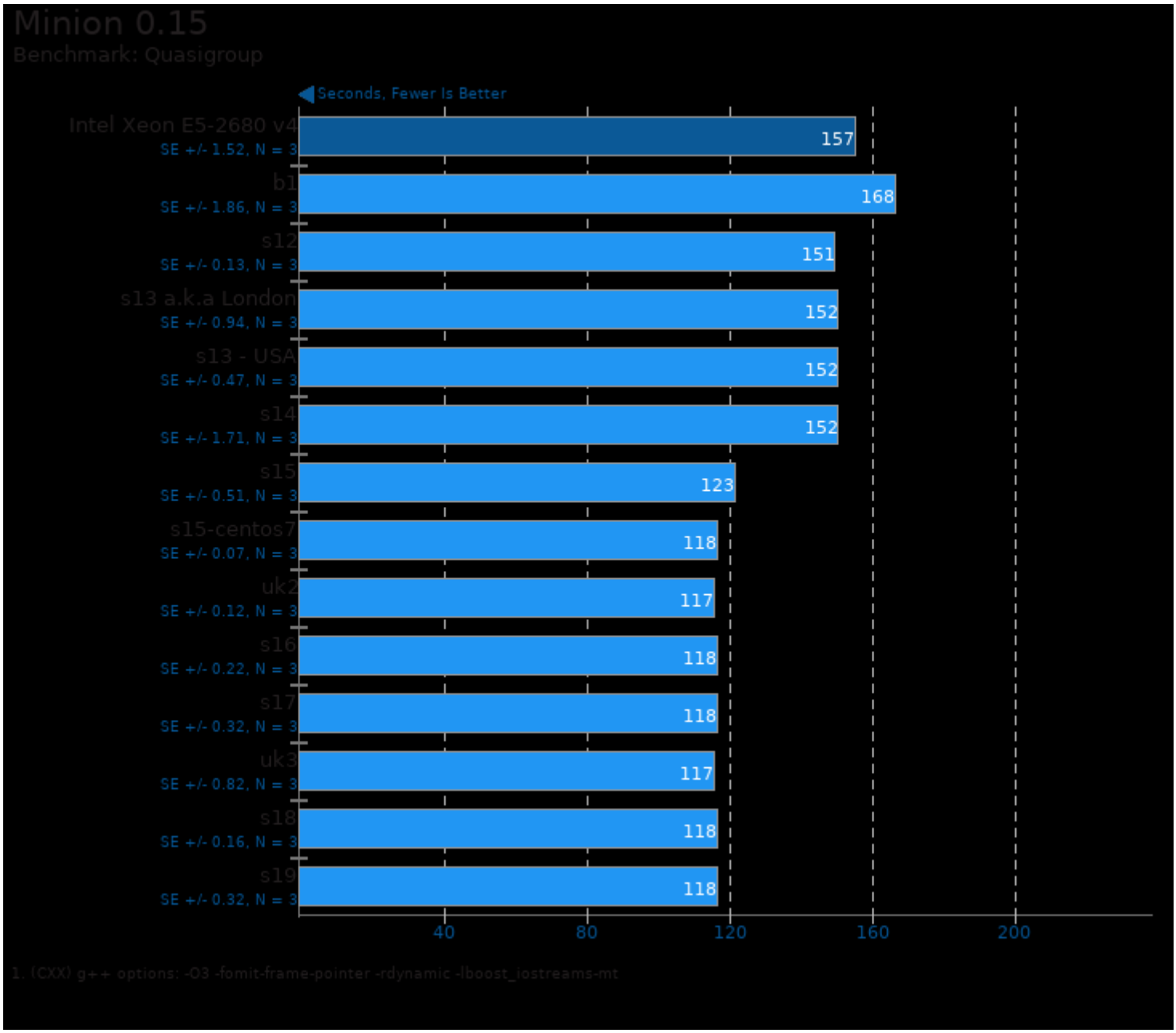

Gzip Compression
2GB File Compression
Seconds, Fewer Is Better
Intel Xeon E5-2680 v4
SE +/- 0.04, N = 3
11.94
Intel Xeon E5-2680 v4 27-09-16
SE +/- 0.03, N = 3
11.92
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 0.01, N = 3
11.92
b1
SE +/- 0.08, N = 3
13.49
s12
SE +/- 0.01, N = 3
11.18
s13 a.k.a London
SE +/- 0.06, N = 3
11.27
s13 - USA
SE +/- 0.01, N = 3
11.20
s14
SE +/- 0.01, N = 3
11.24
s15
SE +/- 0.03, N = 3
10.63
s15-centos7
SE +/- 0.09, N = 3
11.16
uk2
SE +/- 0.17, N = 3
11.13
s16
SE +/- 0.13, N = 3
11.27
s17
SE +/- 0.11, N = 3
11.30
uk3
SE +/- 0.14, N = 3
11.08
s18
SE +/- 0.12, N = 3
11.13
s19
SE +/- 0.15, N = 5
11.12
3
6
9
12
15

