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openeuler_default

Unknown testing with a THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS) and llvmpipe on Linx 10 via the Phoronix Test Suite.

Automated Executive Summary

kyv10 had the most wins, coming in first place for 27% of the tests.

Based on the geometric mean of all complete results, the fastest (kp100_0725) was 2.058x the speed of the slowest (KP100_1120).

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

OpenSSL (Algorithm: SHA256) at 622555832.063x
Flexible IO Tester (Type: Random Read - IO Engine: POSIX AIO - Buffered: Yes - Direct: No - Block Size: 4KB - Disk Target: Default Test Directory) at 187.24x
Flexible IO Tester (Type: Random Read - IO Engine: POSIX AIO - Buffered: Yes - Direct: No - Block Size: 4KB - Disk Target: Default Test Directory) at 171.69x
IOzone (Record Size: 64Kb - File Size: 512MB - Disk Test: Write Performance) at 51.852x
FS-Mark (Test: 1000 Files, 1MB Size) at 32.532x
Dbench (Client Count: 6) at 25.559x
FS-Mark (Test: 5000 Files, 1MB Size, 4 Threads) at 13.152x

FS-Mark (Test: 4000 Files, 32 Sub Dirs, 1MB Size) at 8.859x
Flexible IO Tester (Type: Sequential Write - IO Engine: POSIX AIO - Buffered: Yes - Direct: No - Block Size: 4KB - Disk Target: Default Test Directory) at 7.362x
Flexible IO Tester (Type: Sequential Write - IO Engine: POSIX AIO - Buffered: Yes - Direct: No - Block Size: 4KB - Disk Target: Default Test Directory) at 7.316x.

Test Systems:

openeuler_default

Processor: Unknown @ 2.60GHz (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 4 x 16384 MB DDR4-2933MT/s Hynix HMA82GR7CJR8N-WM, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: Huawei Hi1710 [iBMC Intelligent Management chip w/VGA support], Network: 4 x Huawei HNS GE/10GE/25GE

OS: openEuler 20.03, Kernel: 4.19.90-2003.4.0.0036.oe1.aarch64 (aarch64) 20200323, Compiler: GCC 7.3.0, File-System: ext4, Screen Resolution: 640x480

Kernel Notes: Transparent Huge Pages: always
Disk Notes: BFQ / relatime,rw,seclabel,stripe=64 / Block Size: 4096
Processor Notes: Scaling Governor: cppc_cpufreq performance
Python Notes: Python 2.7.18 + Python 3.7.9
Security Notes: SELinux + itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Not affected + tsx_async_abort: Not affected

KP100

Processor: Unknown @ 2.60GHz (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 4 x 16384 MB DDR4-2933MT/s Hynix HMA82GR7CJR8N-WM, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: llvmpipe, Network: 4 x Huawei HNS GE/10GE/25GE

OS: Linx 10, Kernel: 4.19.0-11-linx-security-arm64 (aarch64), Display Server: X Server 1.20.4, OpenGL: 3.3 Mesa 18.3.6 (LLVM 7.0 128 bits), Compiler: GCC 8.3.0, File-System: xfs, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: MQ-DEADLINE / attr2,inode64,noquota,relatime,rw,sunit=512,swidth=512 / Block Size: 4096
Processor Notes: Scaling Governor: cppc_cpufreq performance
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Not affected + srbds: Not affected + tsx_async_abort: Not affected

kyv10

Processor: HUAWEI Kunpeng 920 @ 2.60GHz (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 65536MB, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: llvmpipe 65152MB, Network: Huawei HNS GE/10GE/25GE

OS: Kylin Linux Advanced Server V10, Kernel: 4.19.90-24.4.v2101.ky10.aarch64 (aarch64) 20210524, Desktop: MATE,

Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 3.3 Mesa 20.1.4 (LLVM 10.0.1 128 bits), Compiler: GCC 7.3.0, File-System: ext4, Screen Resolution: 1024x768

Disk Notes: MQ-DEADLINE / relatime,rw,stripe=64
Processor Notes: Scaling Governor: cppc_cpufreq performance
Python Notes: Python 2.7.18 + Python 3.7.9
Security Notes: __user pointer sanitization Protection

UOS

Processor: HUAWEI Kunpeng 920 5221K (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 64512MB, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: llvmpipe 64128MB, Network: Huawei HNS GE/10GE/25GE

OS: Uos 20, Kernel: 4.19.0-arm64-desktop (aarch64), Desktop: Deepin Desktop Environment, Display Server: X Server 1.20.4, Display Driver: modesetting 1.20.4, OpenGL: 3.3 Mesa 19.2.6 (LLVM 7.0 128 bits), Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=aarch64-linux-gnu --disable-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: CFQ / relatime,rw,stripe=64
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: __user pointer sanitization Protection

KP100ext4

Processor: Unknown @ 2.60GHz (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 4 x 16384 MB DDR4-2933MT/s Hynix HMA82GR7CJR8N-WM, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: llvmpipe 64256MB, Network: Huawei HNS GE/10GE/25GE

OS: Linx 10, Kernel: 4.19.0-11-linx-security-arm64 (aarch64), Display Server: X Server 1.20.4, Display Driver: modesetting 1.20.4, OpenGL: 3.3 Mesa 18.3.6 (LLVM 7.0 128 bits), Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=aarch64-linux-gnu --disable-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: cppc_cpufreq performance
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: __user pointer sanitization Protection

KP100_debian10.6

Processor: Unknown @ 2.60GHz (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 64GB, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: Huawei Hi1710 [iBMC Intelligent Management chip w/VGA support], Network: 4 x Huawei HNS GE/10GE/25GE

OS: Debian 10, Kernel: 4.19.0-11-linx-security-arm64 (aarch64), Display Server: X Server 1.20.4, Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v

Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw,stripe=64 / Block Size: 4096
Processor Notes: Scaling Governor: cppc_cpufreq performance
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Not affected + srbds: Not affected + tsx_async_abort: Not affected

KP100_1120

kp100

Processor: Unknown @ 2.60GHz (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 4 x 16384 MB DDR4-2933MT/s Hynix HMA82GR7CJR8N-WM, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: llvmpipe, Network: 4 x Huawei HNS GE/10GE/25GE

OS: Linx 10, Kernel: 4.19.0-11-linx-security-arm64 (aarch64), Display Server: X Server 1.20.4, OpenGL: 3.3 Mesa 18.3.6 (LLVM 7.0 128 bits), Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw,stripe=64 / Block Size: 4096
Processor Notes: Scaling Governor: cppc_cpufreq performance
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Not affected + srbds: Not affected + tsx_async_abort: Not affected

kp100_debian10.6

Processor: Unknown @ 2.60GHz (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 64GB, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: Huawei Hi1710 [iBMC Intelligent Management chip w/VGA support], Network: 4 x Huawei HNS GE/10GE/25GE

OS: Debian 10, Kernel: 4.19.0-11-linx-security-arm64 (aarch64), Display Server: X Server 1.20.4, Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw,stripe=64 / Block Size: 4096
Processor Notes: Scaling Governor: cppc_cpufreq performance
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Not affected + srbds: Not affected + tsx_async_abort: Not affected

debian10.6

Processor: Unknown @ 2.60GHz (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 4 x 16384 MB DDR4-2933MT/s Hynix HMA82GR7CJR8N-WM, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: llvmpipe, Network: 4 x Huawei HNS GE/10GE/25GE

OS: Debian 10, Kernel: 4.19.0-11-arm64 (aarch64), Display Server: X Server 1.20.4, OpenGL: 3.3 Mesa 18.3.6 (LLVM 7.0 128 bits), Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 800x600

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin

--enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw,stripe=64 / Block Size: 4096
Processor Notes: Scaling Governor: cppc_cpufreq performance
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Not affected + srbds: Not affected + tsx_async_abort: Not affected

kp100_0725

Processor: Unknown @ 2.60GHz (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 4 x 16384 MB DDR4-2933MT/s Hynix HMA82GR7CJR8N-WM, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: llvmpipe, Network: 4 x Huawei HNS GE/10GE/25GE

OS: Linx 10, Kernel: 4.19.0-11-linx-security-arm64 (aarch64), Display Server: X Server 1.20.4, OpenGL: 3.3 Mesa 18.3.6 (LLVM 7.0 128 bits), Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw / Block Size: 4096
Processor Notes: Scaling Governor: cppc_cpufreq performance
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Not affected + srbds: Not affected + tsx_async_abort: Not affected

kp100_0725_config

Processor: Unknown @ 2.60GHz (64 Cores), Motherboard: THTF BC82AMDGE (KL4.41.017.TF.201225.R BIOS), Chipset: Huawei HiSilicon, Memory: 4 x 16384 MB DDR4-2933MT/s Hynix HMA82GR7CJR8N-WM, Disk: 240GB SAMSUNG MZ7LH240 + 1999GB HW-SAS3508, Graphics: llvmpipe, Monitor: S24D300, Network: 4 x Huawei HNS GE/10GE/25GE

OS: Linx 10, Kernel: 4.19.0-11-linx-security-arm64 (aarch64), Display Server: X Server 1.20.4, OpenGL: 3.3 Mesa 18.3.6 (LLVM 7.0 128 bits), Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 3840x1200

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw,stripe=64 / Block Size: 4096
Processor Notes: Scaling Governor: cppc_cpufreq performance
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Not affected + srbds: Not affected + tsx_async_abort: Not affected

	openeuler_default	KP100	kyv10	UOS	KP100ext4	KP100_debian10.6	KP100_1120	kp100	kp100_debian10.6	debian10.6	kp100_0725	kp100_0725_config

openeuler_default

Flexible IO Tester - Rand Read - POSIX AIO - Yes - No -	0.6635	0.653	0.79	0.70	**36.50**	0.692	**0.234**	0.684	0.690	0.694	36.5	0.772
Normalized	1.81%	1.79%	2.16%	1.91%	99.81%	1.89%	0.64%	1.87%	1.89%	1.9%	99.81%	2.11%
Standard Deviation	44.5%	14.8%	2.1%	2.3%	0%	1.8%	45.9%	3.3%	0.4%	0.5%	0.3%	7.4%
Flexible IO Tester - Rand Read - POSIX AIO - Yes - No -	**163**	**160**										
Normalized	100%	98.16%										
Standard Deviation	44.6%	15.2%										
Flexible IO Tester - Rand Write - POSIX AIO - Yes - No -	178	173	179	175	**213**	149	**49.9**	168	148	146	211	169
Normalized	83.57%	81.22%	84.04%	82.16%	100%	69.95%	23.43%	78.87%	69.48%	68.54%	99.06%	79.34%
Standard Deviation		1.7%	0.3%	1.1%	0.5%	1.2%	37.5%	1.2%	0.8%	2.1%	1.7%	0.9%
Flexible IO Tester - Rand Write - POSIX AIO - Yes - No -	**45500**	**44267**										
Normalized	100%	97.29%										
Standard Deviation	0.6%	1.7%										
Flexible IO Tester - Seq Read - POSIX AIO - Yes - No -	191	188	196	184	453	**154**	174	177	154	**154**	**454**	178
Normalized	42.07%	41.41%	43.17%	40.53%	99.78%	33.92%	38.33%	38.99%	33.92%	33.92%	100%	39.21%
Standard Deviation	0.6%		0.6%	0.6%	0.3%	0.8%	0.7%	0.9%		1.4%		0.6%
Flexible IO Tester - Seq Read - POSIX AIO - Yes - No -	**49067**	**48167**										
Normalized	100%	98.17%										
Standard Deviation	0.7%	0.1%										
Flexible IO Tester - Seq Write - POSIX AIO - Yes - No -	184	178	187	181	250	151	**42.4**	168	151	150	**254**	172
Normalized	72.44%	70.08%	73.62%	71.26%	98.43%	59.45%	16.69%	66.14%	59.45%	59.06%	100%	67.72%
Standard Deviation	1.3%	1.5%	1.4%	1.6%	1.9%	2.1%	44.8%	0.7%	0.8%		0.2%	1%
Flexible IO Tester - Seq Write - POSIX AIO - Yes - No -	**47167**	**45600**										
Normalized	100%	96.68%										
Standard Deviation	1.2%	1.3%										
FS-Mark - 1.F.1.S (Files/s)	121.4	134.2	184.90	173.60	**283.03**	157.0	**8.7**	163.0	153.7	152.6	282.2	168.1
Normalized	42.89%	47.42%	65.33%	61.34%	100%	55.47%	3.07%	57.59%	54.31%	53.92%	99.71%	59.39%

openeuler_default

Standard Deviation	17.4%	1.4%	0.4%	0.5%	0%	1.3%	24.2%	3.6%	2.8%	1.7%	0.9%	2.2%
FS-Mark - 5.F.1.S.4.T (Files/s)	181.5	132.0	191.20	183.30	317.07	151.3	**24.3**		151.1	149.6	**319.6**	172.5
Normalized	56.79%	41.3%	59.82%	57.35%	99.21%	47.34%	7.6%		47.28%	46.81%	100%	53.97%
Standard Deviation	1%	0.7%	0.4%	0.5%	0.8%	0.7%	4.8%		1.2%	0.7%	0.4%	0.6%
FS-Mark - 4.F.3.S.D.1.S (Files/s)	65.8	127.1	181.53	174.03	**284.37**	152.8	**32.1**	167.6	152.2	152.0	282.6	166.6
Normalized	23.14%	44.7%	63.84%	61.2%	100%	53.73%	11.29%	58.94%	53.52%	53.45%	99.38%	58.59%
Standard Deviation	2.4%	1.5%	1.3%	0.5%	0.2%	0.7%	0.6%	0%	0.1%	0.5%	0.3%	1%
FS-Mark - 1.F.1.S.N.S.F (Files/s)	2388	2123	**2778**	1537	1353	1407	**922.8**	1336	1423	1323	1339	2249
Normalized	85.96%	76.42%	100%	55.32%	48.71%	50.62%	33.21%	48.1%	51.23%	47.63%	48.21%	80.93%
Standard Deviation	0.7%	0.2%	0.9%	13.5%	0.3%	0.1%	0.8%	0.3%	0.3%	0.3%	0.2%	0.5%
BlogBench - Read (Final	983357	**910062**	1421953	117401	985600	1029987	1078251	1036996	1056319	**1471648**	984212	1091928
Normalized	66.82%	61.84%	96.62%	79.78%	66.97%	69.99%	73.27%	70.46%	71.78%	100%	66.88%	74.2%
Standard Deviation	4.5%	1.9%	0.9%	0.7%	2.6%	2.3%	2.3%	2.1%	0.9%	0.7%	0.4%	3.9%
Dbench - 6	95.7491	384.471	411.16	396.83	**1524**	379.279	**59.6284**	389.457	399.505	387.005	1517	384.100
Normalized	6.28%	25.23%	26.98%	26.04%	100%	24.89%	3.91%	25.55%	26.21%	25.39%	99.55%	25.2%
Standard Deviation	41.9%	0.1%	1.5%	0.2%	0.2%	0.6%	0.4%	1.2%	1.2%	0.7%	0.1%	3.1%
IOzone - 64Kb - 512MB - Write Performance (MB/s)	5.58	63.09	37.82	37.70	140.78	36.9114583333	**2.72**	37.07	37.33	36.97	**141.036458333**	37.90
Normalized	3.96%	44.73%	26.82%	26.73%	99.82%	26.17%	1.93%	26.28%	26.47%	26.21%	100%	26.87%
Standard Deviation	16.9%	0.5%	1.1%	0.7%	1.2%	0.3%	0.6%	1.6%	0.2%	0.3%	1%	0.5%
Threaded I/O Tester - Read - 32MB - 4 (MB/s)	**13155**	10287	12658	9294	10711	11043	**5124**	10977	7922	11319	10621	11271
Normalized	100%	78.2%	96.23%	70.65%	81.43%	83.94%	38.95%	83.45%	60.22%	86.05%	80.74%	85.68%
Standard Deviation	2.1%	0.5%	3.5%	4.3%	2%	11.8%	0.3%	0.4%	0.9%	3.2%	1.3%	5.4%
Threaded I/O Tester - Read - 64MB - 4 (MB/s)	14688	11520	**14985**	9364	11233	12453	**6150**	12036	12584	12738	11601	12806
Normalized	98.02%	76.87%	100%	62.49%	74.96%	83.11%	41.04%	80.32%	83.98%	85%	77.42%	85.46%
Standard Deviation	0.4%	0.5%	1.3%	1.8%	2.2%	3.2%	0%	1.1%	0.3%	1.9%	1.2%	2.4%
Threaded I/O Tester - Read - 128MB - 4 (MB/s)	15549	11967	**15929**	9891	11985	13364	**8794**	12719	13448	14180	12271	13964
Normalized	97.62%	75.13%	100%	62.1%	75.24%	83.9%	55.21%	79.85%	84.43%	89.02%	77.04%	87.67%
Standard Deviation	1%	5.3%	1.4%	7.3%	1.4%	3.6%	0%	2.3%	3.1%	1.7%	0.9%	1.1%
Threaded I/O Tester - Read - 256MB - 4 (MB/s)	**16090**	12913	16071	**10694**	11584	14308	11180	12939	14350	14895	12269	14124
Normalized	100%	80.25%	99.88%	66.46%	71.99%	88.92%	69.48%	80.41%	89.18%	92.57%	76.25%	87.78%
Standard Deviation	0.4%	1.1%	4.6%	1.3%	9.1%	0.1%	0%	9.8%	0.3%	1.5%	5.2%	6.1%

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Compile Bench - Initial Create (MB/s)	128.14	189.99	278.23	324.16	229.74	287.17	179.86	250.85	286.84	270.38	234.88	198.53
Normalized	39.53%	58.61%	85.83%	100%	70.87%	88.59%	55.48%	77.38%	88.49%	83.41%	72.46%	61.24%
Standard Deviation	1.1%	1.7%	0.8%	3.1%	0.7%	1.2%	2.2%	0.2%	2%	1.4%	0.5%	1.7%
PostMark - D.T.P (TPS)	3714	3623	4492	3665	3191	3505	3246	3260	3456	3318	3138	4413
Normalized	82.68%	80.65%	100%	81.59%	71.04%	78.03%	72.26%	72.57%	76.94%	73.86%	69.86%	98.24%
Standard Deviation	2.2%		2.1%	3.4%	0.7%	2.1%		0.8%	0.8%	0.8%	0.7%	2%
RAMspeed SMP - Add - Integer (MB/s)	23162	24498	23741	17053	24254	25004	24231	23945	25135	25153	24432	22688
Normalized	92.09%	97.39%	94.39%	67.8%	96.43%	99.4%	96.33%	95.2%	99.93%	100%	97.13%	90.2%
Standard Deviation	0.3%	0.3%	0.3%	0.1%	0.1%	0.4%	0.2%	0%	0.3%	2.1%	0.1%	0.2%
RAMspeed SMP - Copy - Integer (MB/s)	21165	23747	21826	15538	23685	23767	23688	23535	23825	23962	23682	23667
Normalized	88.33%	99.1%	91.08%	64.84%	98.84%	99.19%	98.86%	98.21%	99.43%	100%	98.83%	98.77%
Standard Deviation	0.1%	0.2%	0.1%	0.4%	0.1%	0.1%	0.1%	0%	0.2%	0.1%	0.3%	0%
RAMspeed SMP - Scale - Integer (MB/s)	15421	16561	16691	12333	16554	16778	16522	16429	16724	16924	16689	16709
Normalized	91.12%	97.86%	98.62%	72.87%	97.82%	99.14%	97.63%	97.08%	98.82%	100%	98.61%	98.73%
Standard Deviation	0%	0.7%	0.1%	0.2%	0.1%	2.3%	0.6%	0.6%	0.2%	0.2%	0.6%	0%
RAMspeed SMP - Triad - Integer (MB/s)	16684	17727	16666	13393	17485	18543	17517	17394	18417	18397	17749	14156
Normalized	89.97%	95.6%	89.88%	72.22%	94.29%	100%	94.46%	93.8%	99.32%	99.21%	95.71%	76.34%
Standard Deviation	0.4%	0.5%	0.3%	0.1%	0.3%	2.1%	0.7%	0.4%	2.4%	1.9%	0.3%	0.1%
RAMspeed SMP - Average - Integer (MB/s)	19068	20629	19720	14539	20512	20958	20516	20342	20908	21247	20665	19278
Normalized	89.75%	97.09%	92.81%	68.43%	96.54%	98.64%	96.56%	95.74%	98.4%	100%	97.26%	90.73%
Standard Deviation	0.5%	0.2%	0.1%	0.3%	0.1%	0.1%	0.1%	0.1%	0.7%	0.7%	0.2%	0.1%
Stream - Copy (MB/s)	65200	66466	71403	32244	66202	65755	66253	66388	66507	66654	66534	59125
Normalized	91.31%	93.09%	100%	45.16%	92.72%	92.09%	92.79%	92.98%	93.14%	93.35%	93.18%	82.8%
Standard Deviation	6.8%	0.7%	0.5%	2%	2%	1.2%	0.9%	0.9%	1.1%	1%	0.9%	17.3%
Stream - Scale (MB/s)	67152	70185	70512	36173	69640	71012	70031	70689	70519	70760	70453	65075
Normalized	94.56%	98.84%	99.3%	50.94%	98.07%	100%	98.62%	99.54%	99.31%	99.65%	99.21%	91.64%
Standard Deviation	8.5%	0.6%	0.7%	0.3%	2%	0.5%	1%	0.3%	0.9%	0.9%	1.1%	17.4%
Stream - Triad (MB/s)	70878	71105	71576	35338	70764	71140	70975	71008	71120	71125	71003	65356
Normalized	99.03%	99.34%	100%	49.37%	98.87%	99.39%	99.16%	99.21%	99.36%	99.37%	99.2%	91.31%
Standard Deviation	1.1%	0.8%	0.4%	0.7%	1.8%	0.8%	0.5%	1%	0.5%	0.5%	0.3%	19.1%
Stream - Add (MB/s)	70924	70991	71656	35544	70589	71045	70842	71048	71116	70953	70944	65071
Normalized	98.98%	99.07%	100%	49.6%	98.51%	99.15%	98.86%	99.15%	99.25%	99.02%	99.01%	90.81%
Standard Deviation	0.8%	0.5%	0.4%	0.5%	1.7%	0.6%	0.8%	1%	0.4%	0.4%	0.3%	20.4%