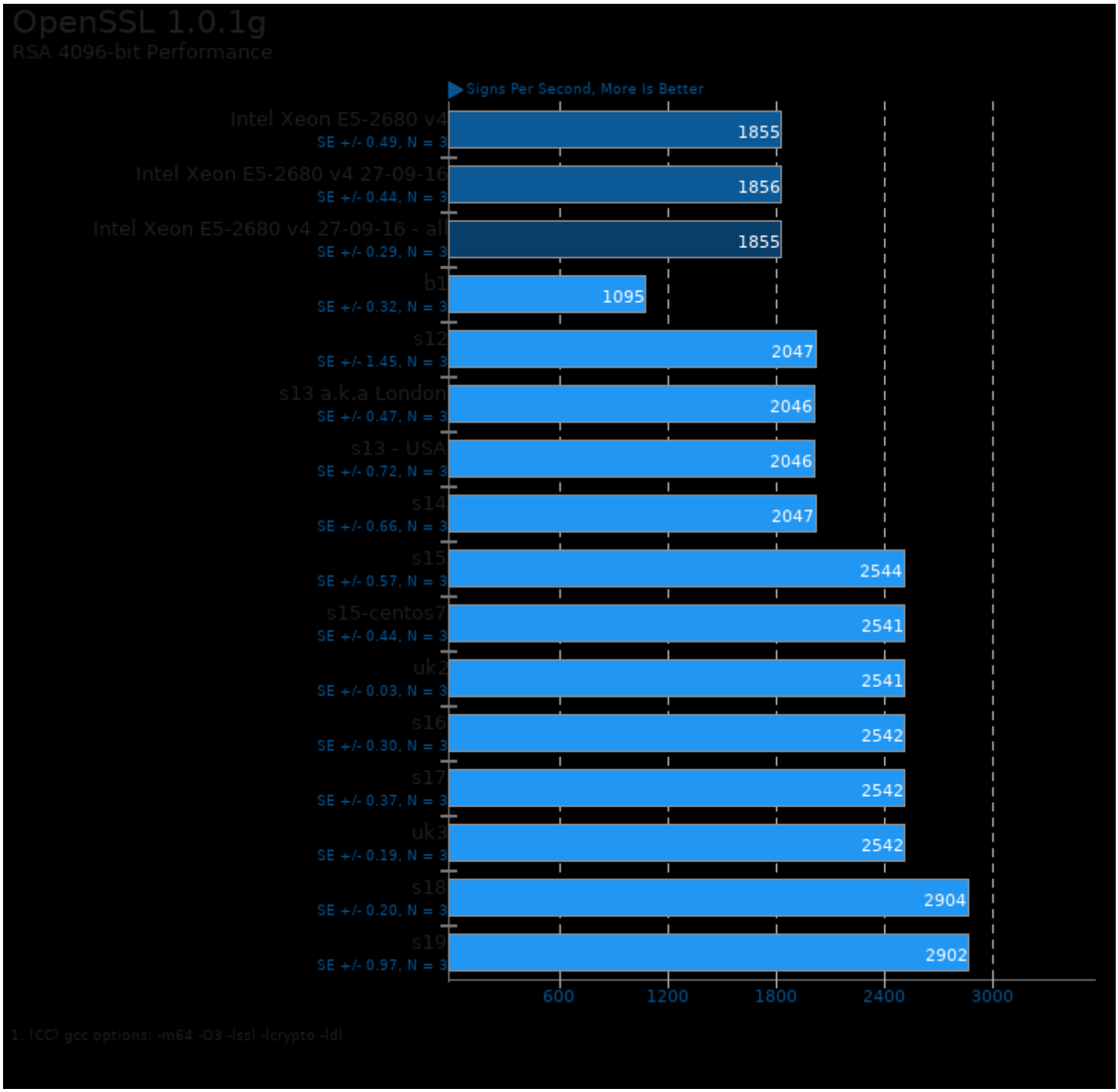

Minion 0.15
Benchmark: Graceful
Seconds, Fewer Is Better
Intel Xeon E5-2680 v4
SE +/- 0.45, N = 3
71.85
b1
SE +/- 0.16, N = 3
77.07
s12
SE +/- 0.16, N = 3
68.88
s13 a.k.a London
SE +/- 0.37, N = 3
69.15
s13 - USA
SE +/- 0.26, N = 3
68.58
s14
SE +/- 0.16, N = 3
69.22
s15
SE +/- 0.43, N = 3
55.27
s15-centos7
SE +/- 0.65, N = 3
53.62
uk2
SE +/- 0.39, N = 3
52.96
s16
SE +/- 0.69, N = 12
56.21
s17
SE +/- 0.69, N = 3
53.49
uk3
SE +/- 0.37, N = 3
54.41
s18
SE +/- 0.19, N = 3
55.14
s19
SE +/- 0.42, N = 3
54.53
20
40
60
80
100
1. (CXX) g++ options: -O3 -fomit-frame-pointer -rdynamic -lboost_iostreams-mt

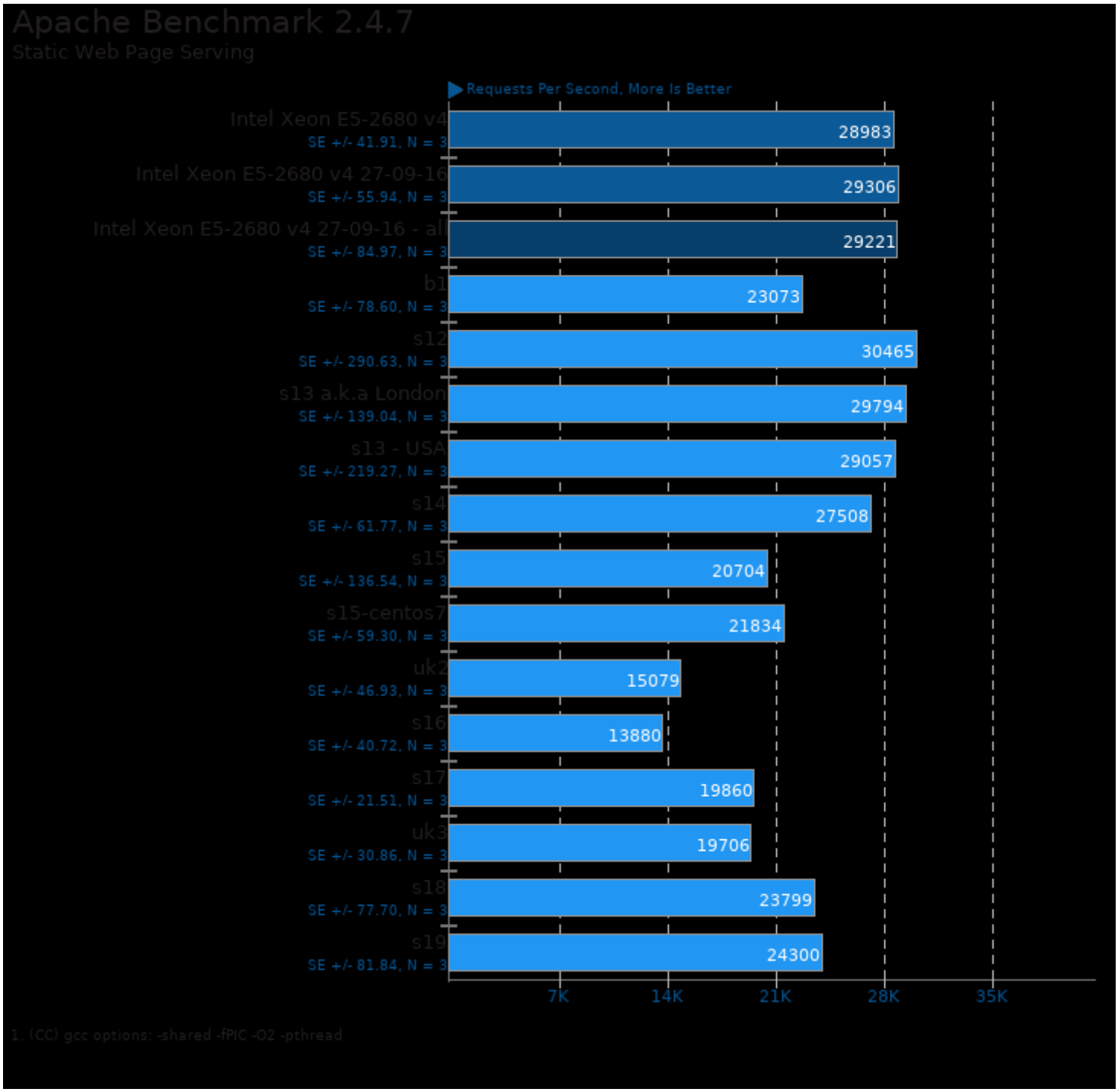
complete-last

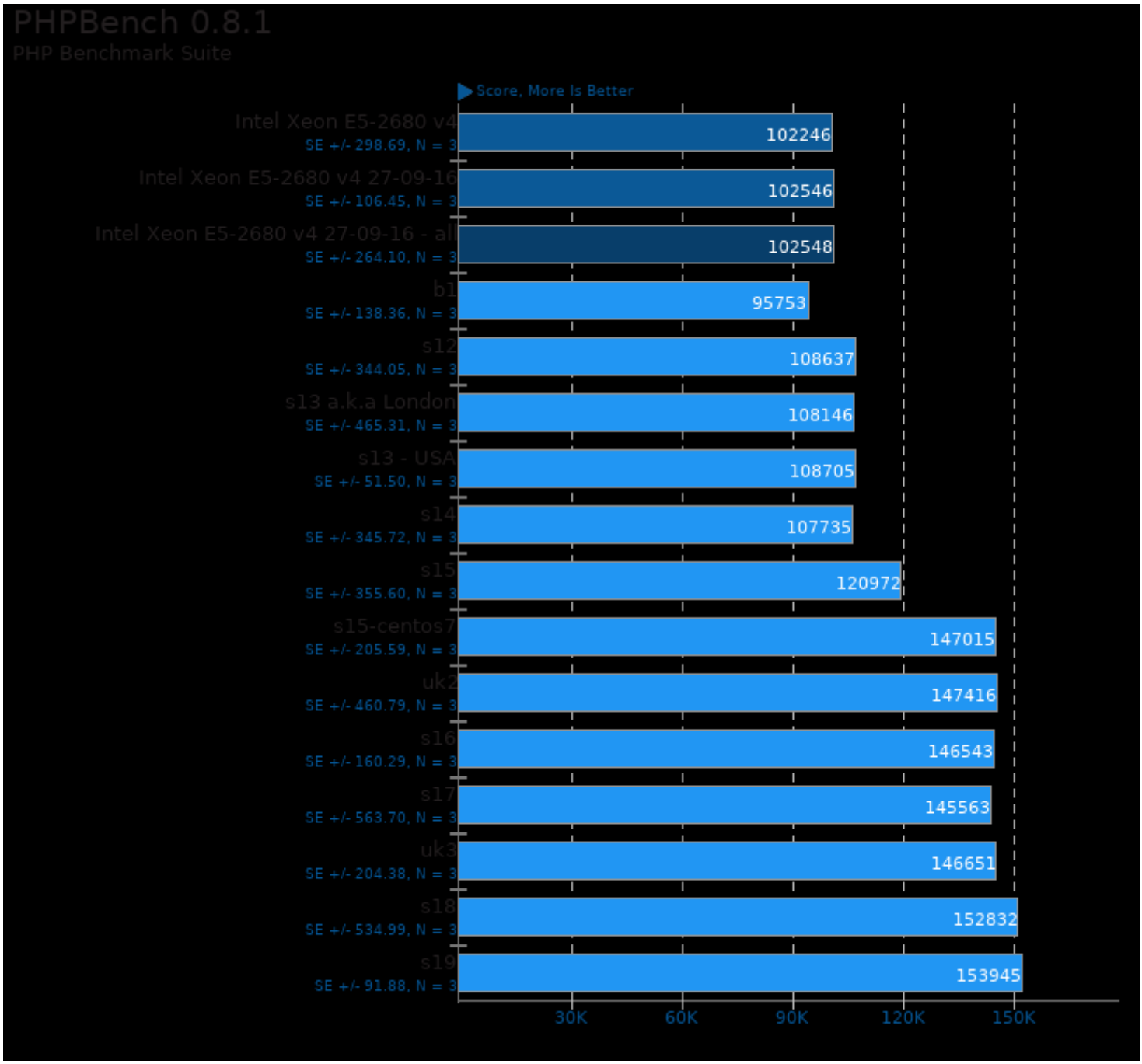


complete-last



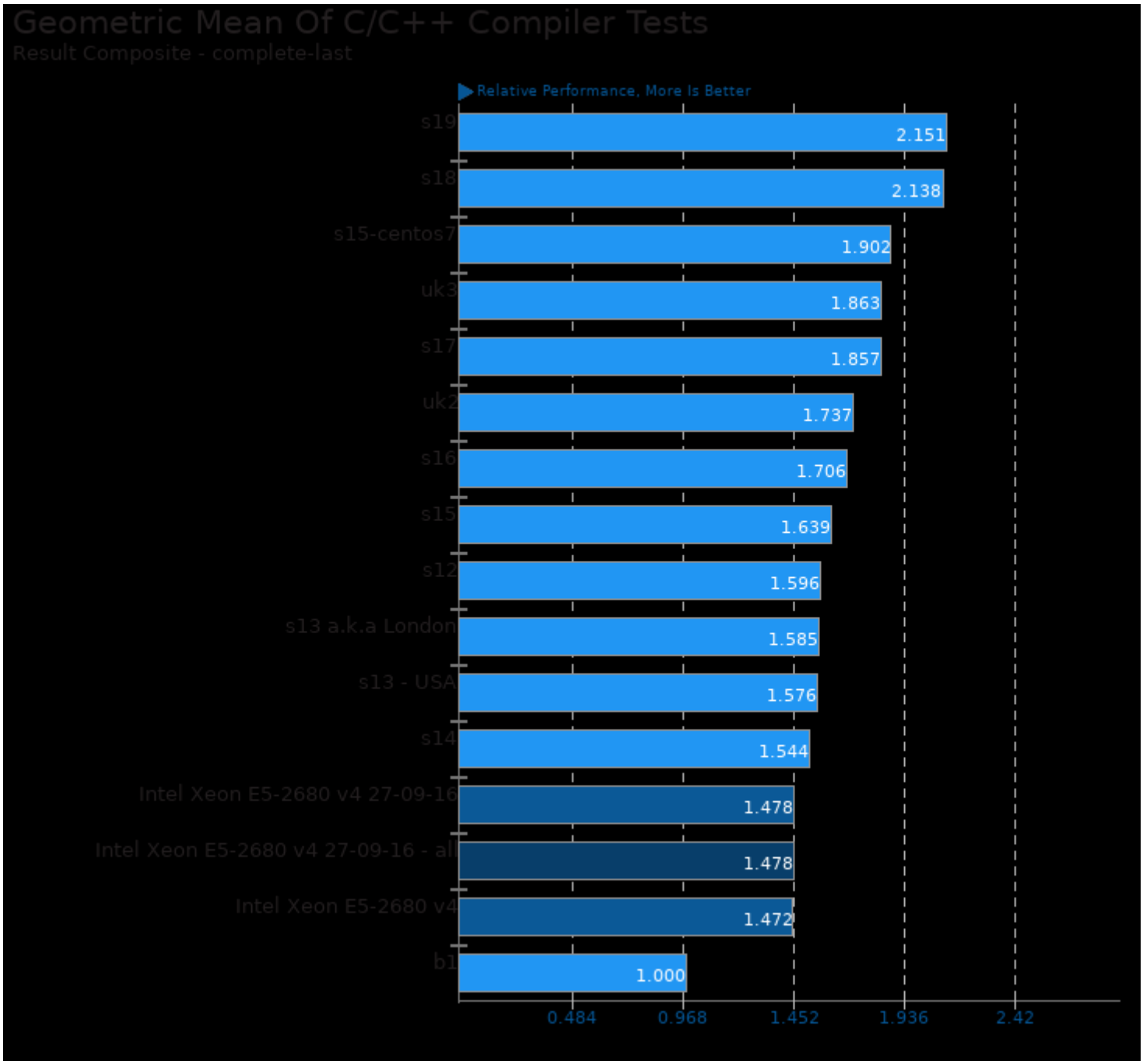

OpenSSL 1.0.1g
RSA 4096-bit Performance
Signs Per Second, More Is Better
Intel Xeon E5-2680 v4
SE +/- 0.49, N = 3
1855
Intel Xeon E5-2680 v4 27-09-16
SE +/- 0.44, N = 3
1856
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 0.29, N = 3
1855
b1
SE +/- 0.32, N = 3
1095
s12
SE +/- 1.45, N = 3
2047
s13 a.k.a London
SE +/- 0.47, N = 3
2046
s13 - USA
SE +/- 0.72, N = 3
2046
s14
SE +/- 0.66, N = 3
2047
s15
SE +/- 0.57, N = 3
2544
s15-centos7
SE +/- 0.44, N = 3
2541
uk2
SE +/- 0.03, N = 3
2541
s16
SE +/- 0.30, N = 3
2542
s17
SE +/- 0.37, N = 3
2542
uk3
SE +/- 0.19, N = 3
2542
s18
SE +/- 0.20, N = 3
2904
s19
SE +/- 0.97, N = 3
2902
600
1200
1800
2400
3000
1. (CC) gcc options: -m64 -O3 -lssl -lcrypto -ldl


Apache Benchmark 2.4.7
Static Web Page Serving
Requests Per Second, More Is Better
Intel Xeon E5-2680 v4
SE +/- 41.91, N = 3
28983
Intel Xeon E5-2680 v4 27-09-16
SE +/- 55.94, N = 3
29306
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 84.97, N = 3
29221
b1
SE +/- 78.60, N = 3