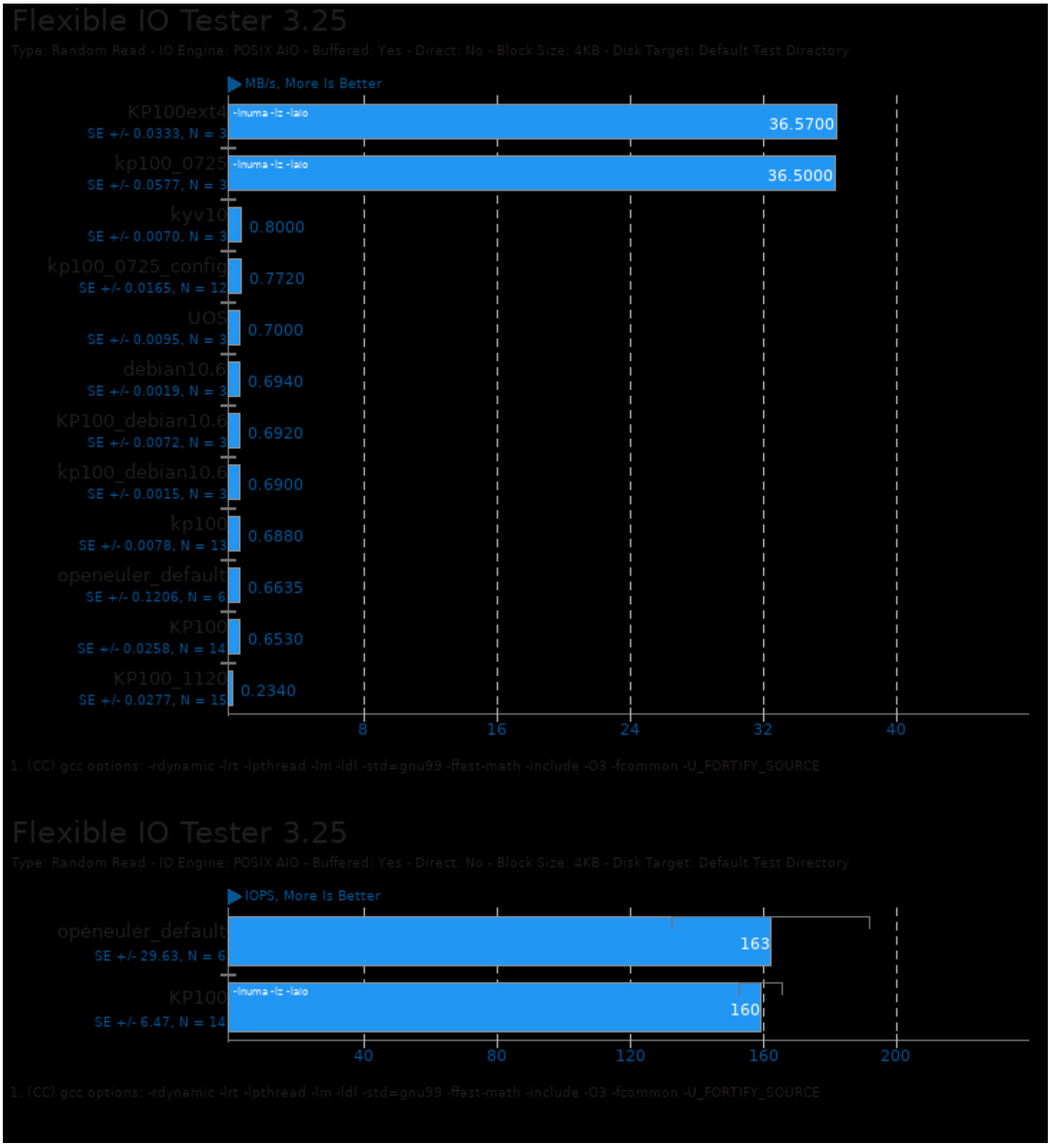
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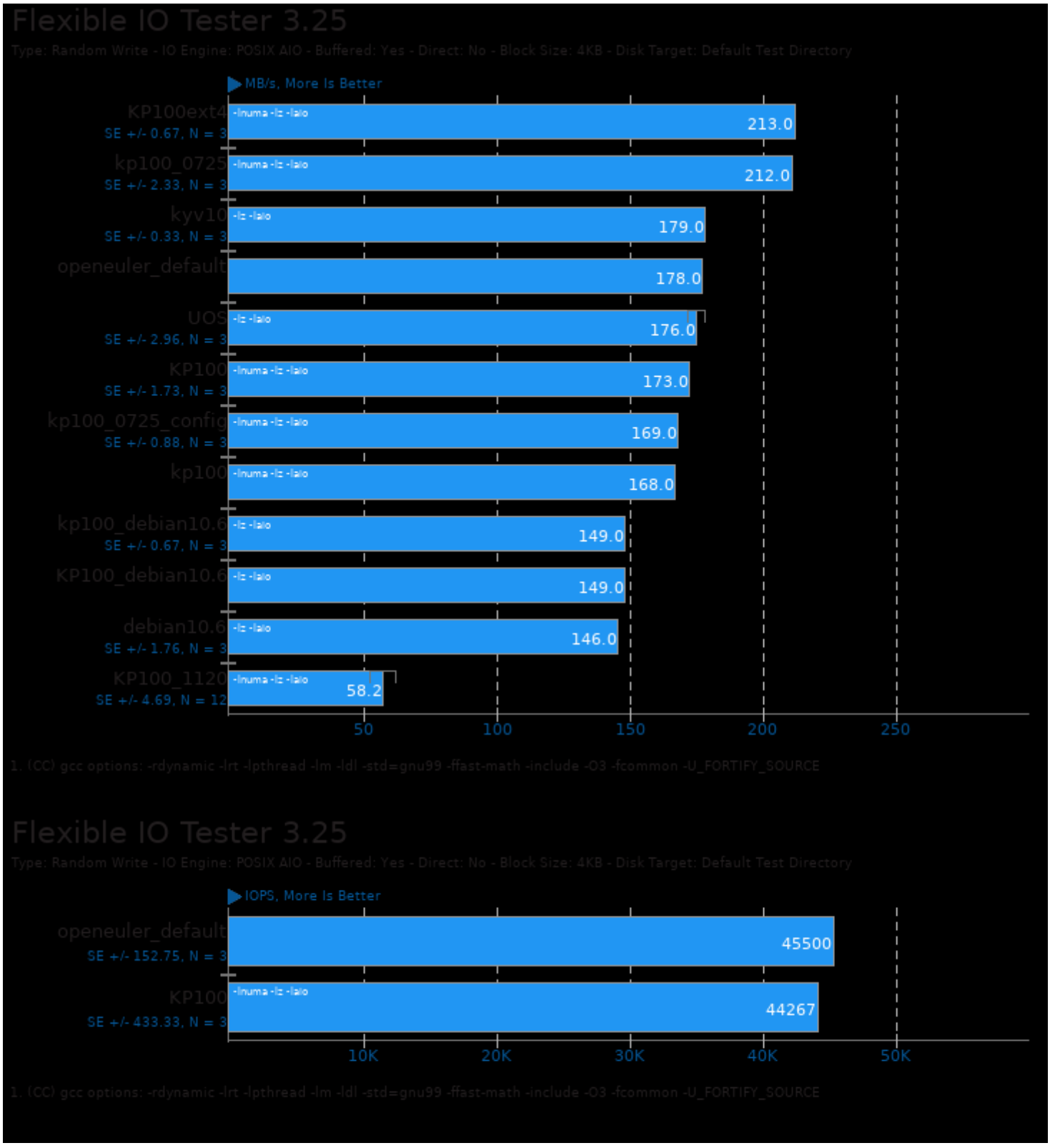
Timed MAFFT Alignment - M.S.A - LSU RNA	16.082	18.960	16.04	**19.77**	19.03	19.263	19.207	19.178	19.166	18.840	19.094	**15.860**
Normalized	98.62%	83.65%	98.88%	80.22%	83.34%	82.33%	82.57%	82.7%	82.75%	84.18%	83.06%	100%
Standard Deviation	1.7%	1.8%	0.9%	0.8%	1%	1.5%	1.4%	2%	0.6%	2.2%	0.7%	0.7%
CacheBench - Read (MB/s)	4957	**4956**	**4958**	4957	4956	4957	4957	4956	4957	4957	4956	4956
Normalized	99.98%	99.95%	100%	99.97%	99.95%	99.98%	99.97%	99.96%	99.98%	99.98%	99.96%	99.96%
Standard Deviation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CacheBench - Write (MB/s)	19229	18717	**19253**	18743	18727	9686	18721	18741	9693	**9663**	18716	18727
Normalized	99.87%	97.22%	100%	97.35%	97.27%	50.31%	97.23%	97.34%	50.35%	50.19%	97.21%	97.27%
Standard Deviation	0%	0%	0%	0.1%	0%	0%	0.1%	0%	0%	0%	0%	0.1%
CacheBench - R.M.W (MB/s)	**29804**	19326	19568	19318	**19317**	29155	19323	19321	29164	29164	19318	19326
Normalized	100%	64.84%	65.65%	64.82%	64.81%	97.82%	64.83%	64.83%	97.85%	97.85%	64.82%	64.84%
Standard Deviation	0%	0%	0%	0%	0%	0.1%	0%	0%	0.2%	0.2%	0%	0.1%
7-Zip Compression - C.S.T (MIPS)	110304	101889	**124556**	**78882**	104523	102741	103562	103593	102272	114774	106253	107758
Normalized	88.56%	81.8%	100%	63.33%	83.92%	82.49%	83.14%	83.17%	82.11%	92.15%	85.31%	86.51%
Standard Deviation	4%	3%	1.6%	0.8%	1.3%	1.6%	0.5%	2.5%	4%	1.7%	3.2%	0.2%
C-Ray - Total Time - 4.1.R.P.P (sec)	**27.506**	27.153	27.48	27.12	27.11	27.120	27.286	27.146	27.121	**27.026**	27.236	27.205
Normalized	98.25%	99.53%	98.35%	99.65%	99.69%	99.65%	99.05%	99.56%	99.65%	100%	99.23%	99.34%
Standard Deviation	0.6%	0.7%	0.4%	0.3%	0.3%	0.3%	0.4%	0.4%	0.2%	0.2%	0.1%	0.4%
OpenSSL - SHA256 (byte/s)	391398 71783	391775 59400		**63**		392035 53003	392010 93160	391880 52017	389159 85901	**392210 17420**		390973 28357
Normalized	99.79%	99.89%		0%		99.96%	99.95%	99.92%	99.22%	100%		99.68%
Standard Deviation	0%	0.1%				0%	0%	0%	2.5%	0.1%		0.2%
OpenSSL - RSA4096 (sign/s)	7654	7633		7658		**7523**	7584	7682	7566	**7692**		7610
Normalized	99.5%	99.22%		99.56%		97.8%	98.59%	99.87%	98.36%	100%		98.93%
Standard Deviation	0.2%	0.5%		0%		0.4%	1.2%	0.2%	1.5%	0%		0.4%
OpenSSL - RSA4096 (verify/s)	**550605**	**550683**										
Normalized	99.99%	100%										
Standard Deviation	0.1%	0.1%										
PHPBench - P.B.S (Score)	**281161**	315326	283615	301653	315348	312888	314597	**315397**	313272	313622	308679	315363
Normalized	89.15%	99.98%	89.92%	95.64%	99.98%	99.2%	99.75%	100%	99.33%	99.44%	97.87%	99.99%
Standard Deviation	0.2%	0.2%	0.3%	0.1%	0.3%	0.2%	0.1%	0.3%	0%	0.4%	3.4%	0.2%
Flexible IO Tester - Rand Read - POSIX AIO - Yes - No -			195	172	**9338**	169	**55**	167	169	170	9345	189
Normalized			2.08%	1.84%	99.74%	1.81%	0.59%	1.78%	1.81%	1.82%	99.82%	2.02%
Standard Deviation			2.1%	2.4%	0%	1.7%	48.9%	3.4%	0.6%	0.7%	0.2%	7.5%

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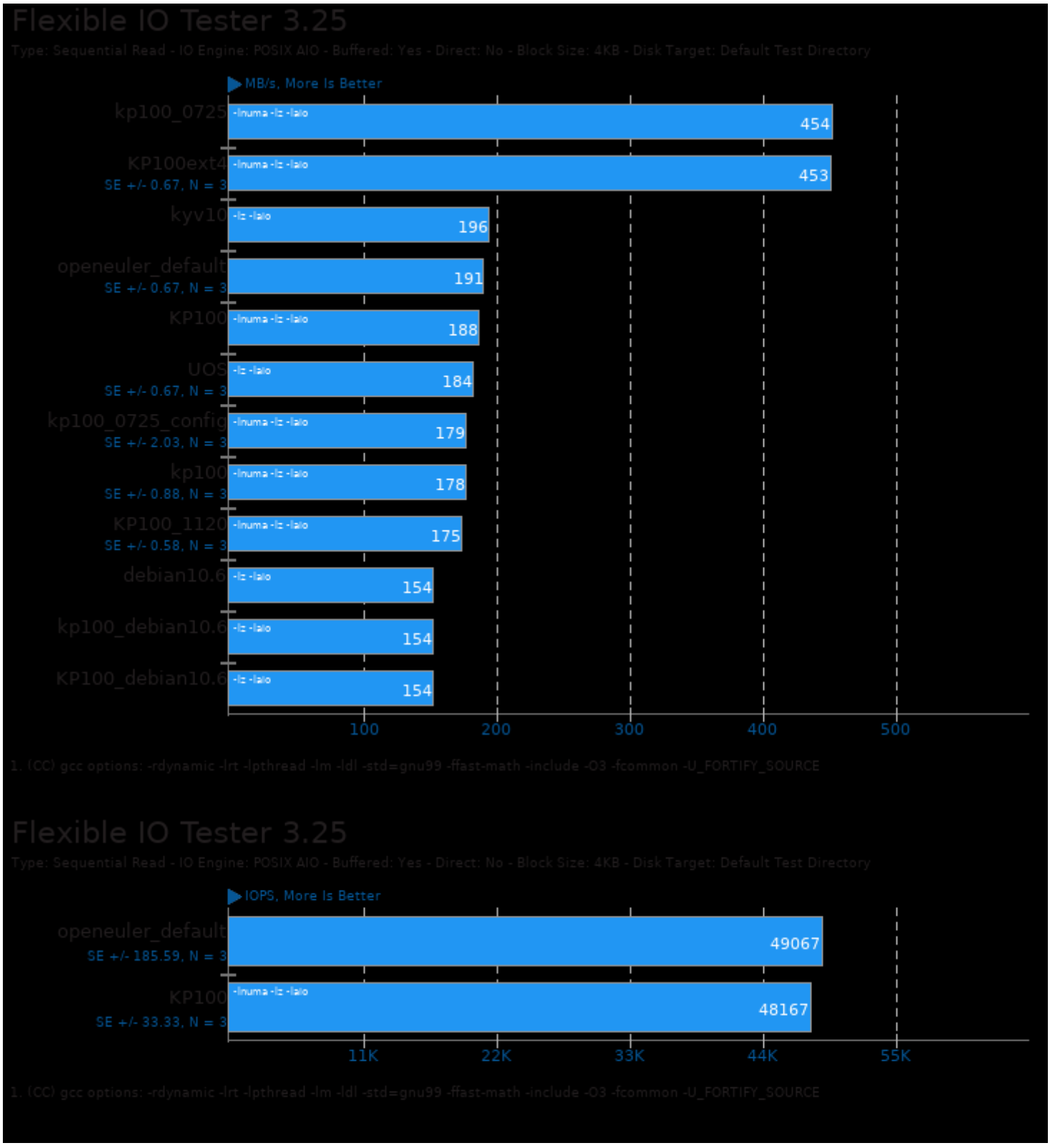
Flexible IO Tester - Rand Write - POSIX AIO - Yes - No -	45700	44800	**54633**	38033	**12699**	42900	37500	37400	53967	43167
Normalized	83.65%	82%	100%	69.62%	23.24%	78.52%	68.64%	68.46%	98.78%	79.01%
Standard Deviation	0.4%	1.1%	0.4%	0.3%	37.2%	2.6%	1.2%	0.5%	1.7%	0.7%
Flexible IO Tester - Seq Read - POSIX AIO - Yes - No -	50133	47200	**116000**	**39400**	44633	45433	39400	39367	**116000**	45600
Normalized	43.22%	40.69%	100%	33.97%	38.48%	39.17%	33.97%	33.94%	100%	39.31%
Standard Deviation	0.1%	1.5%		2.2%	0.7%	0.3%	0.1%	0.4%		0.7%
Flexible IO Tester - Seq Write - POSIX AIO - Yes - No -	47733	46200	63700	38567	**10767**	42900	38600	38400	**64400**	44033
Normalized	73.89%	71.52%	98.61%	59.7%	16.67%	66.41%	59.75%	59.44%	99.69%	68.16%
Standard Deviation	0.4%	1.4%	1.5%	1.1%	44.4%	0.6%	0.5%		1.1%	1.1%
Loopback TCP Network Performance - T.T.T.1.V.L (sec)		**14.33**	12.92	12.577	13.079	13.159	12.370	13.354	13.211	**11.182**
Normalized		78.03%	86.55%	88.91%	85.5%	84.98%	90.4%	83.74%	84.64%	100%
Standard Deviation		0.2%	0.9%	0.8%	1.1%	2.1%	1.8%	1%	1.4%	0.5%
OpenSSL - RSA4096 (verify/s)		**548894**		550961	**551222**	551361	551380	551380		550976
Normalized		99.55%		99.92%	99.97%	100%	100%	100%		99.93%
Standard Deviation		0%		0.1%	0.1%	0%	0%	0%		0.1%

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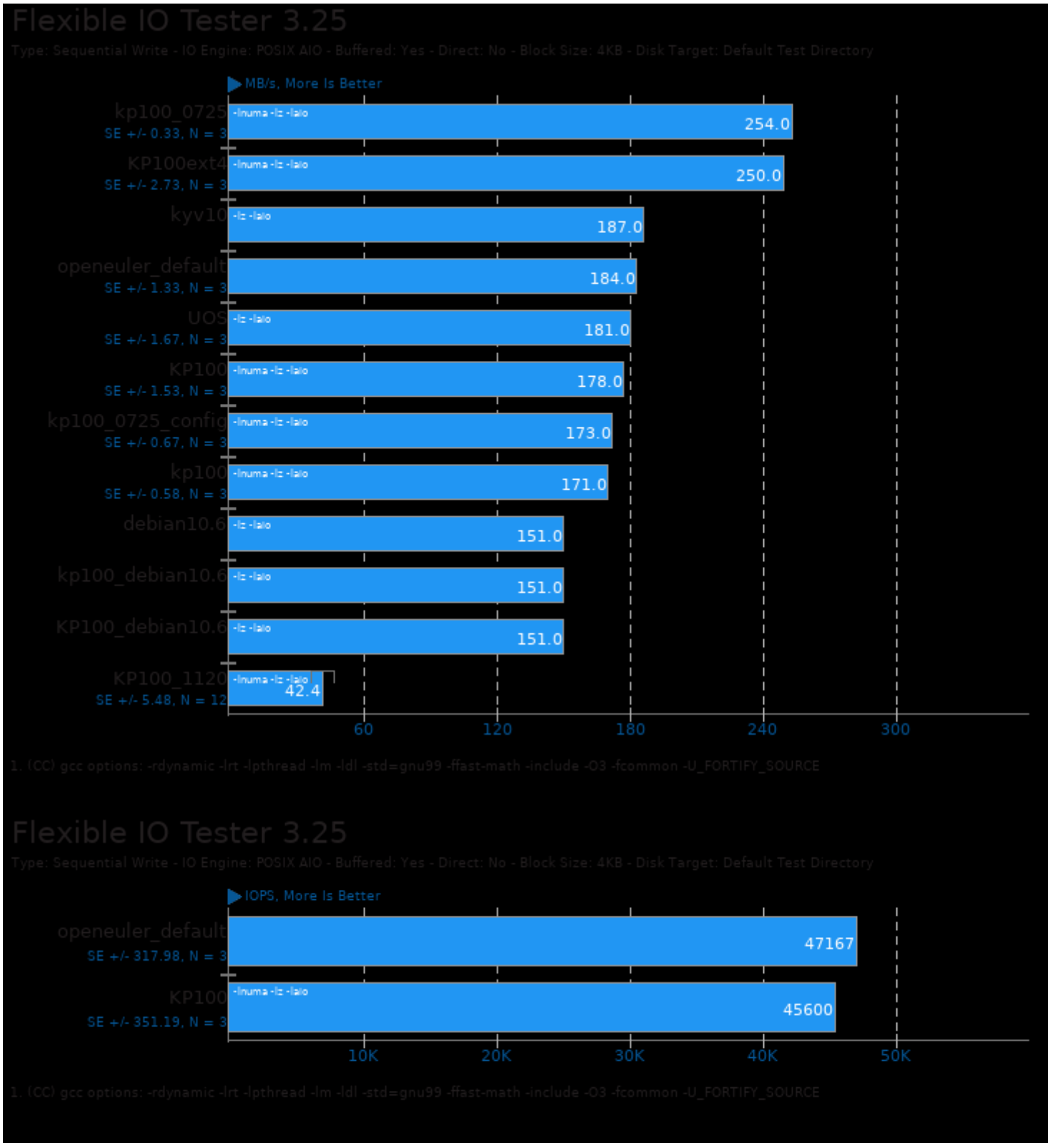