23073
s12
SE +/- 290.63, N = 3
30465
s13 a.k.a London
SE +/- 139.04, N = 3
29794
s13 - USA
SE +/- 219.27, N = 3
29057
s14
SE +/- 61.77, N = 3
27508
s15
SE +/- 136.54, N = 3
20704
s15-centos7
SE +/- 59.30, N = 3
21834
uk2
SE +/- 46.93, N = 3
15079
s16
SE +/- 40.72, N = 3
13880
s17
SE +/- 21.51, N = 3
19860
uk3
SE +/- 30.86, N = 3
19706
s18
SE +/- 77.70, N = 3
23799
s19
SE +/- 81.84, N = 3
24300
7K
14K
21K
28K
35K
1. (CC) gcc options: -shared -fPIC -O2 -pthread


PHPBench 0.8.1
PHP Benchmark Suite
Score, More Is Better
Intel Xeon E5-2680 v4
SE +/- 298.69, N = 3
102246
Intel Xeon E5-2680 v4 27-09-16
SE +/- 106.45, N = 3
102546
Intel Xeon E5-2680 v4 27-09-16 - all
SE +/- 264.10, N = 3
102548
b1
SE +/- 138.36, N = 3
95753
s12
SE +/- 344.05, N = 3
108637
s13 a.k.a London
SE +/- 465.31, N = 3
108146
s13 - USA
SE +/- 51.50, N = 3
108705
s14
SE +/- 345.72, N = 3
107735
s15
SE +/- 355.60, N = 3
120972
s15-centos7
SE +/- 205.59, N = 3
147015
uk2
SE +/- 460.79, N = 3
147416
s16
SE +/- 160.29, N = 3
146543
s17
SE +/- 563.70, N = 3
145563
uk3
SE +/- 204.38, N = 3
146651
s18
SE +/- 534.99, N = 3
152832
s19
SE +/- 91.88, N = 3
153945
30K
60K
90K
120K
150K