Flexible IO Tester 3.25
Type: Random Write - IO Engine: POSIX AIO - Buffered: Yes - Direct: No - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
KP100ext4
SE +/- 0.67, N = 3
-lnuma -lz -laio
213.0
kp100_0725
SE +/- 2.33, N = 3
-lnuma -lz -laio
212.0
kyv10
SE +/- 0.33, N = 3
-lz -laio
179.0
openeuler_default
178.0
UOS
SE +/- 2.96, N = 3
-lz -laio
176.0
KP100
SE +/- 1.73, N = 3
-lnuma -lz -laio
173.0
kp100_0725_config
SE +/- 0.88, N = 3
-lnuma -lz -laio
169.0
kp100
-lnuma -lz -laio
168.0
kp100_debian10.6
SE +/- 0.67, N = 3
-lz -laio
149.0
KP100_debian10.6
-lz -laio
149.0
debian10.6
SE +/- 1.76, N = 3
-lz -laio
146.0
KP100_1120
SE +/- 4.69, N = 12
-lnuma -lz -laio
58.2
50
100
150
200
250
1. (CC) gcc options: -rdynamic -lrt -lpthread -lm -ldl -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE
Flexible IO Tester 3.25
Type: Random Write - IO Engine: POSIX AIO - Buffered: Yes - Direct: No - Block Size: 4KB - Disk Target: Default Test Directory
IOPS, More Is Better
openeuler_default
SE +/- 152.75, N = 3
45500
KP100
SE +/- 433.33, N = 3
-lnuma -lz -laio
44267
10K
20K
30K
40K
50K
1. (CC) gcc options: -rdynamic -lrt -lpthread -lm -ldl -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE