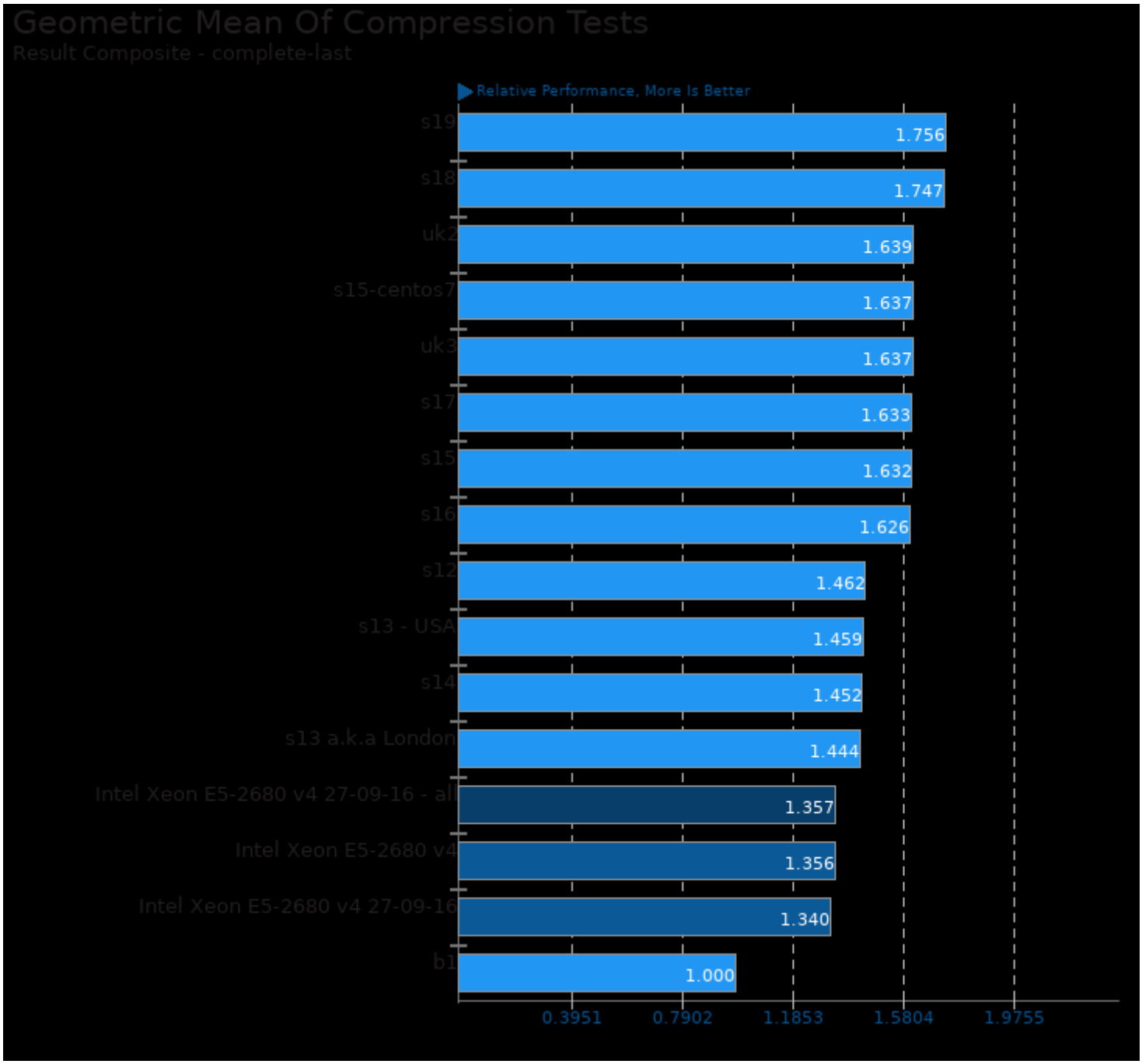
complete-last

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



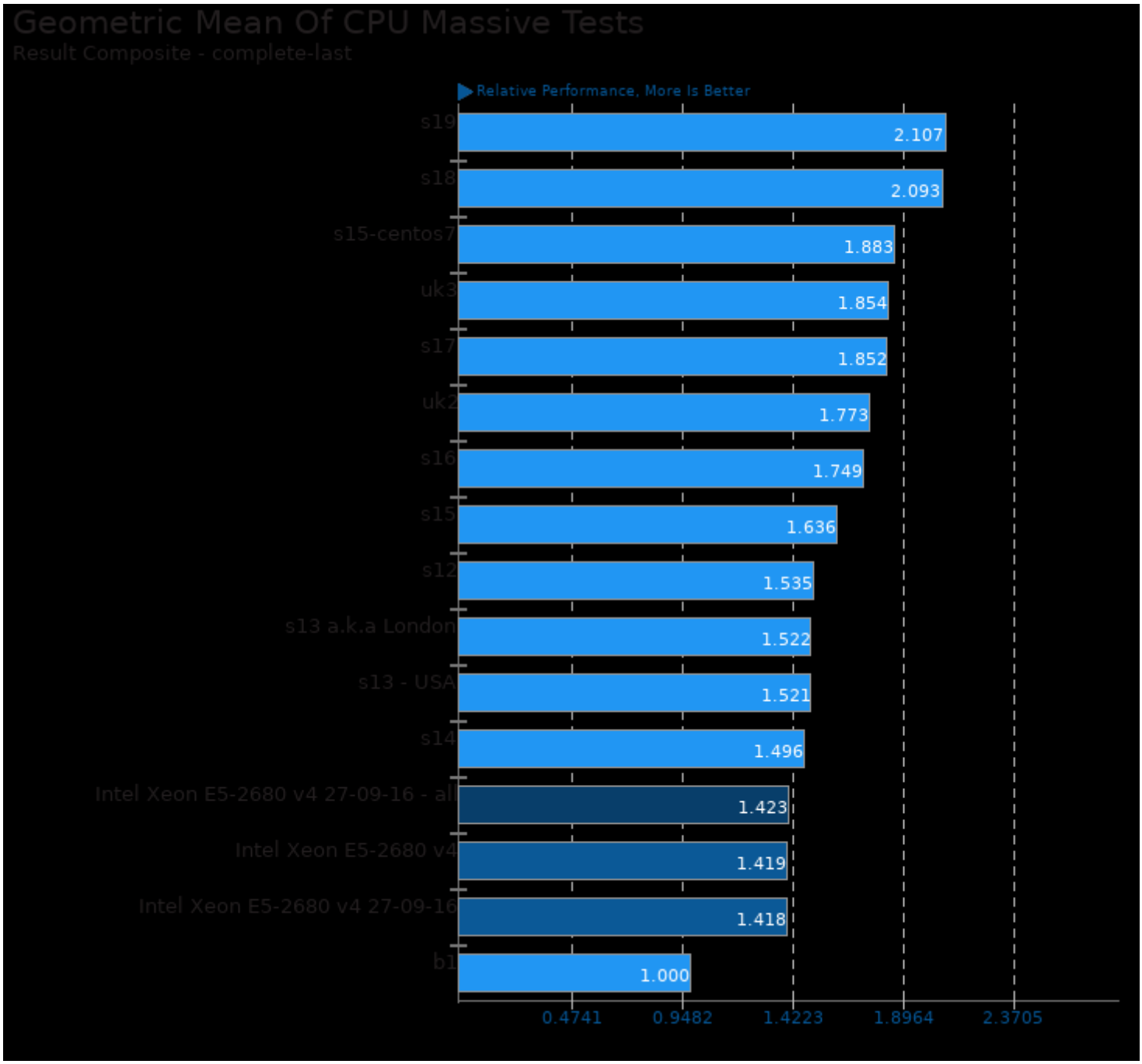
Geometric mean based upon tests: pts/build-php, pts/c-ray, pts/apache and pts/openssl