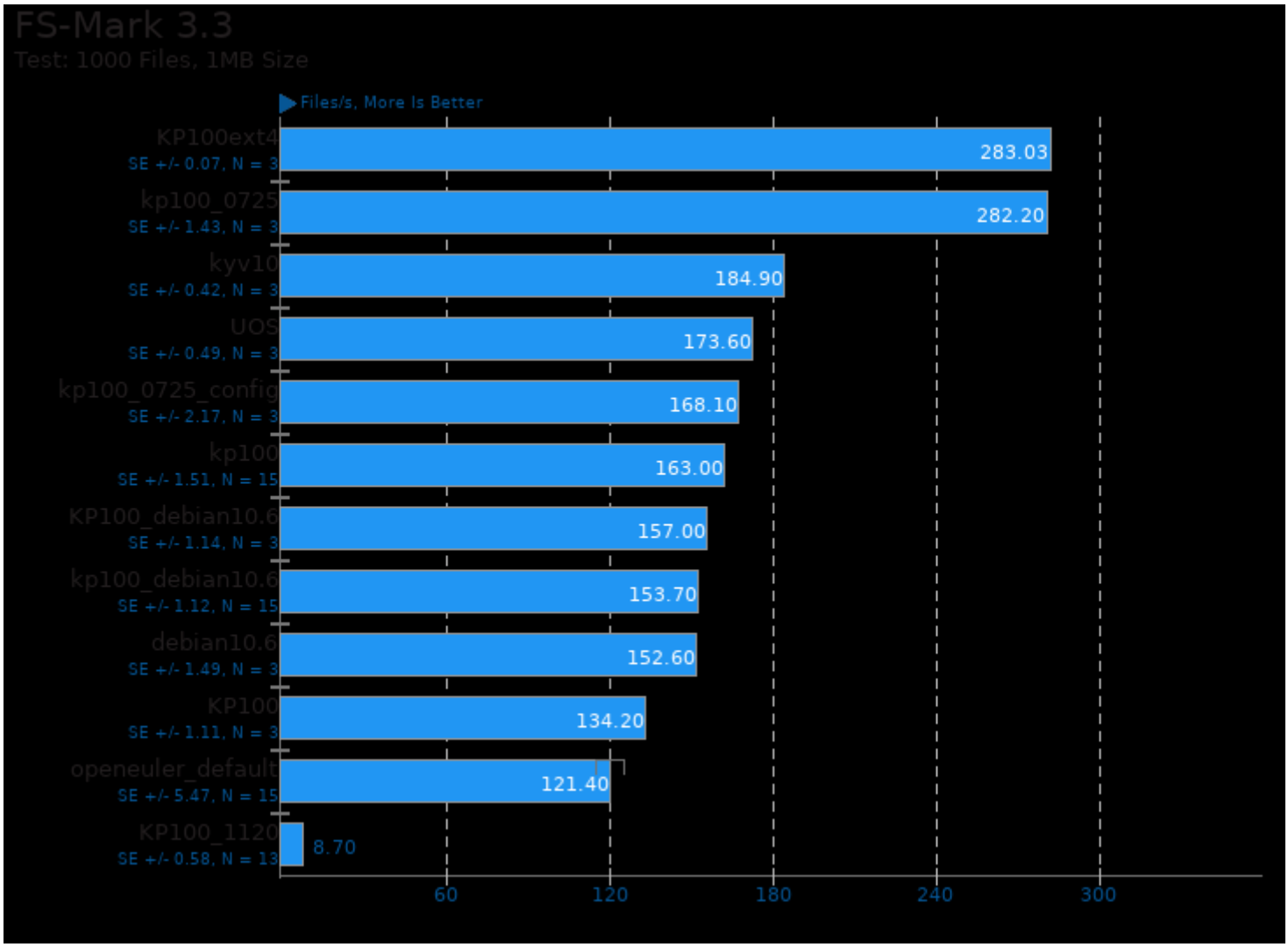
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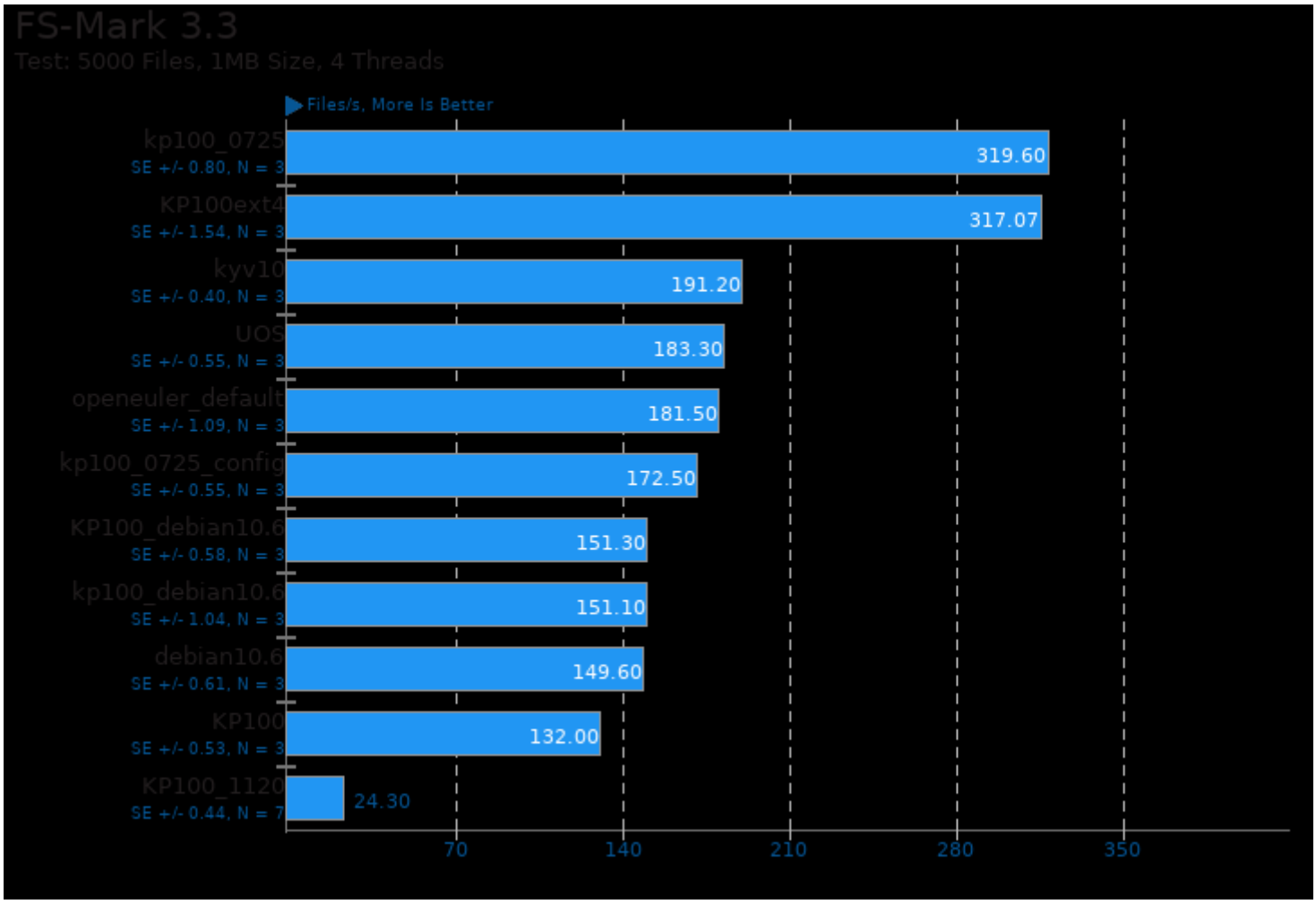
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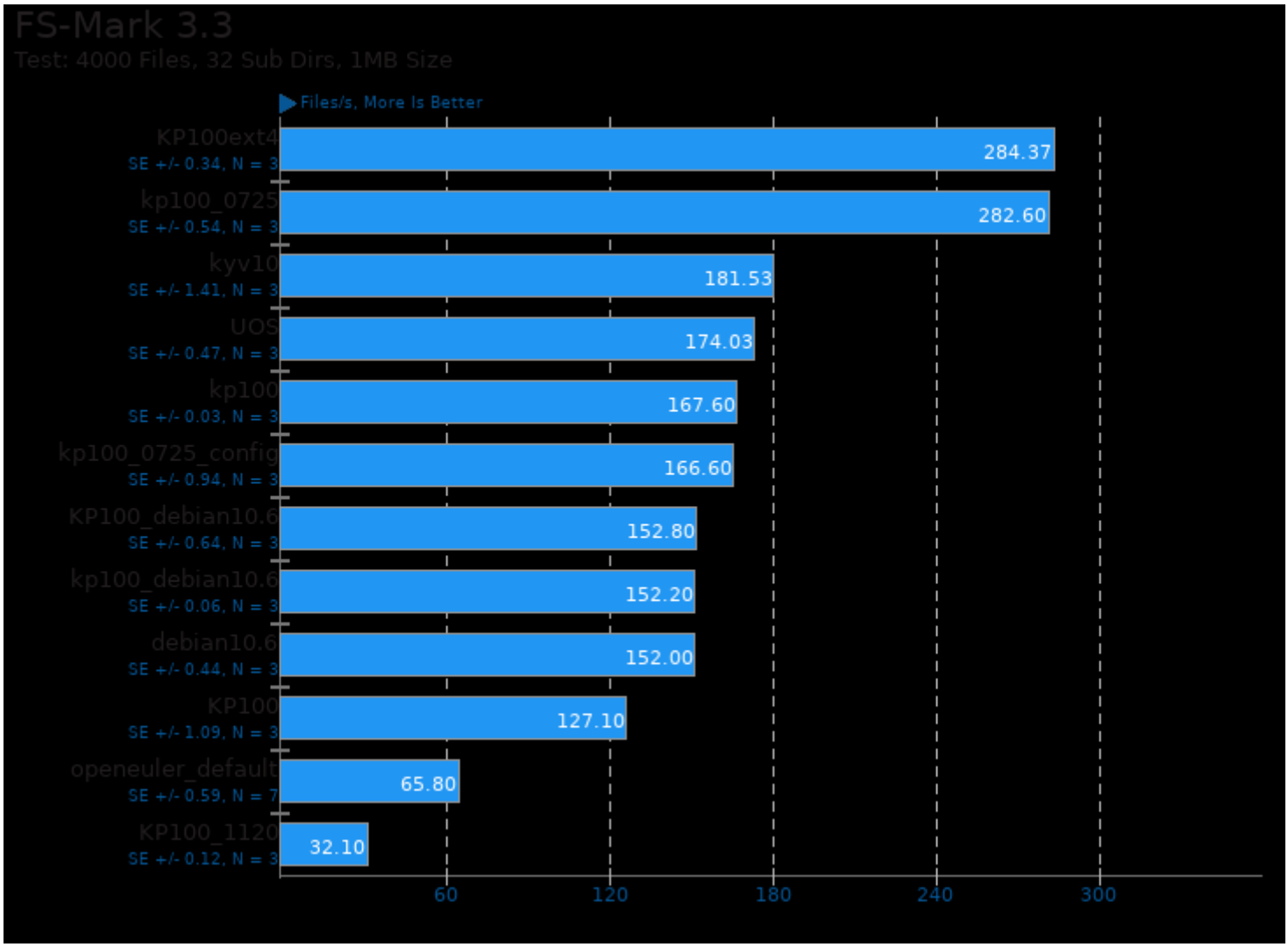
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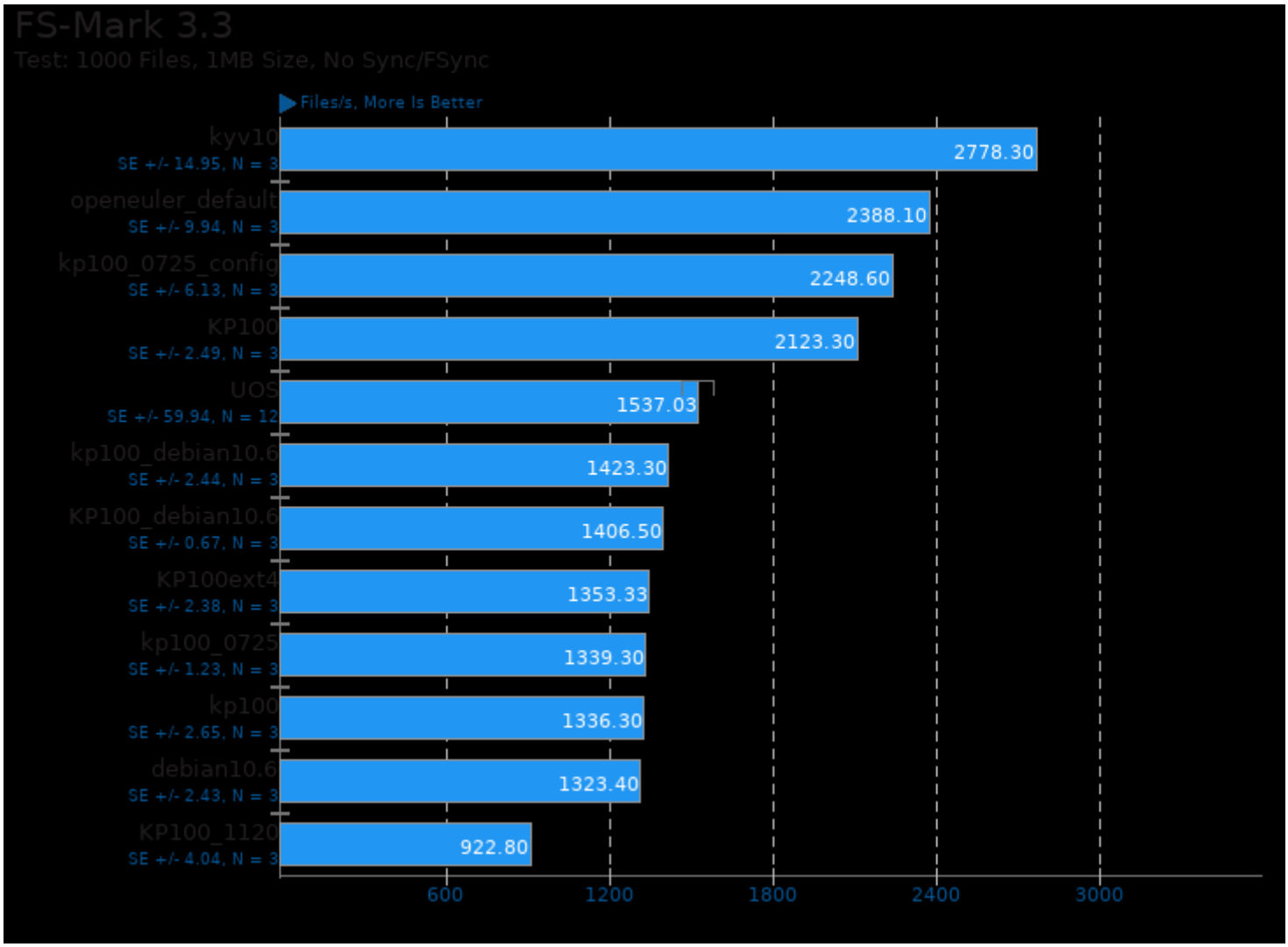
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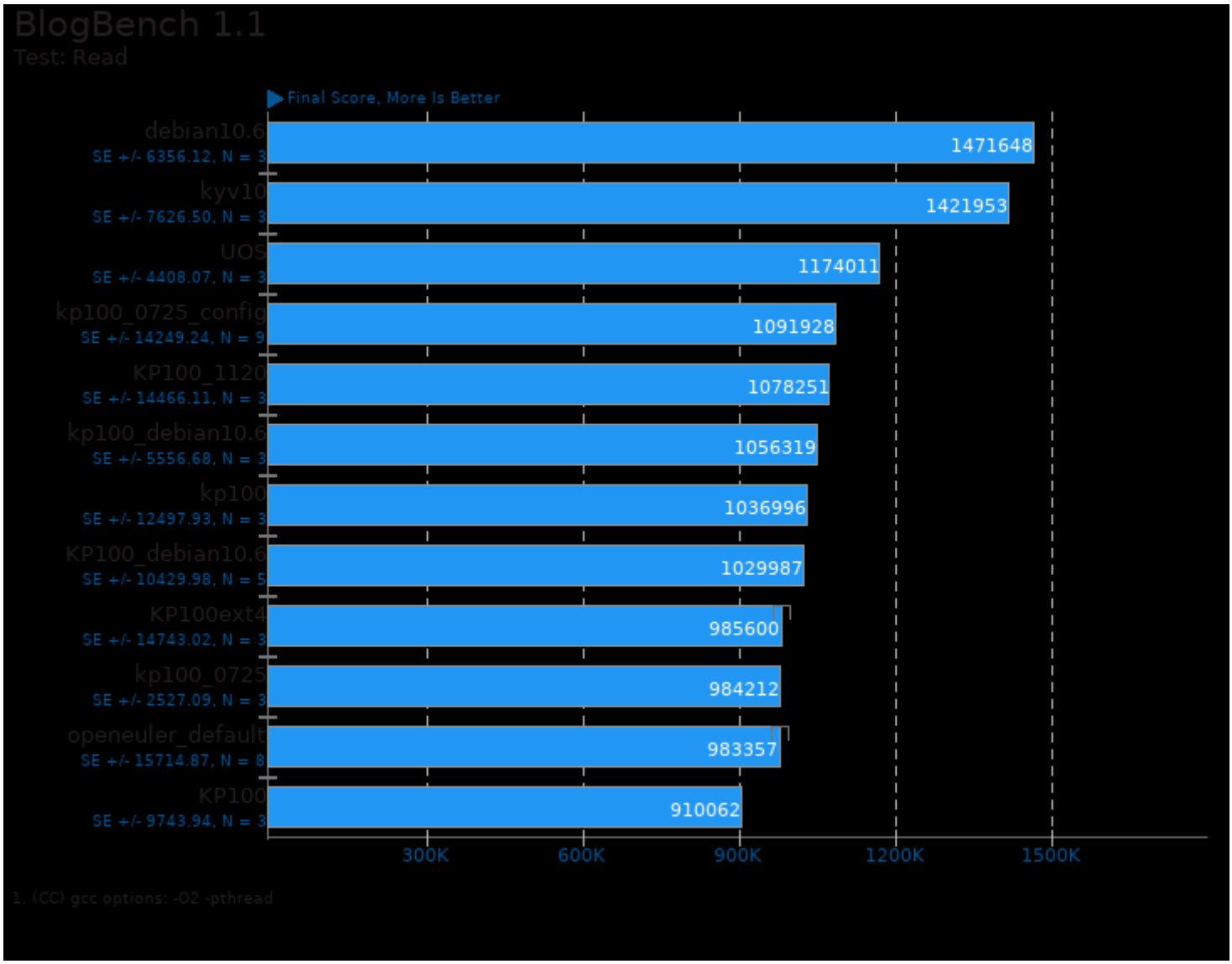
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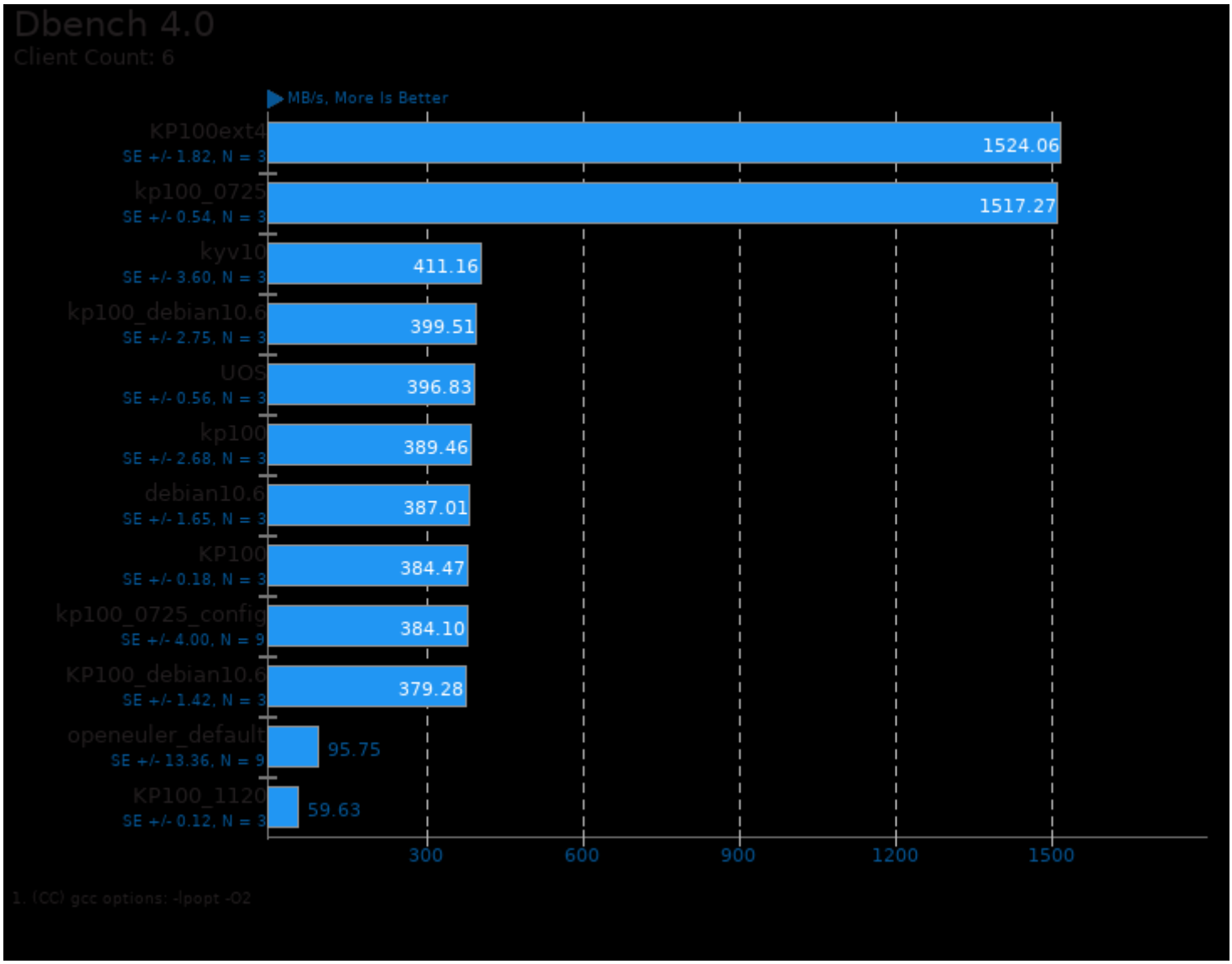
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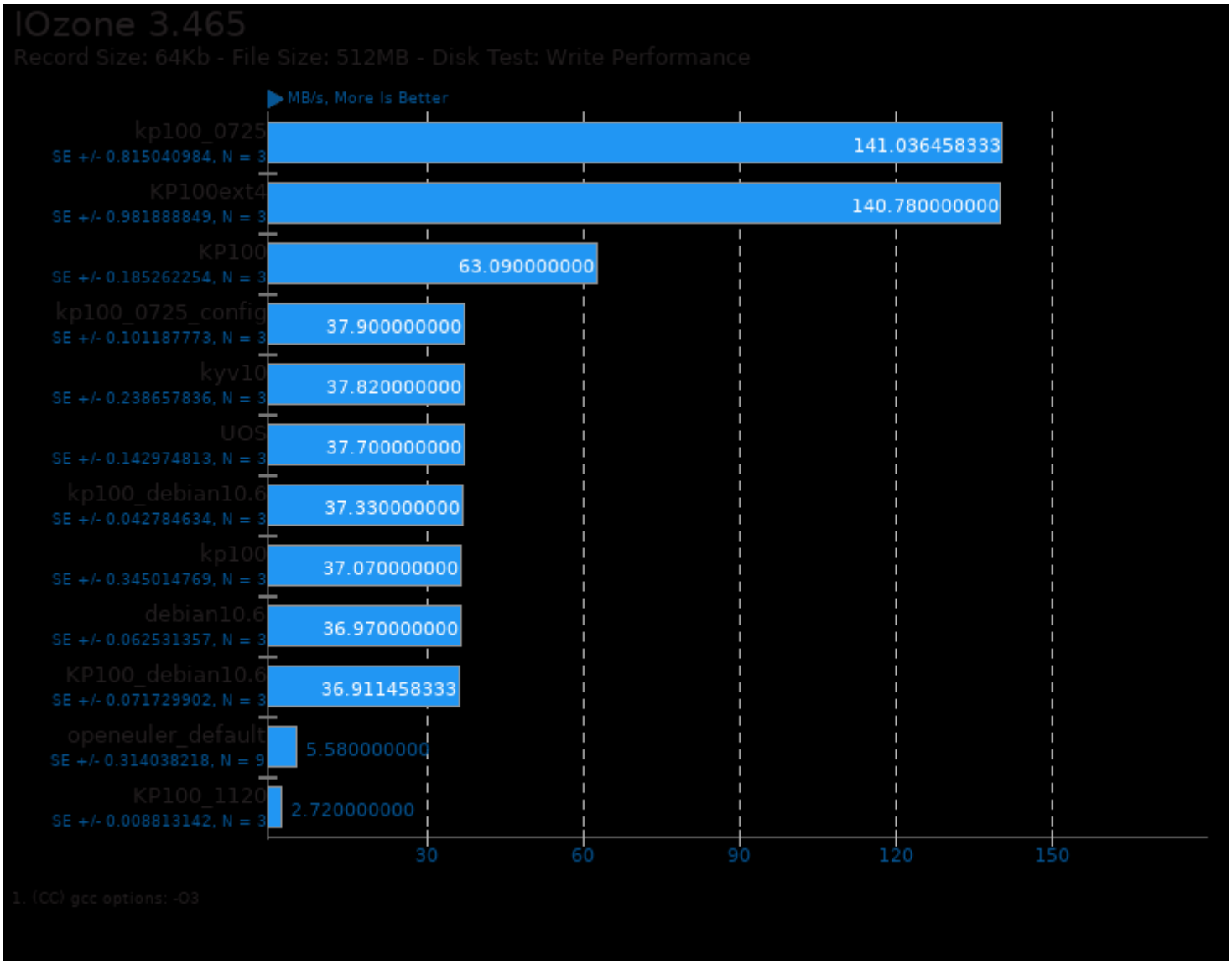
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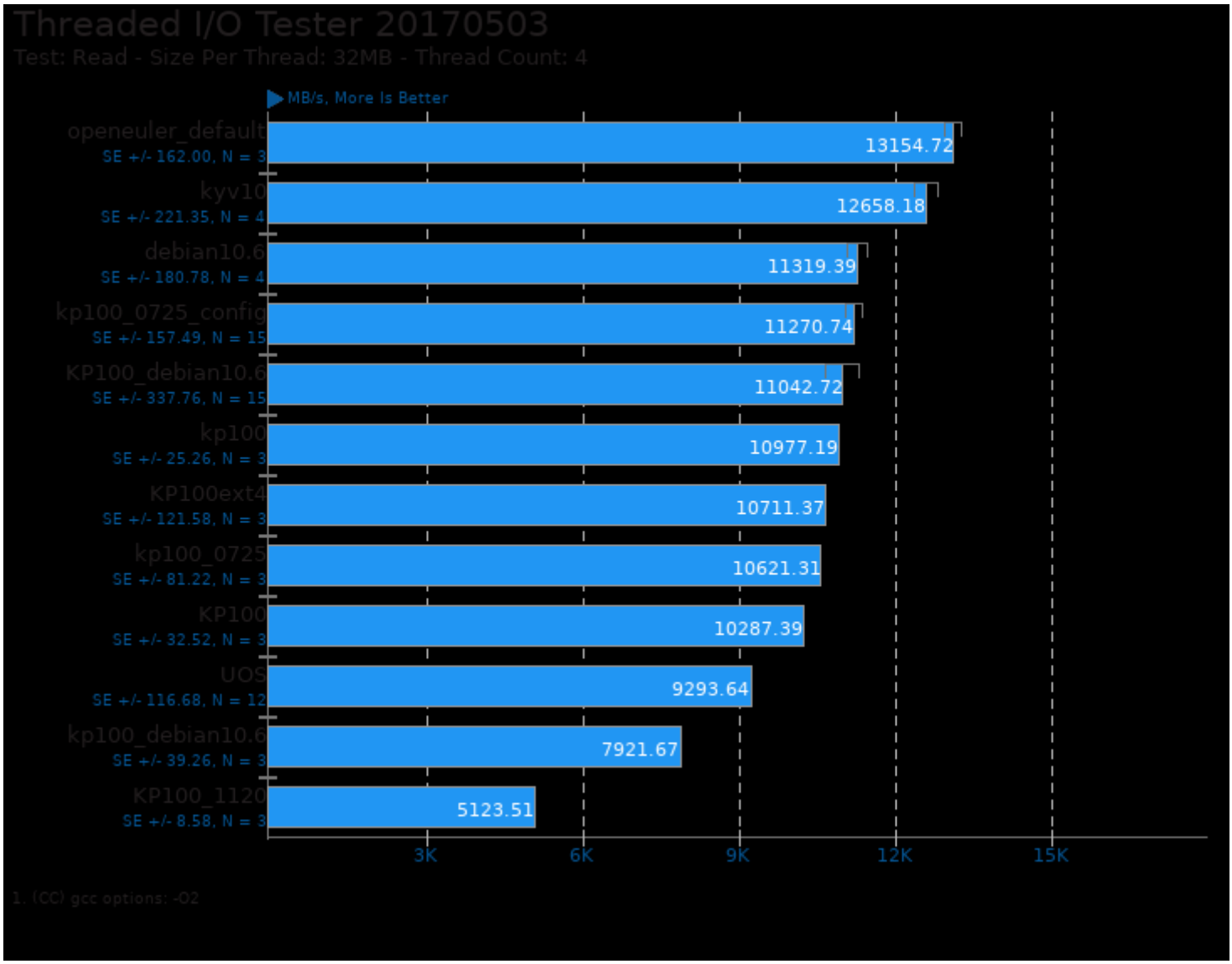
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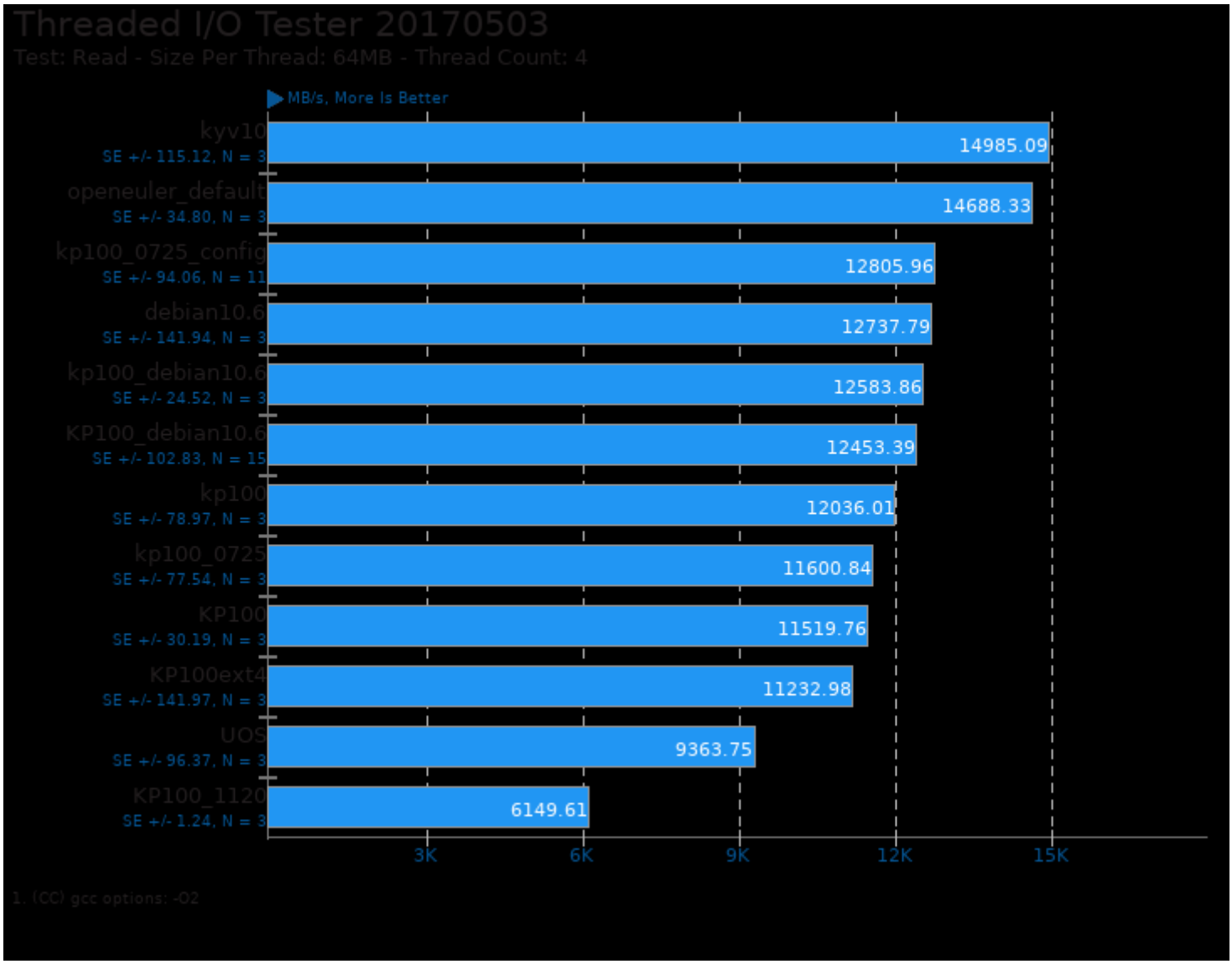
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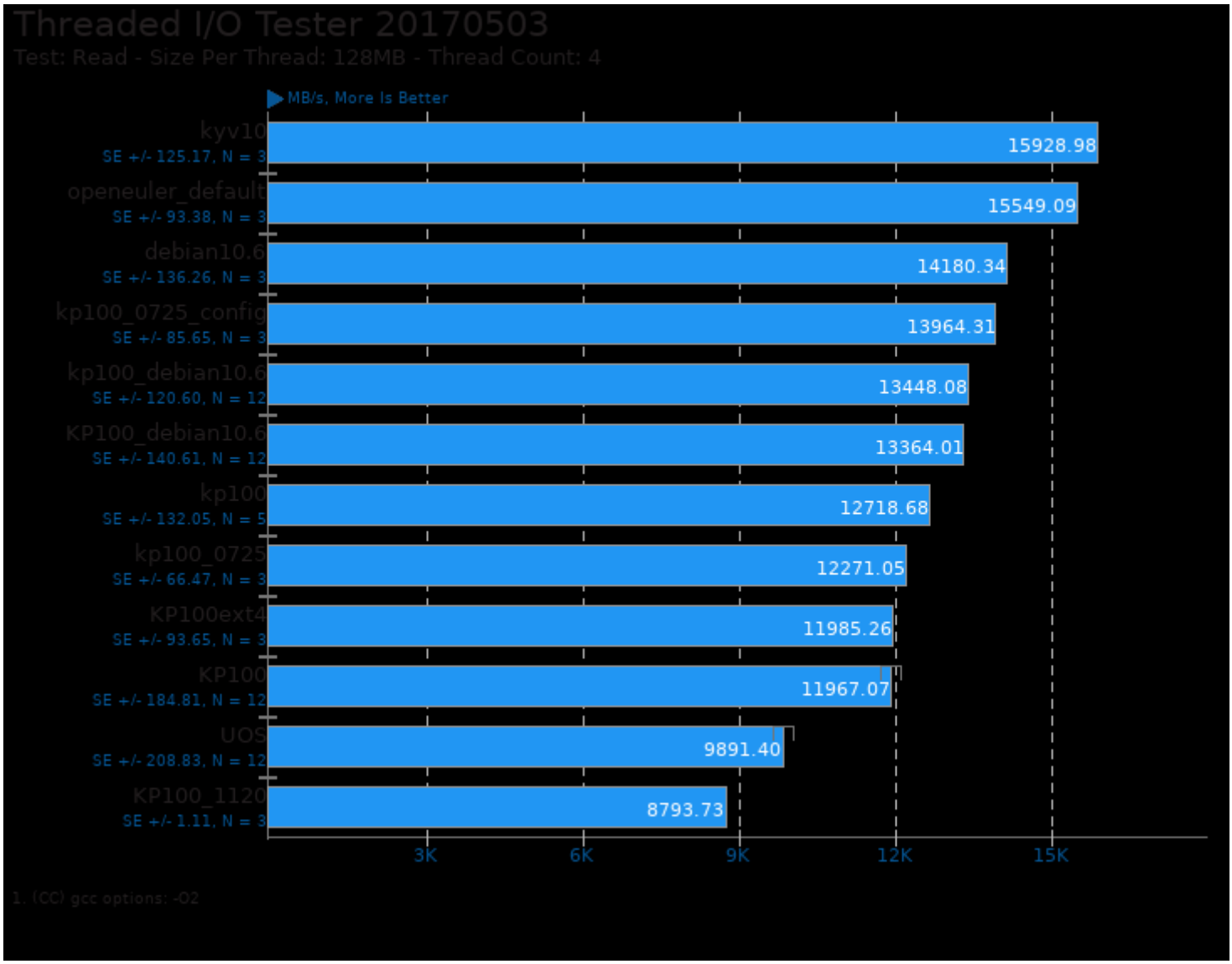
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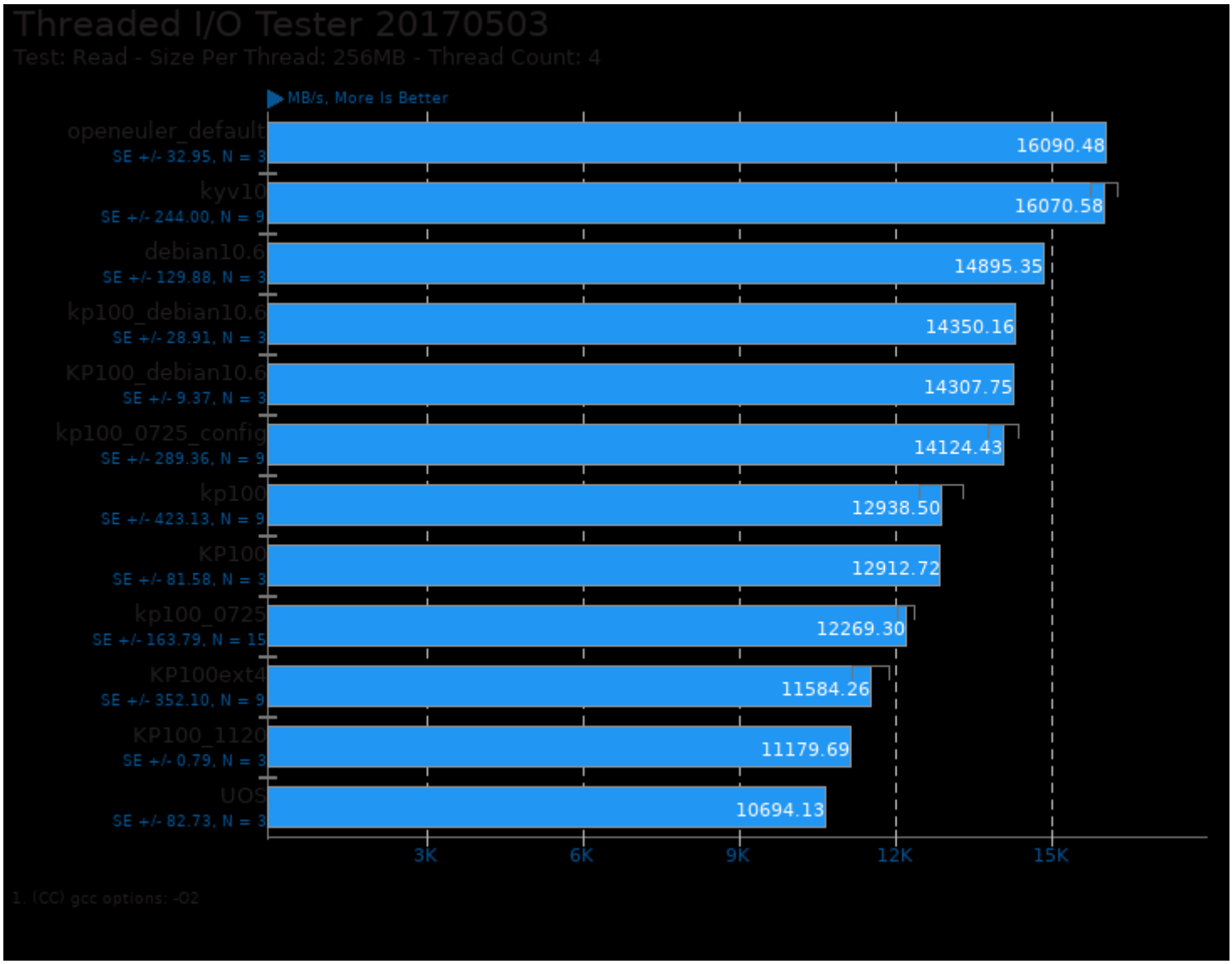
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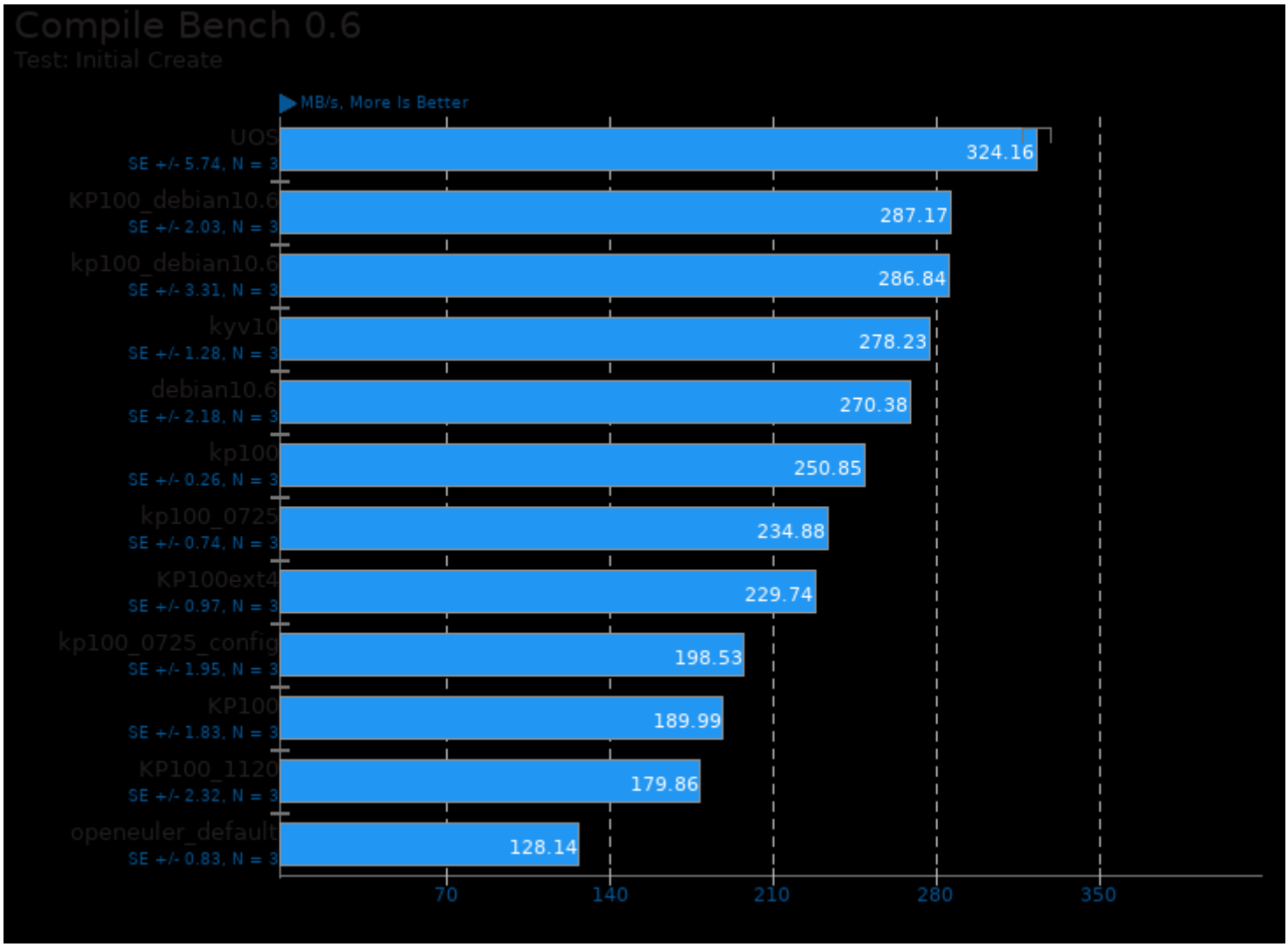
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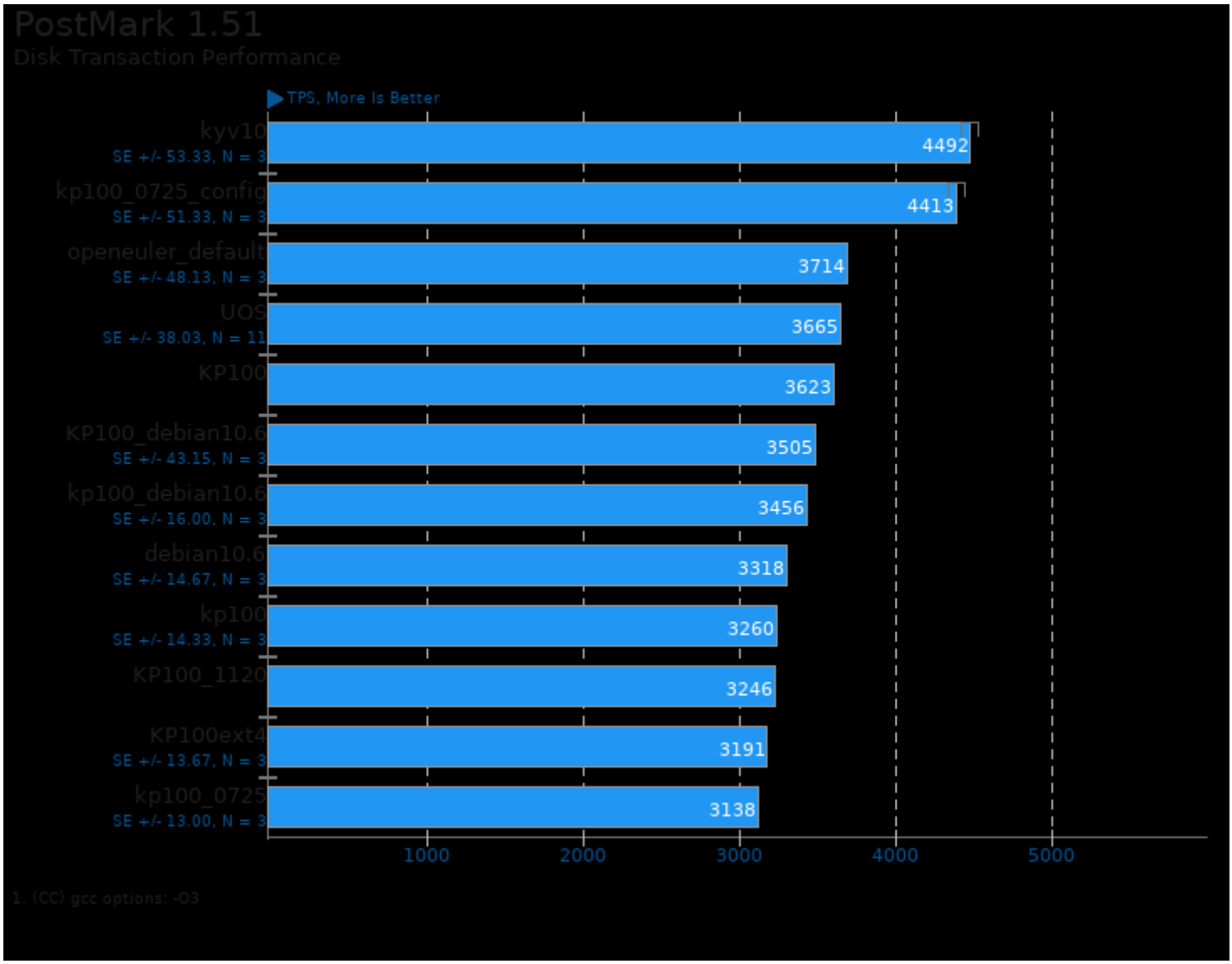
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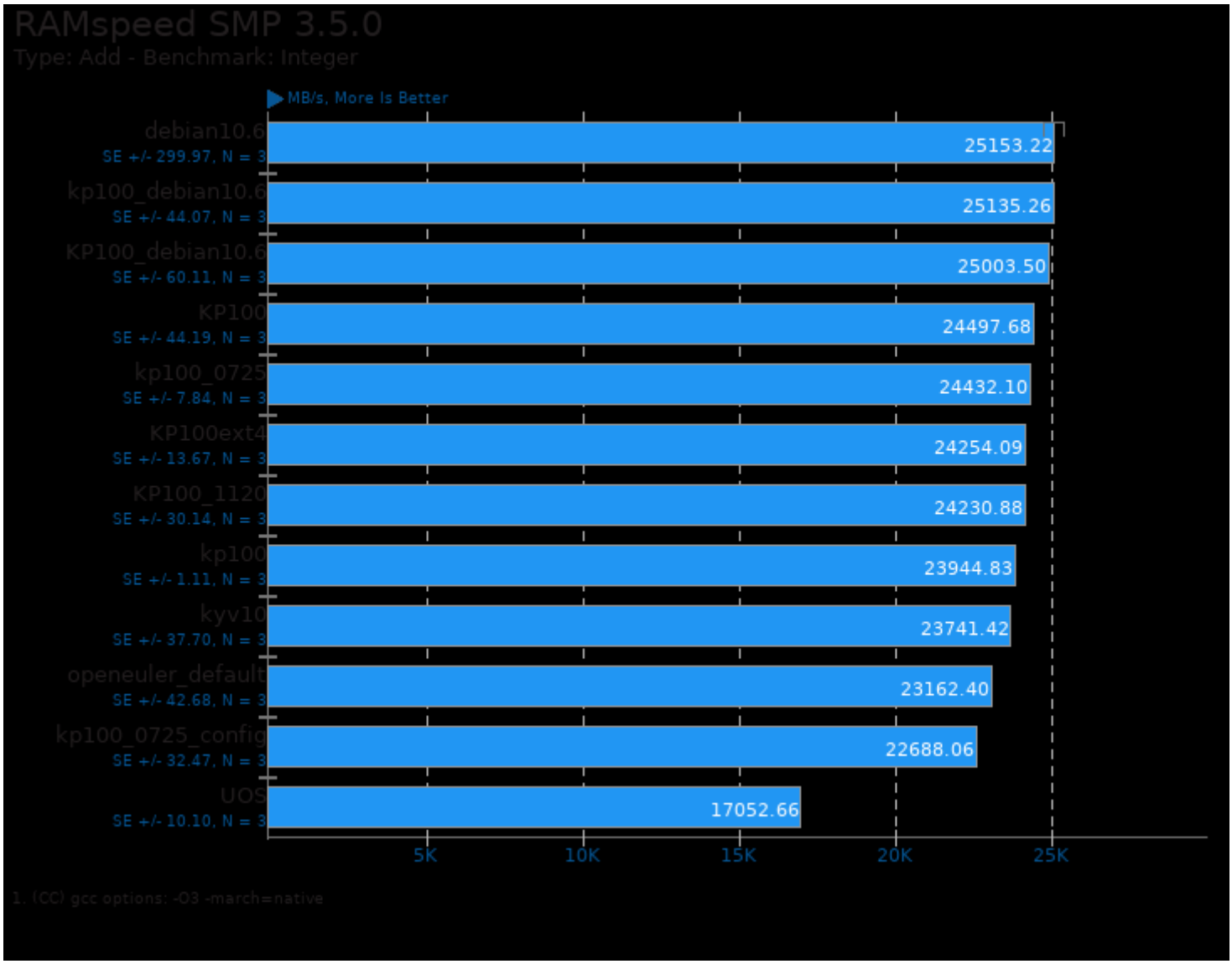