complete-last

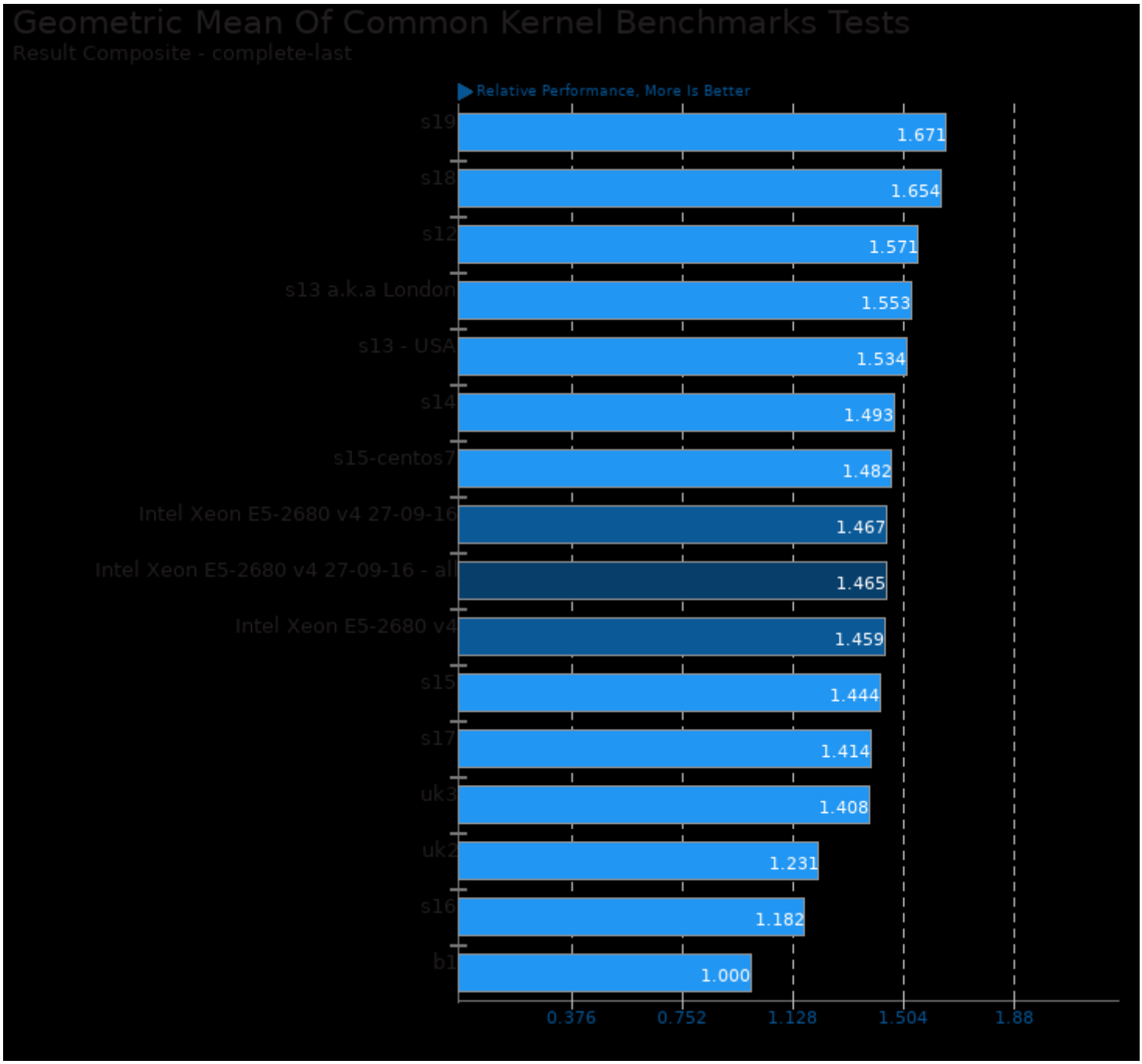


Geometric mean based upon tests: pts/compress-gzip and pts/compress-pbzip2

complete-last

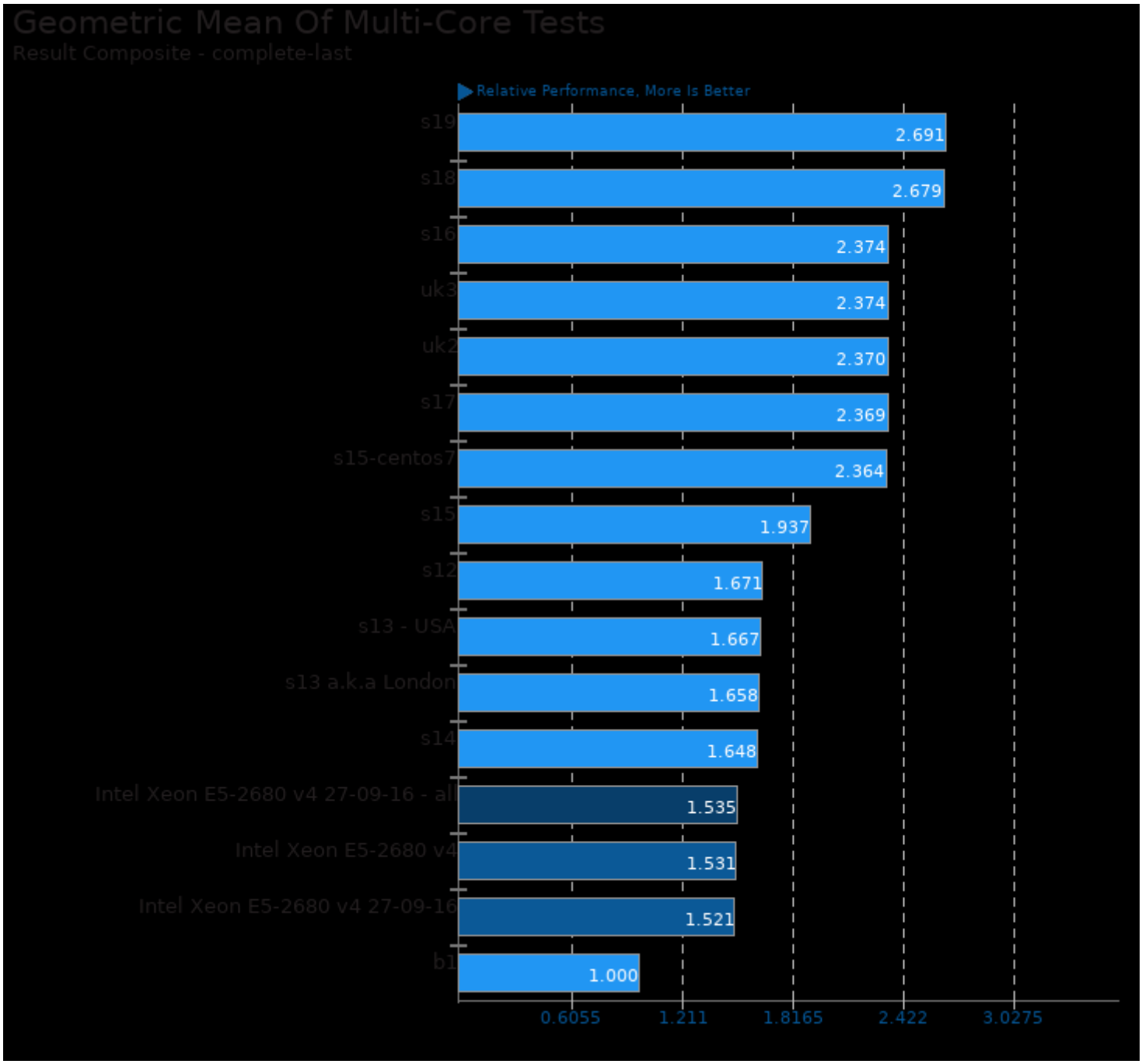