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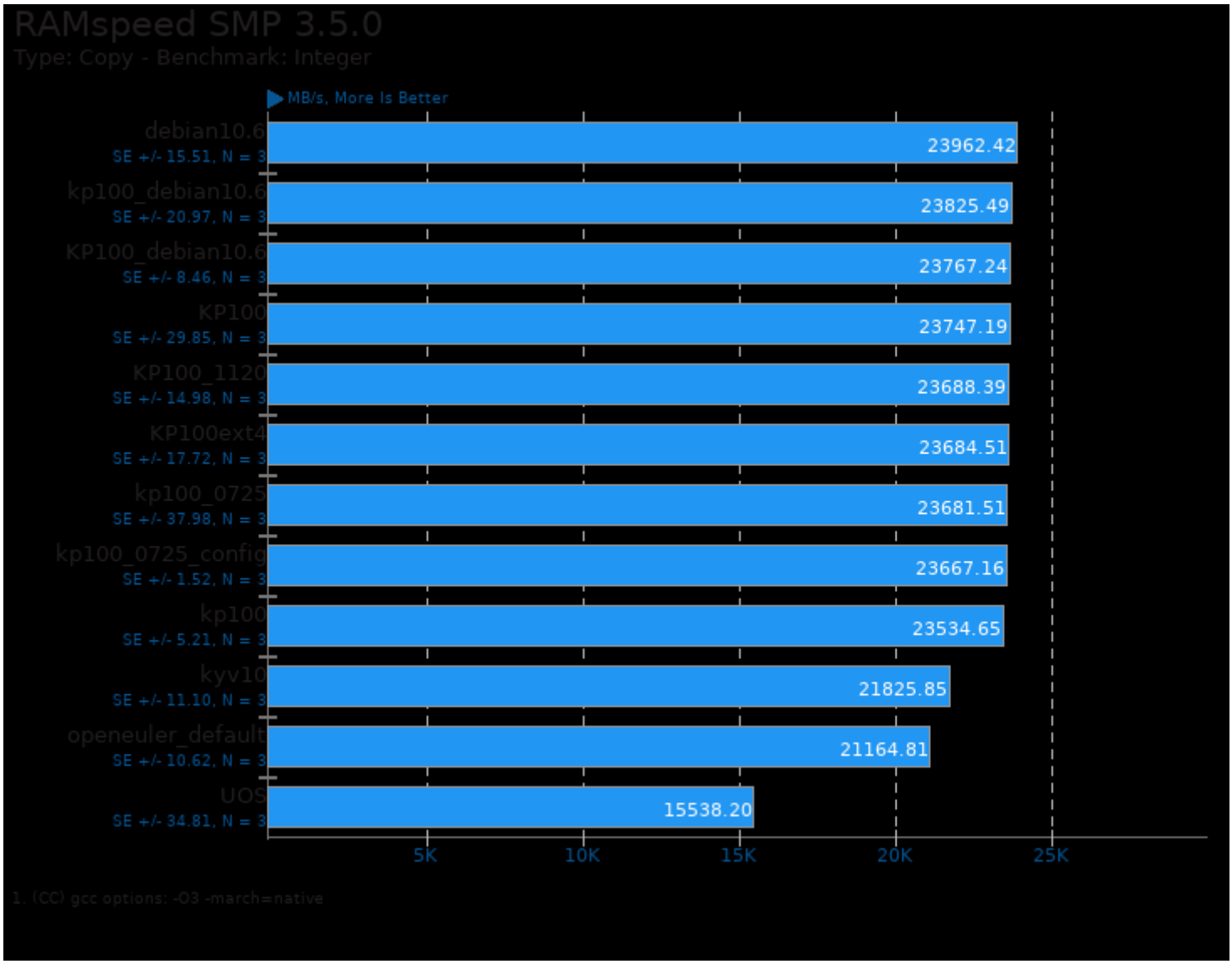
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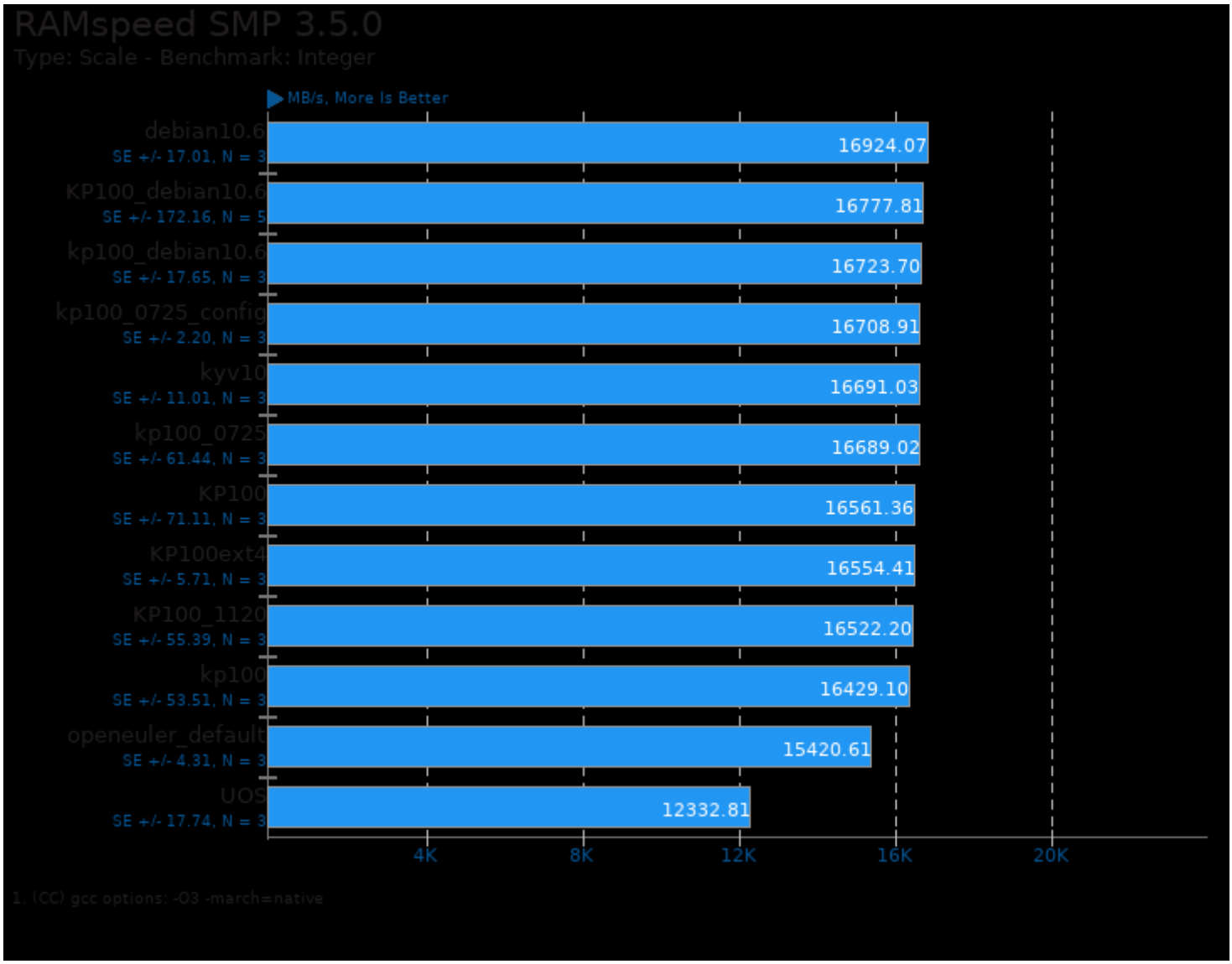
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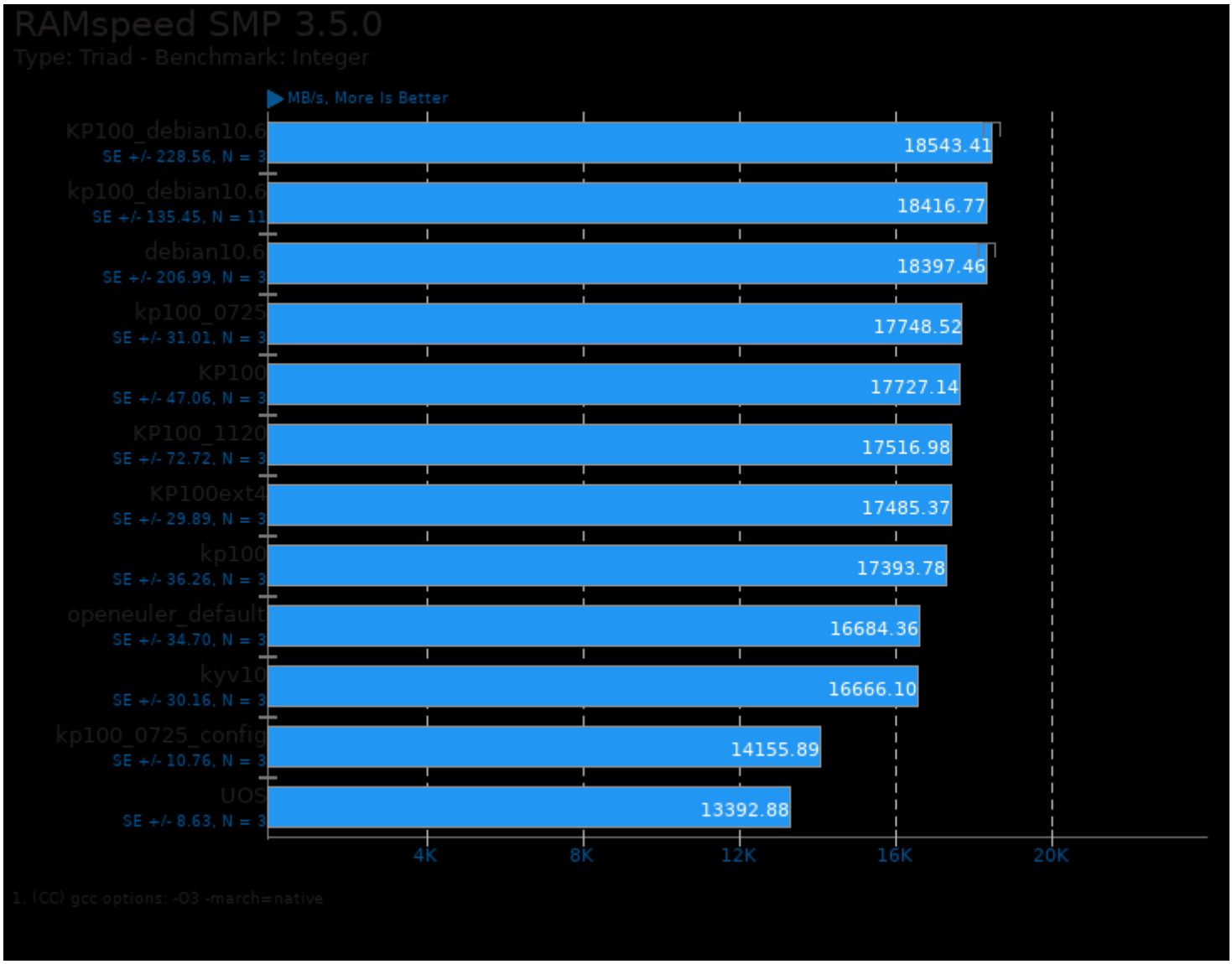
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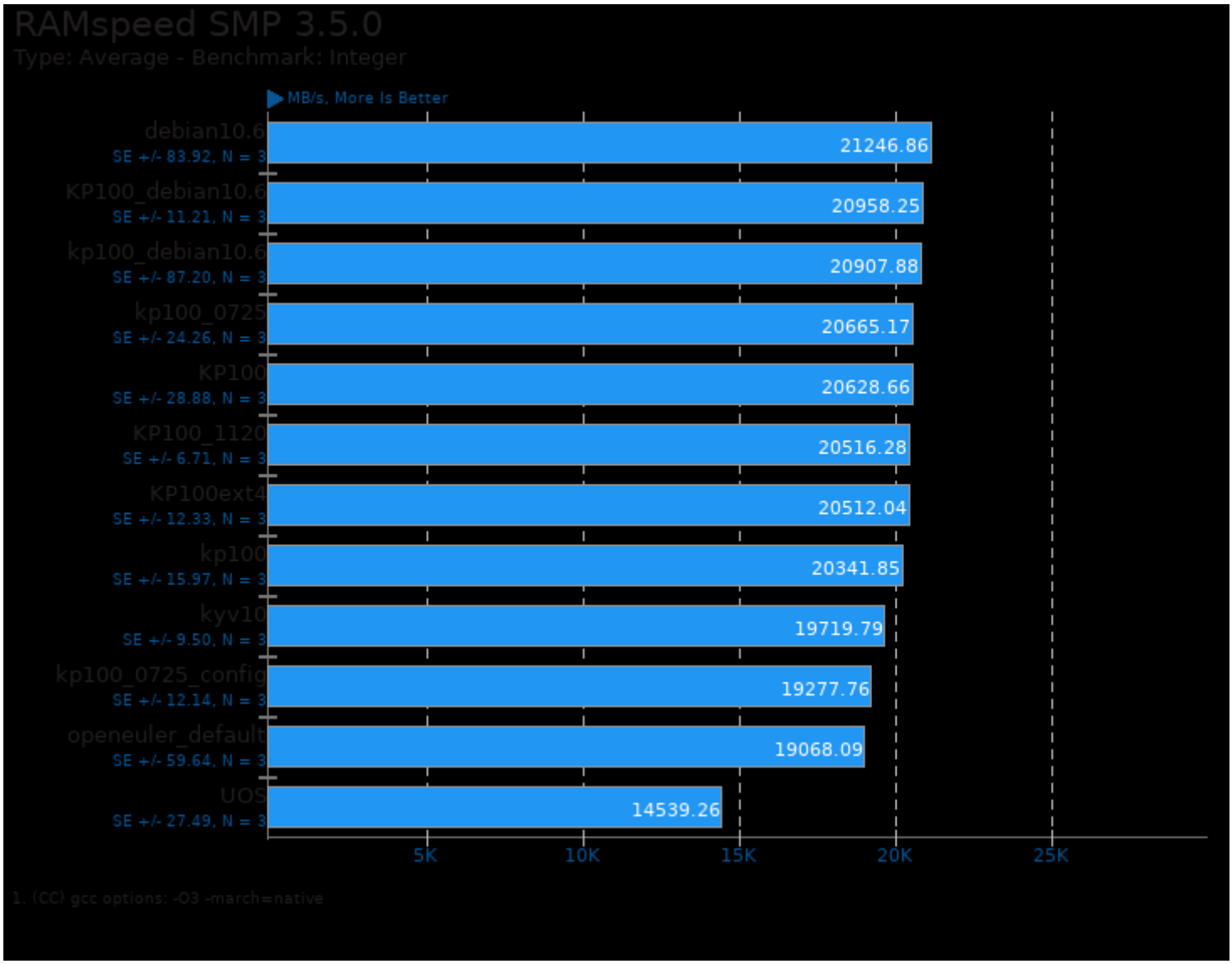
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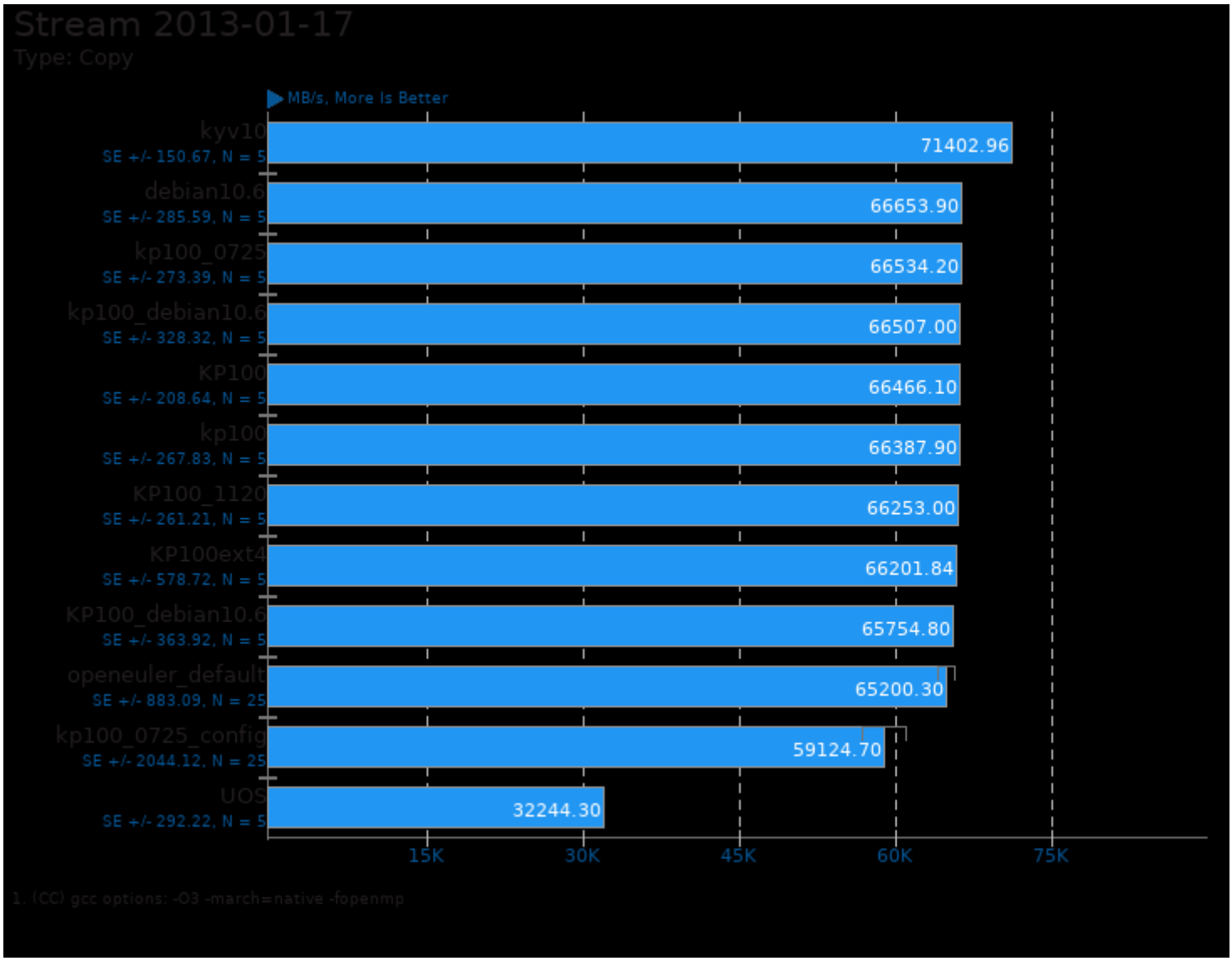
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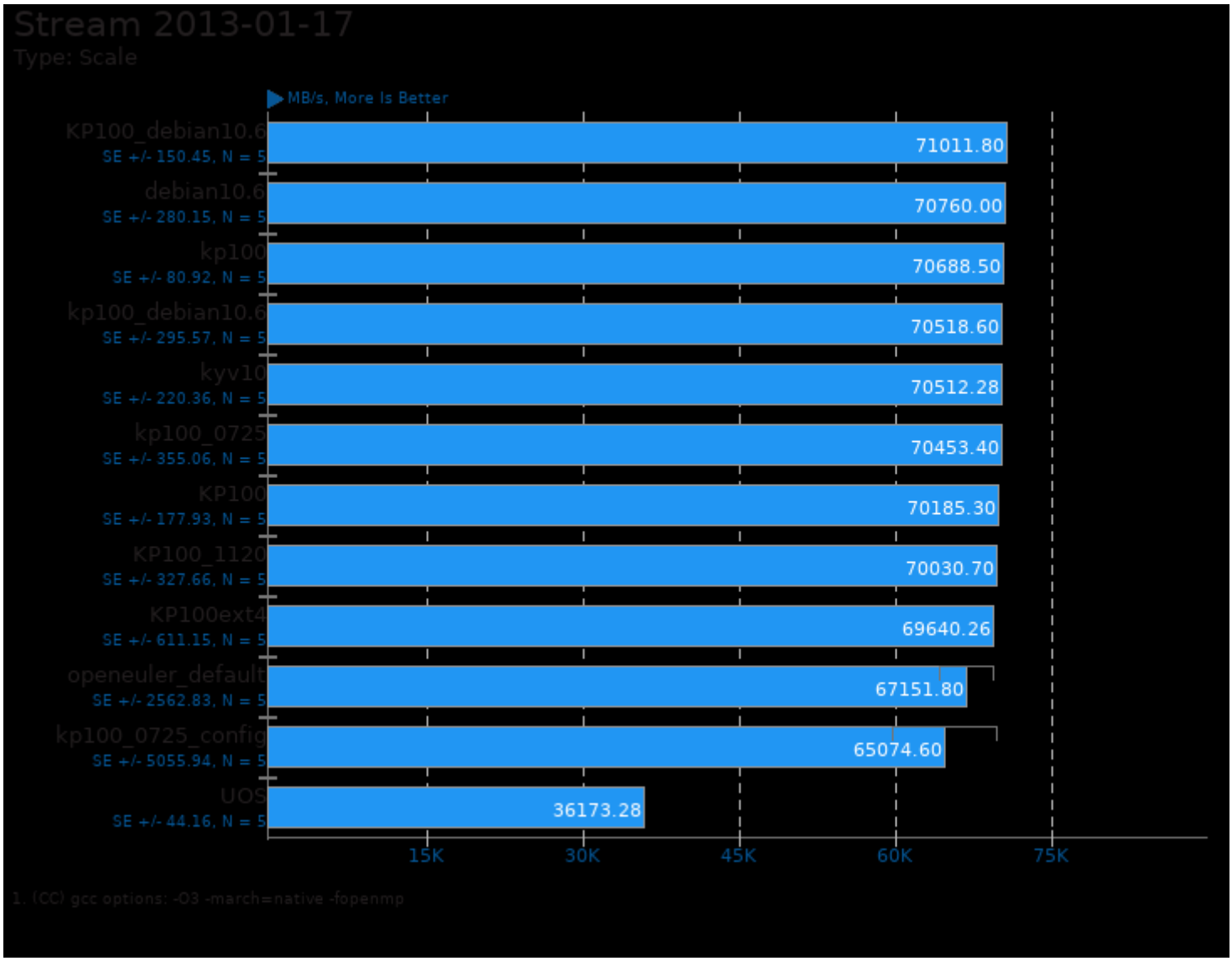