Geometric mean based upon tests: pts/apache, pts/build-php, pts/c-ray, pts/compress-pbzip2, pts/openssl, pts/minion, pts/phpbench and pts/ramspeed



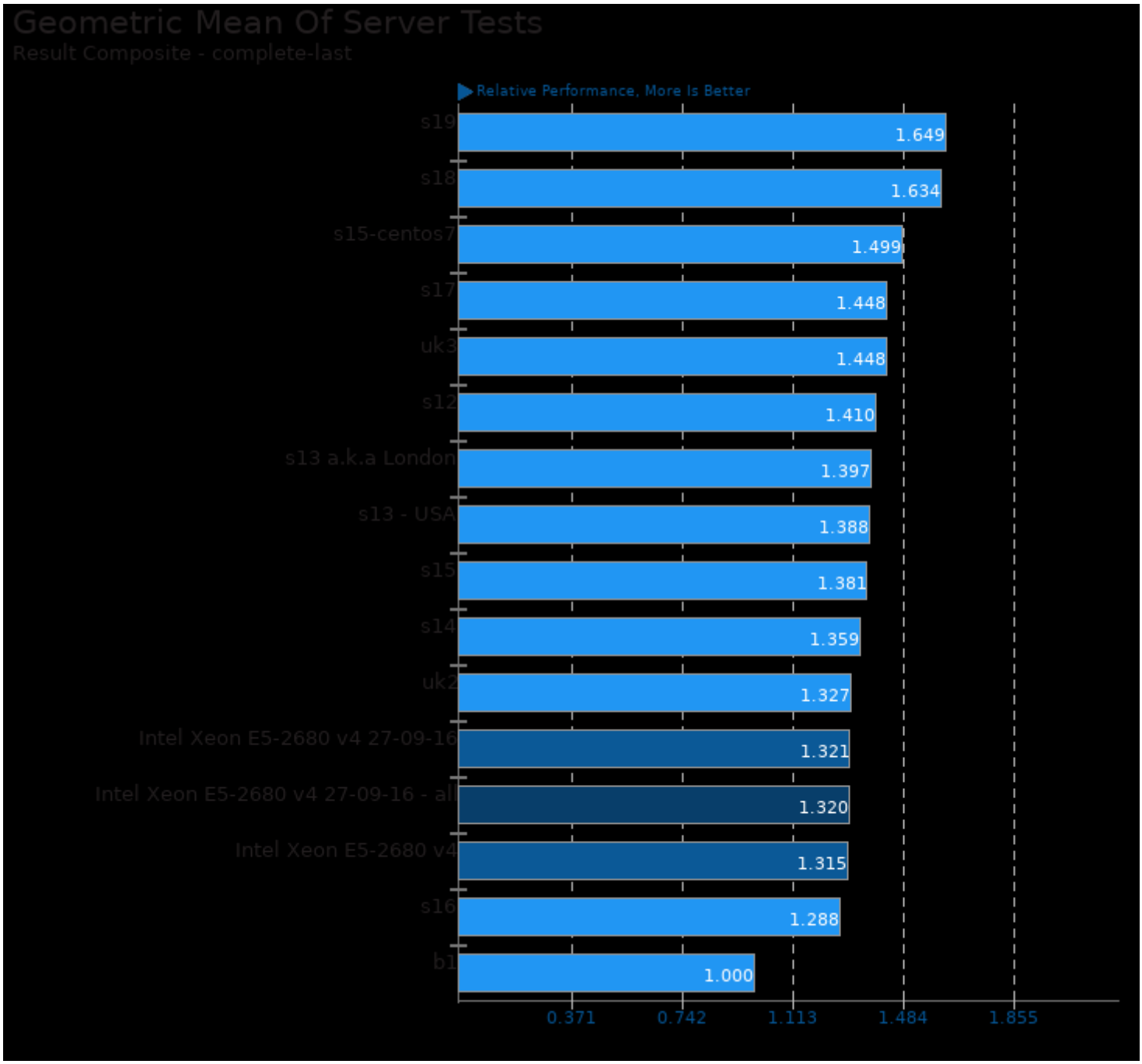
Geometric mean based upon tests: pts/apache and pts/openssl

complete-last



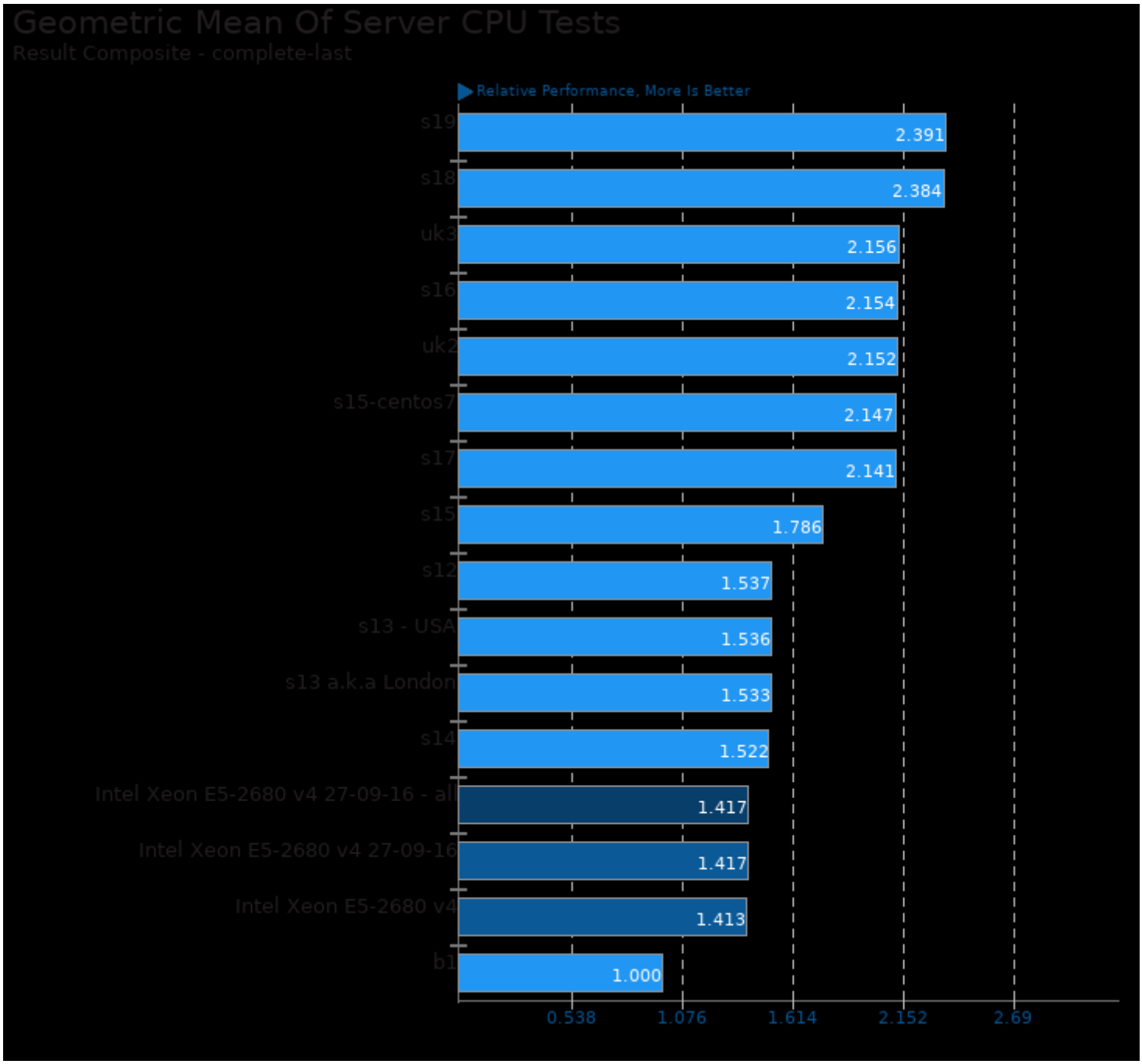
Geometric mean based upon tests: pts/c-ray, pts/compress-pbzip2 and pts/build-php

complete-last



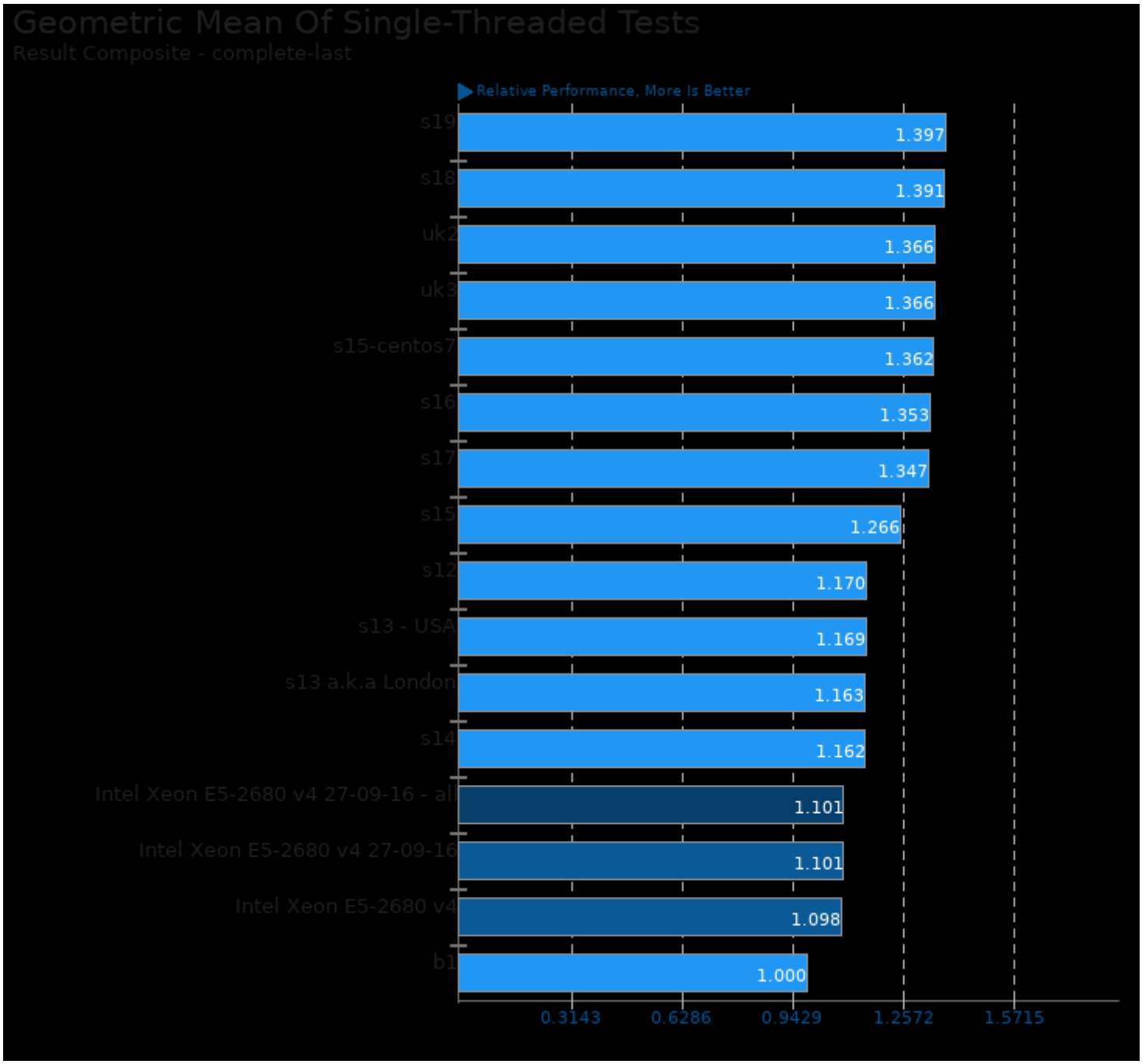
Geometric mean based upon tests: pts/apache, pts/phpbench and pts/openssl

complete-last



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

complete-last



Geometric mean based upon tests: pts/compress-gzip, pts/minion and pts/phpbench

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 07:45.