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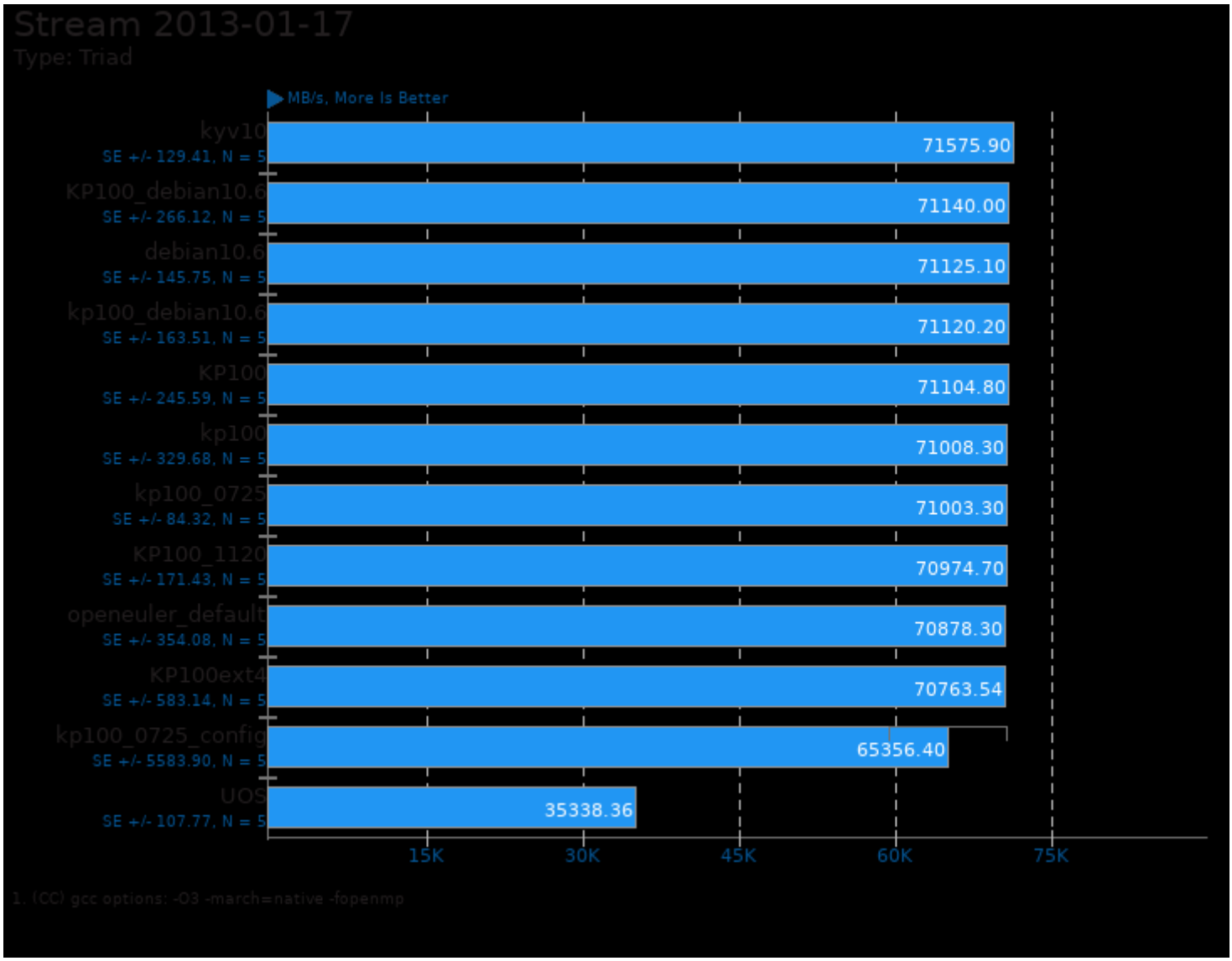
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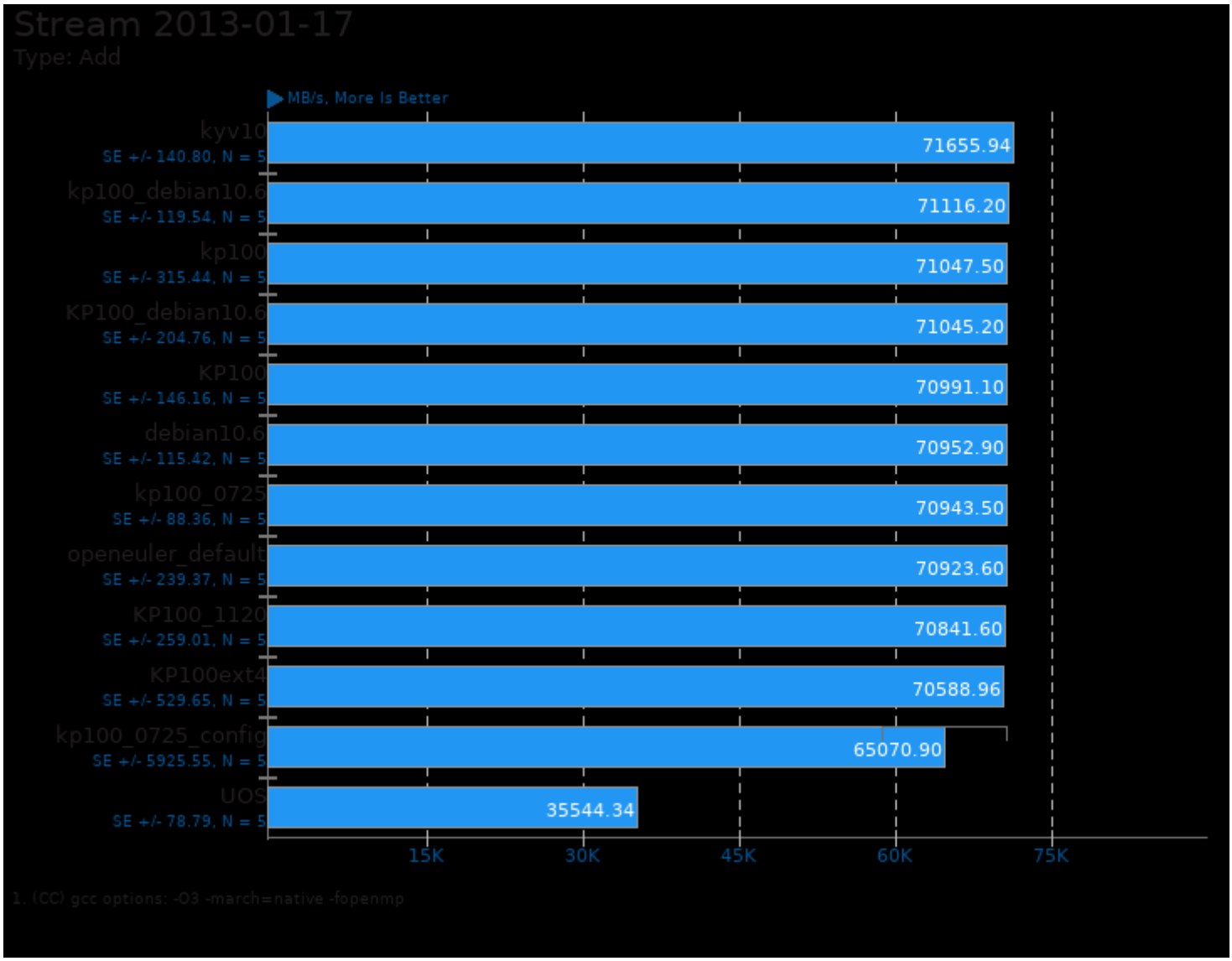
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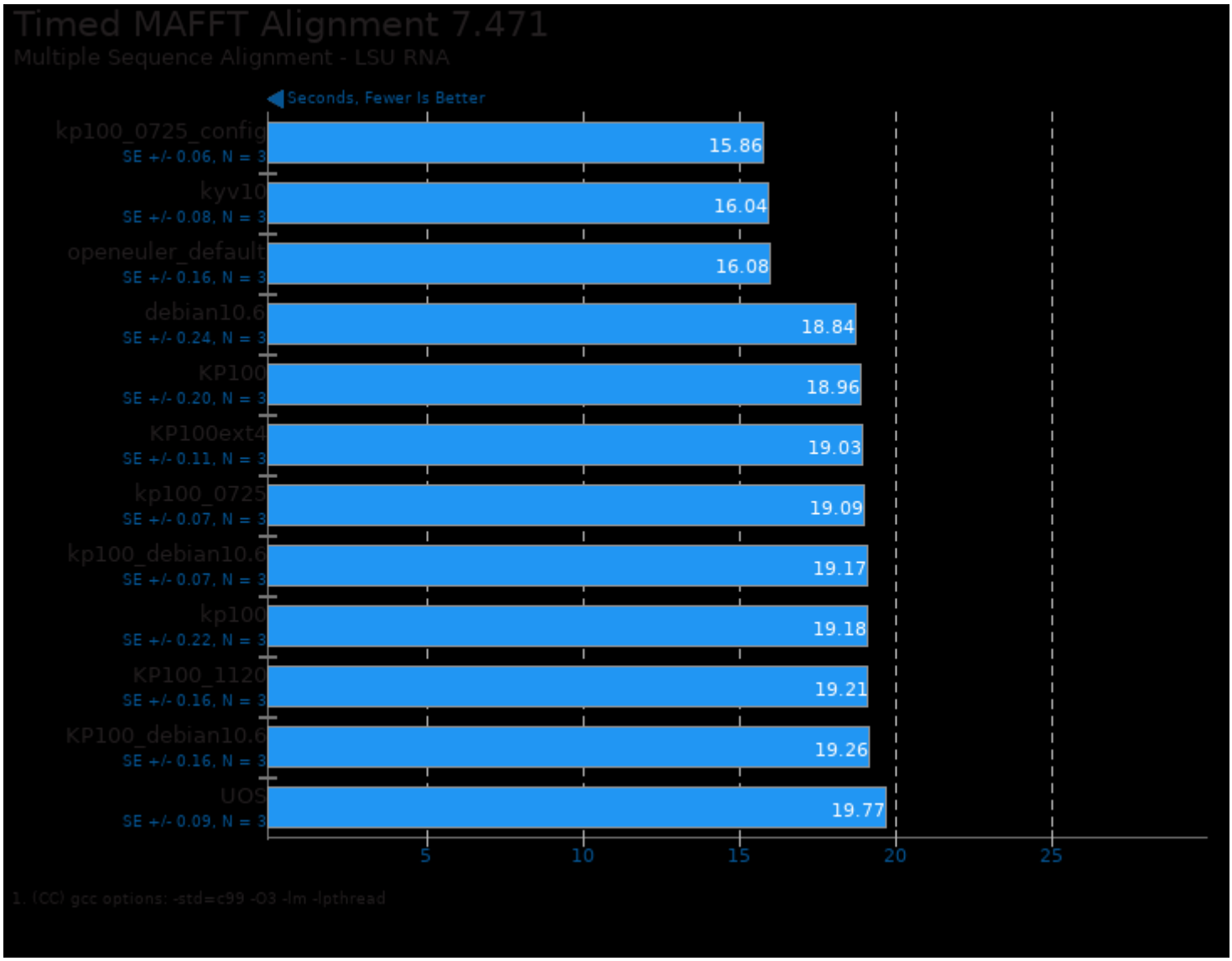
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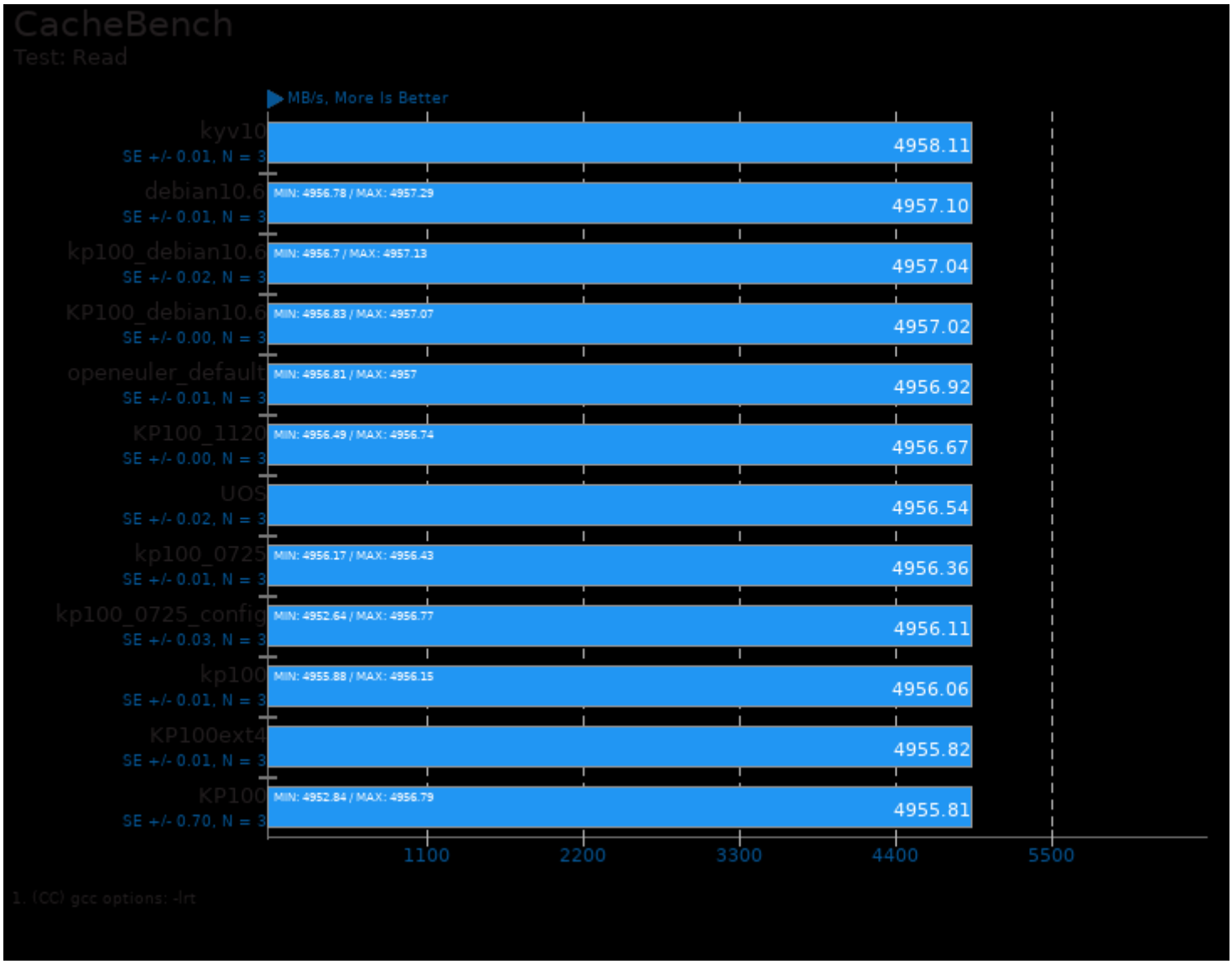
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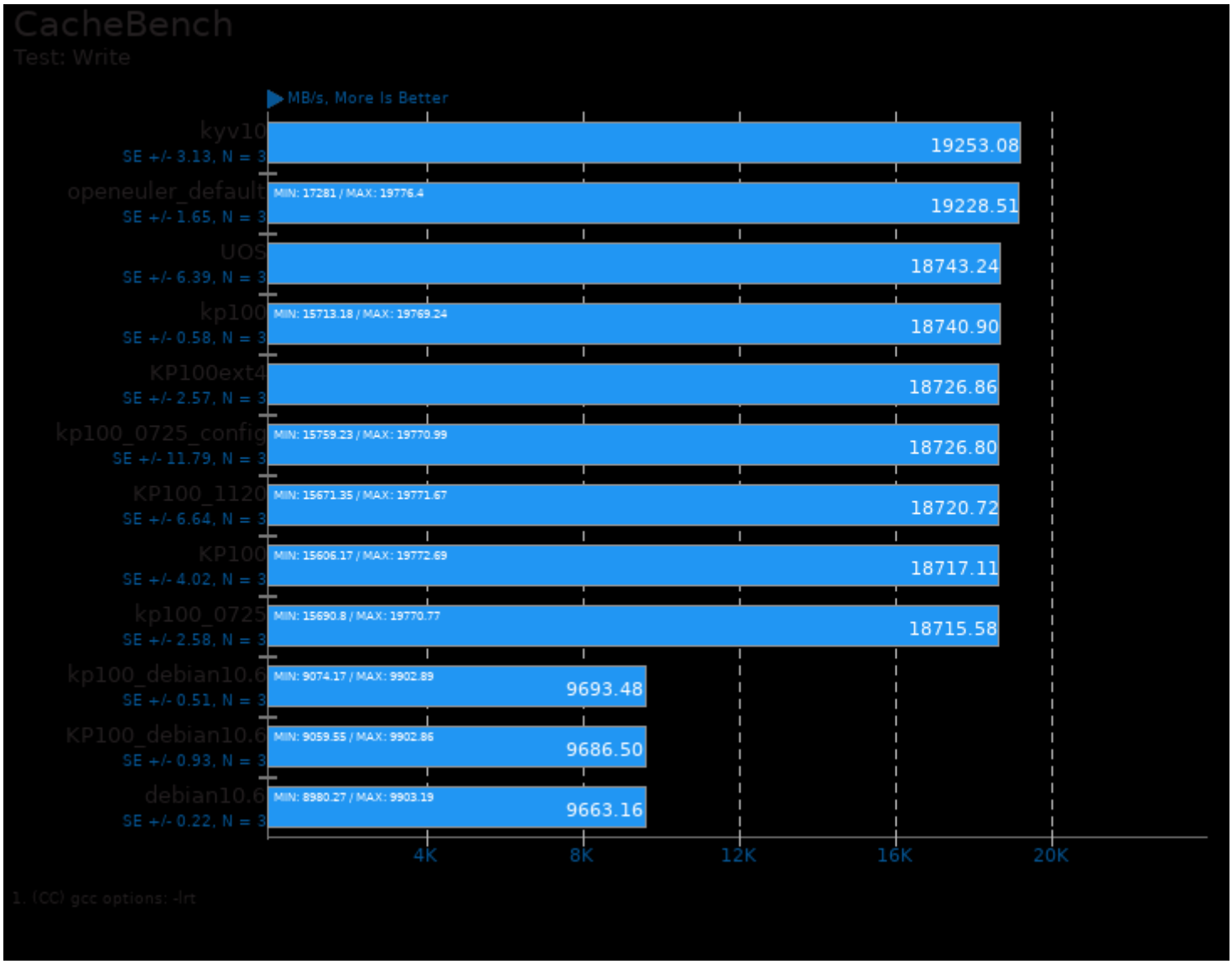
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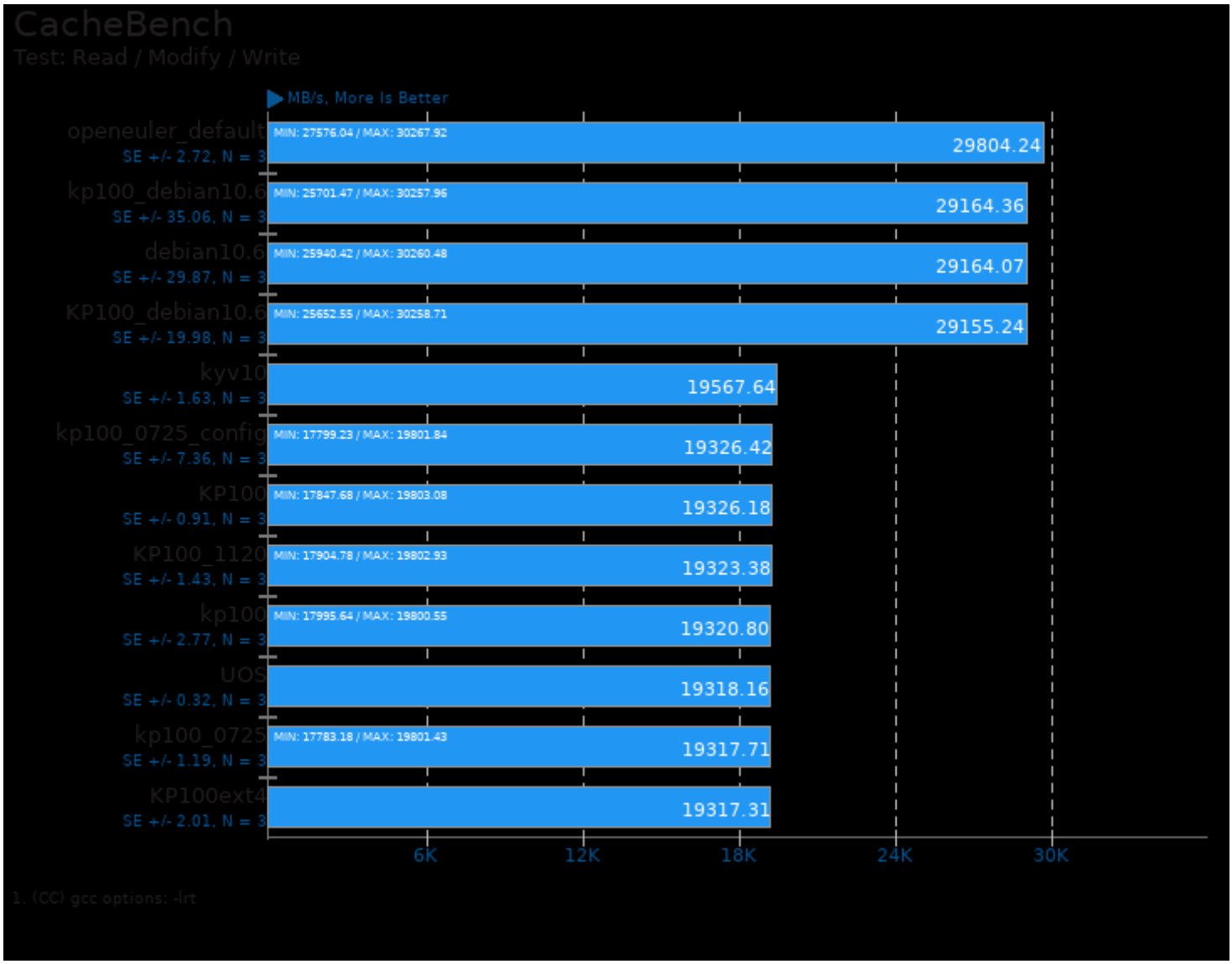
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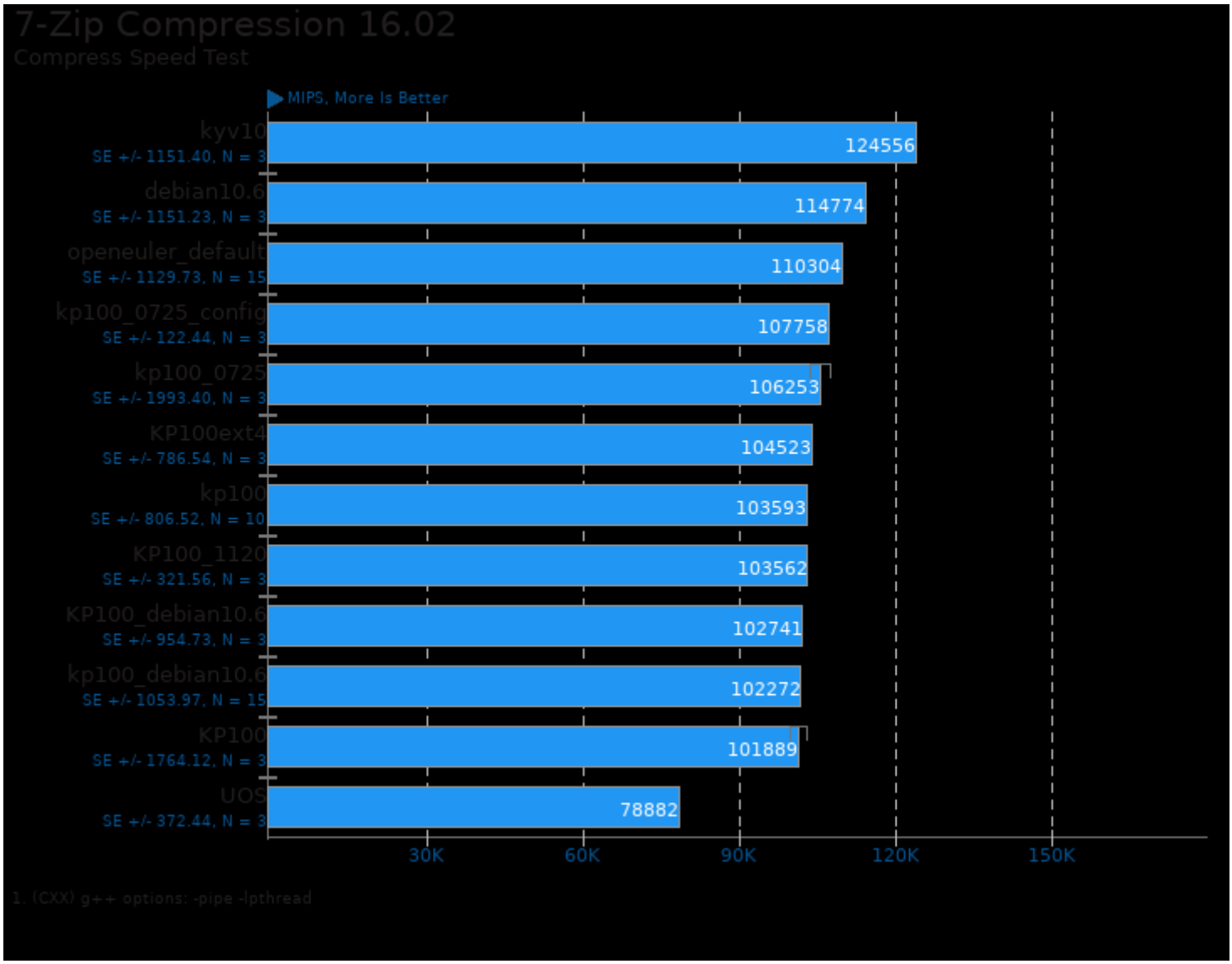
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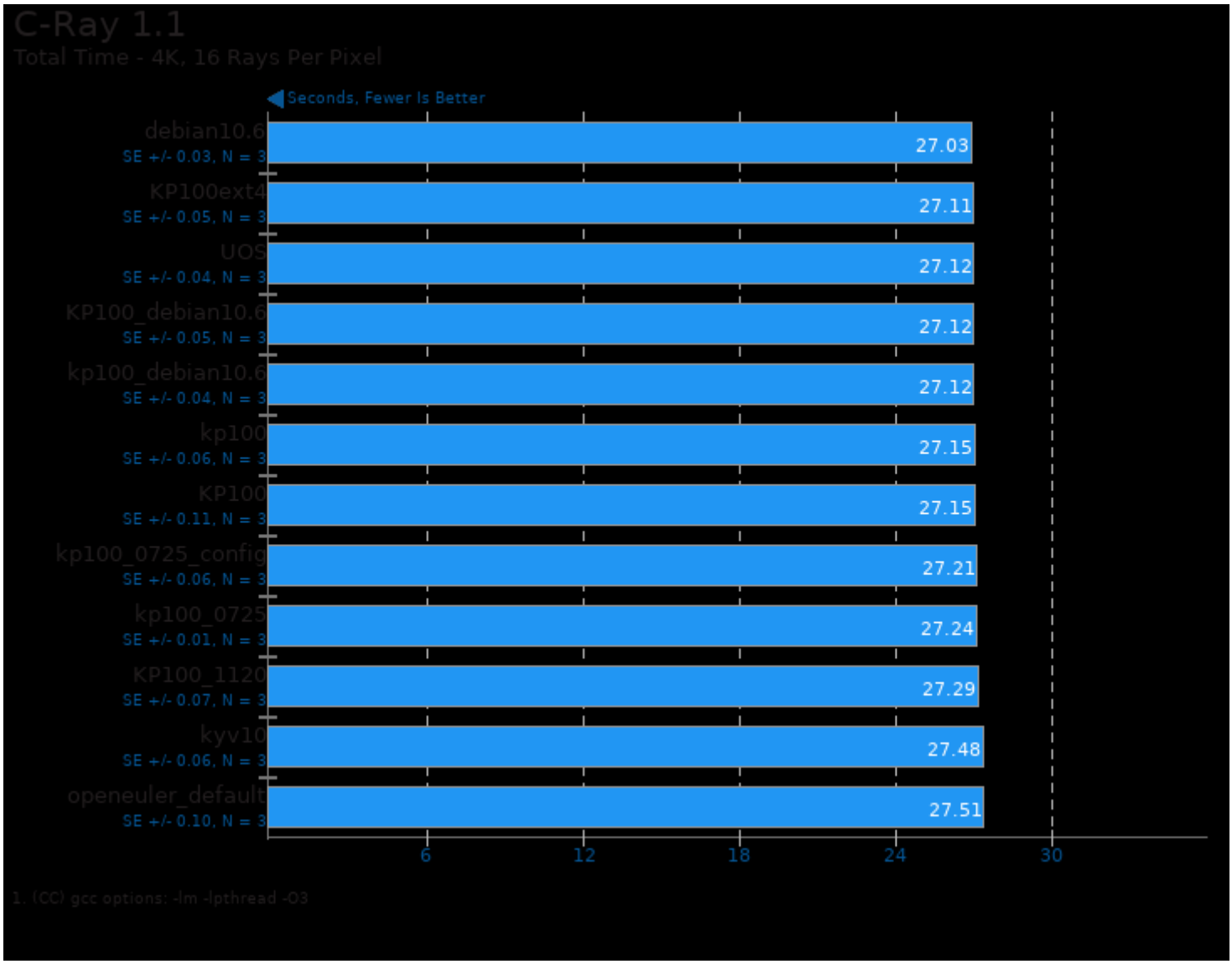
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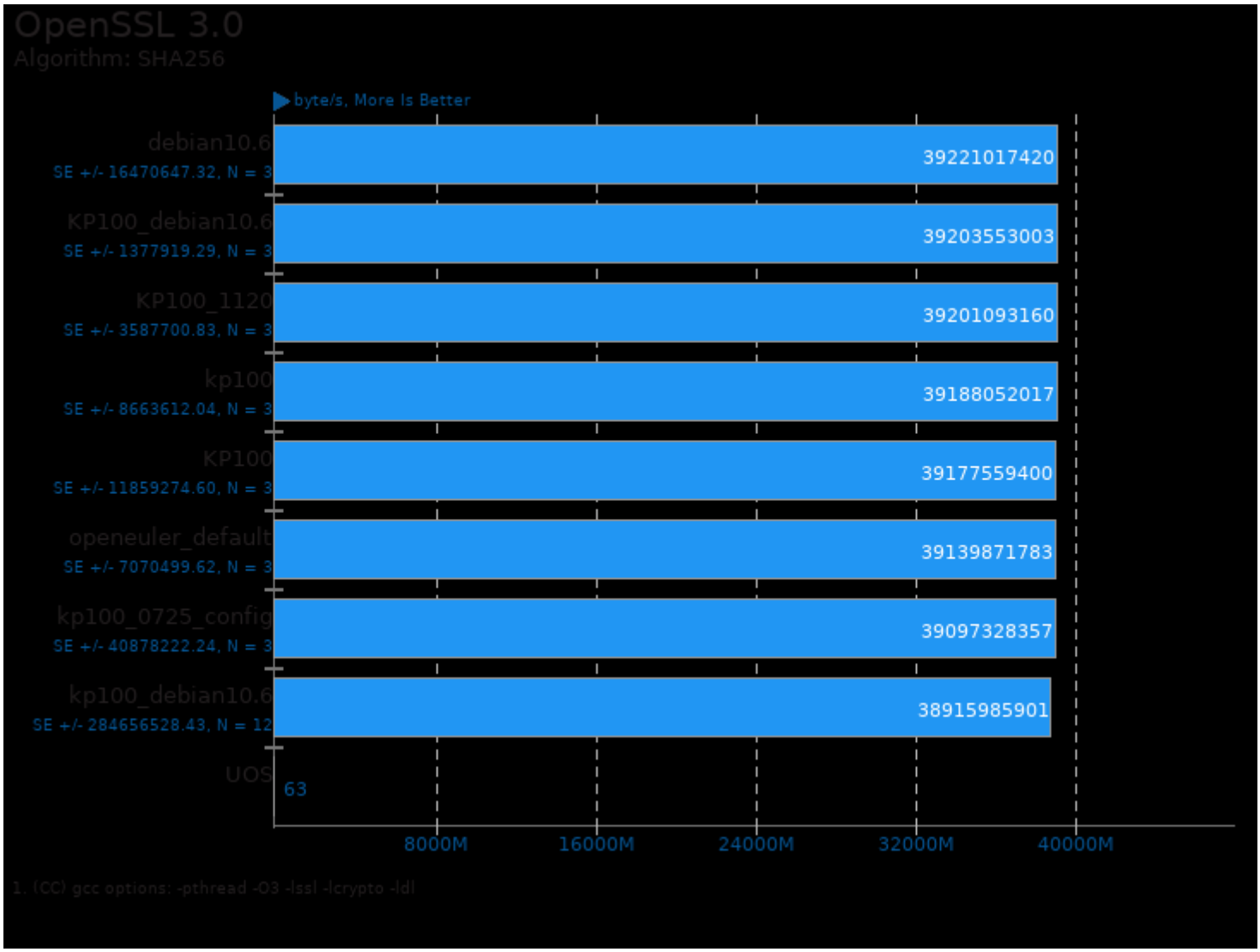
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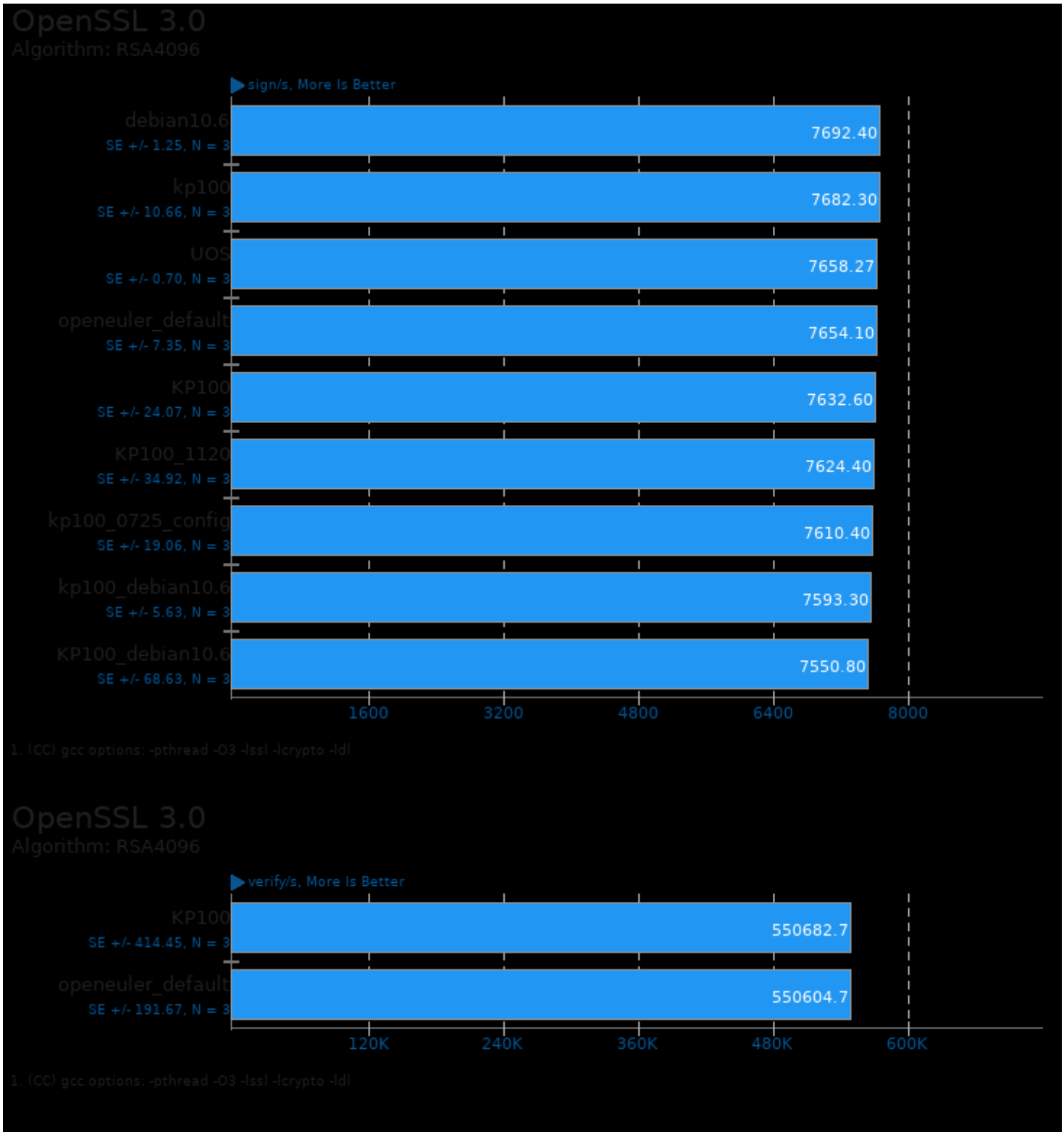
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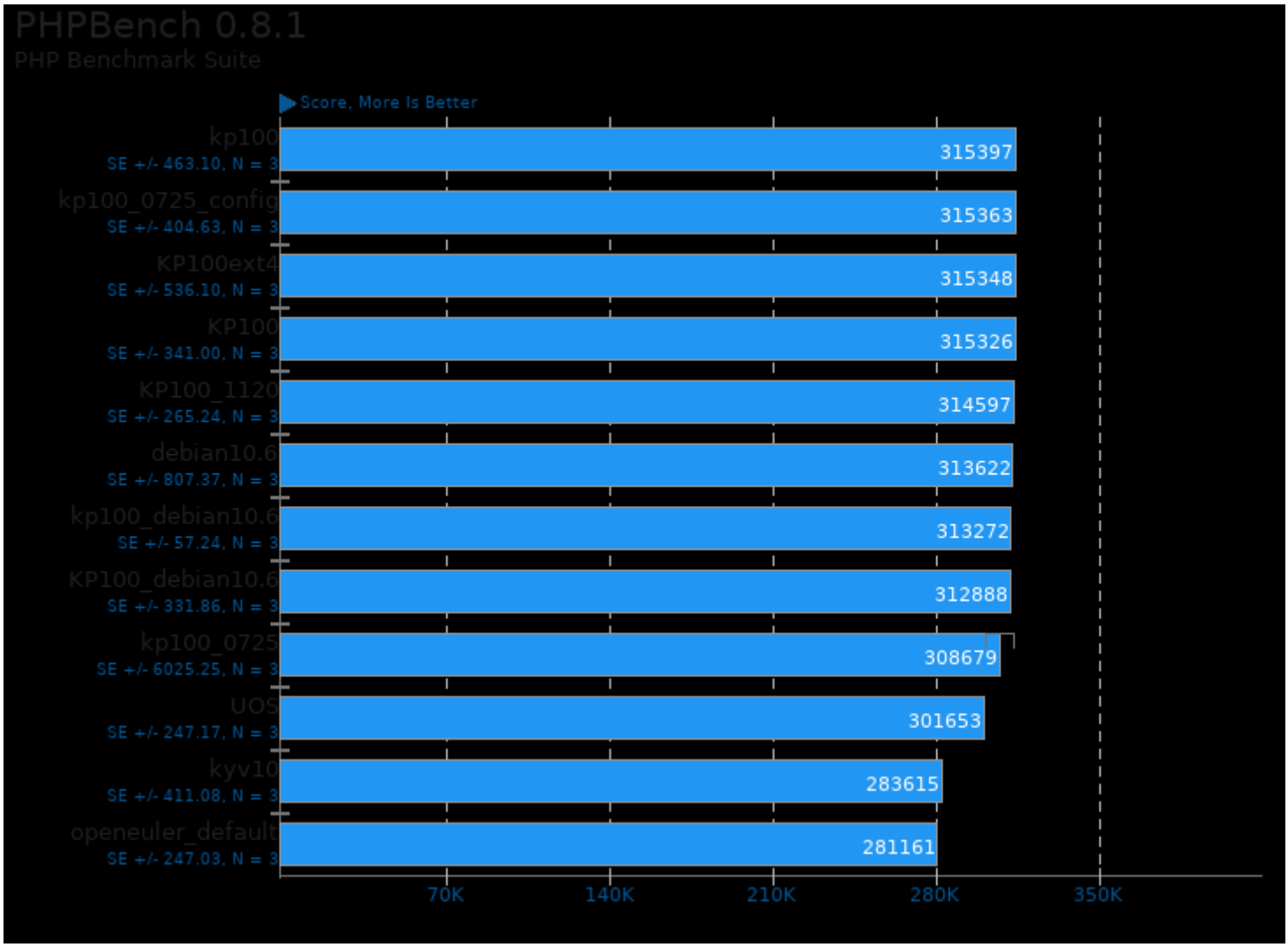
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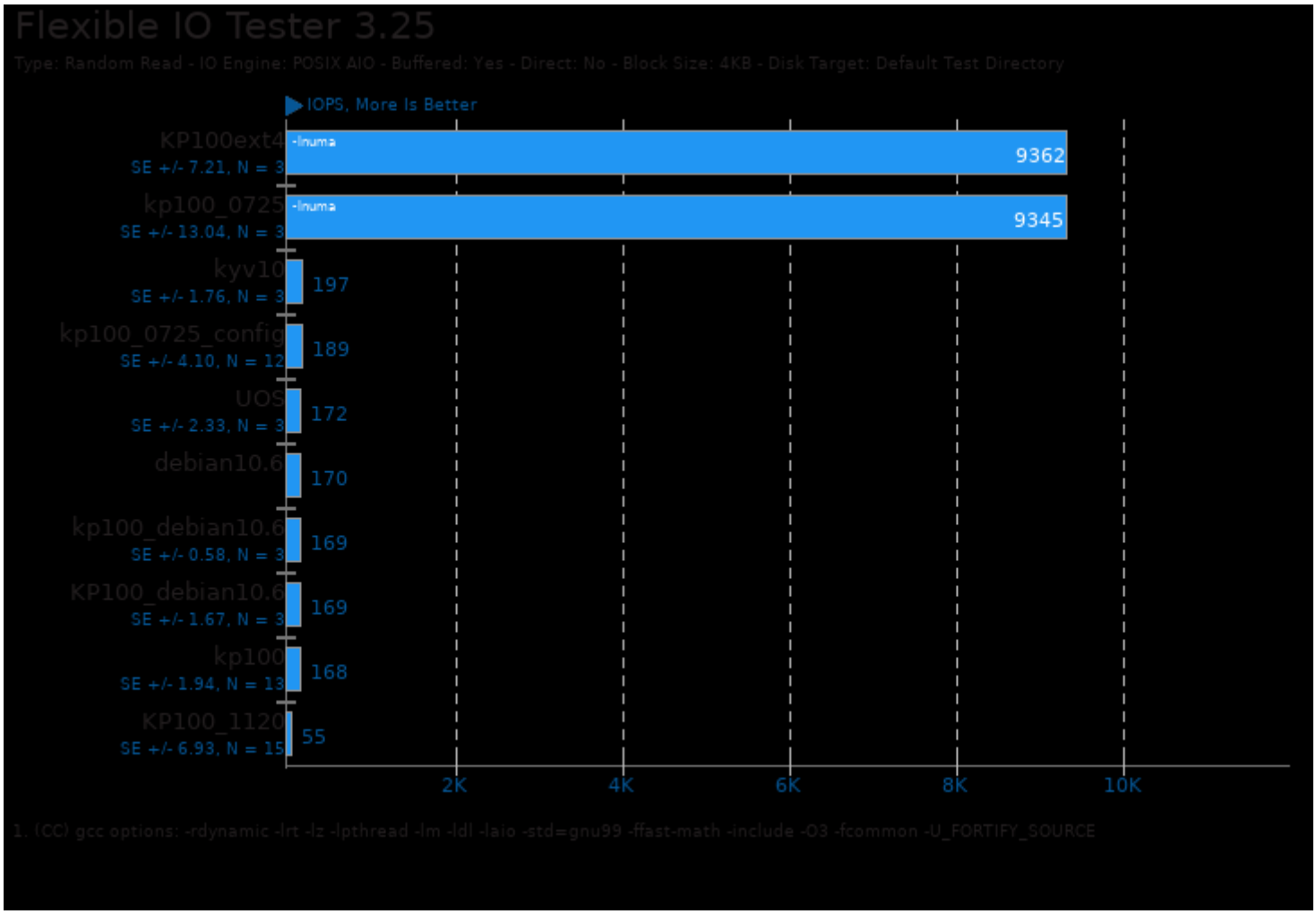
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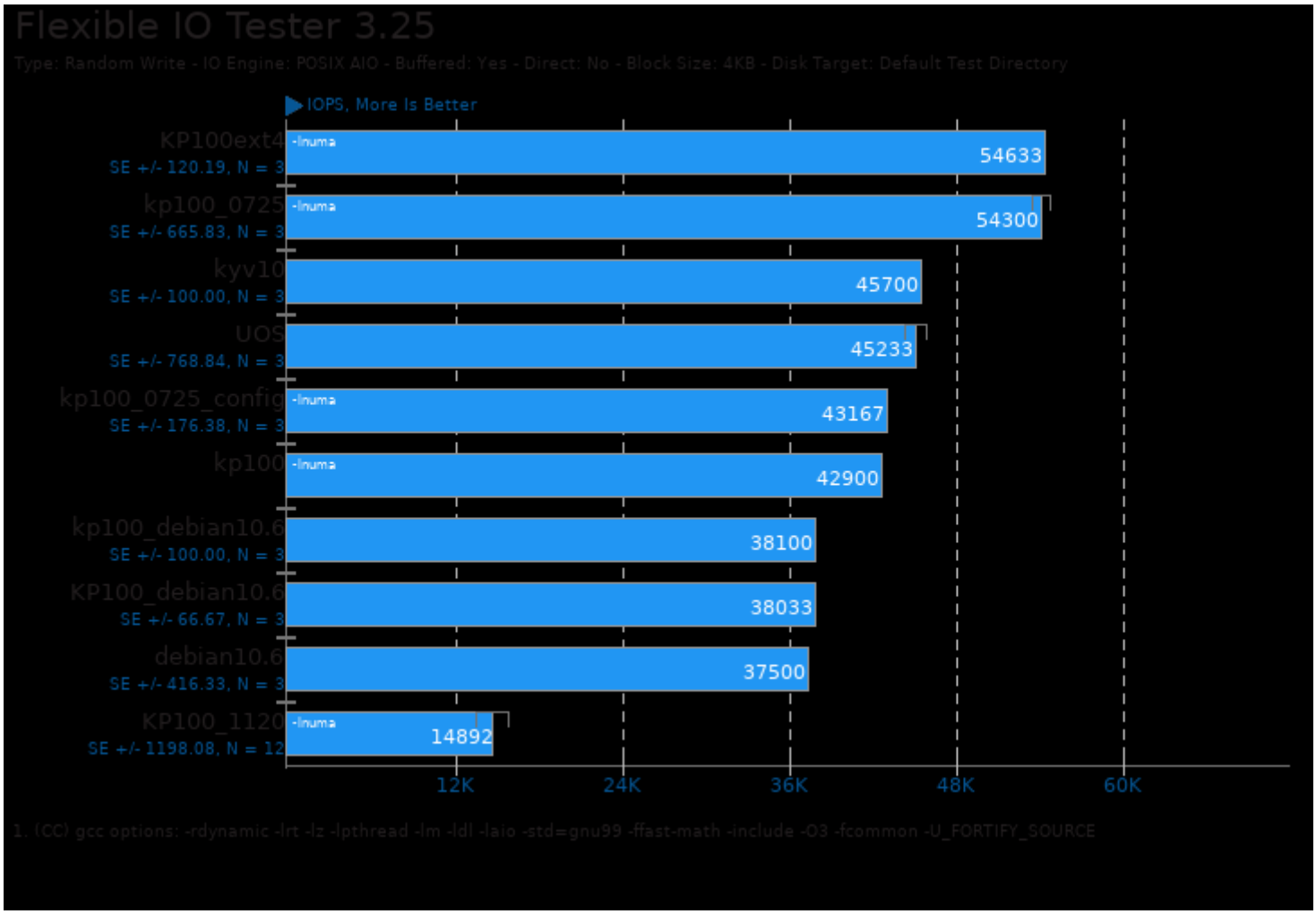
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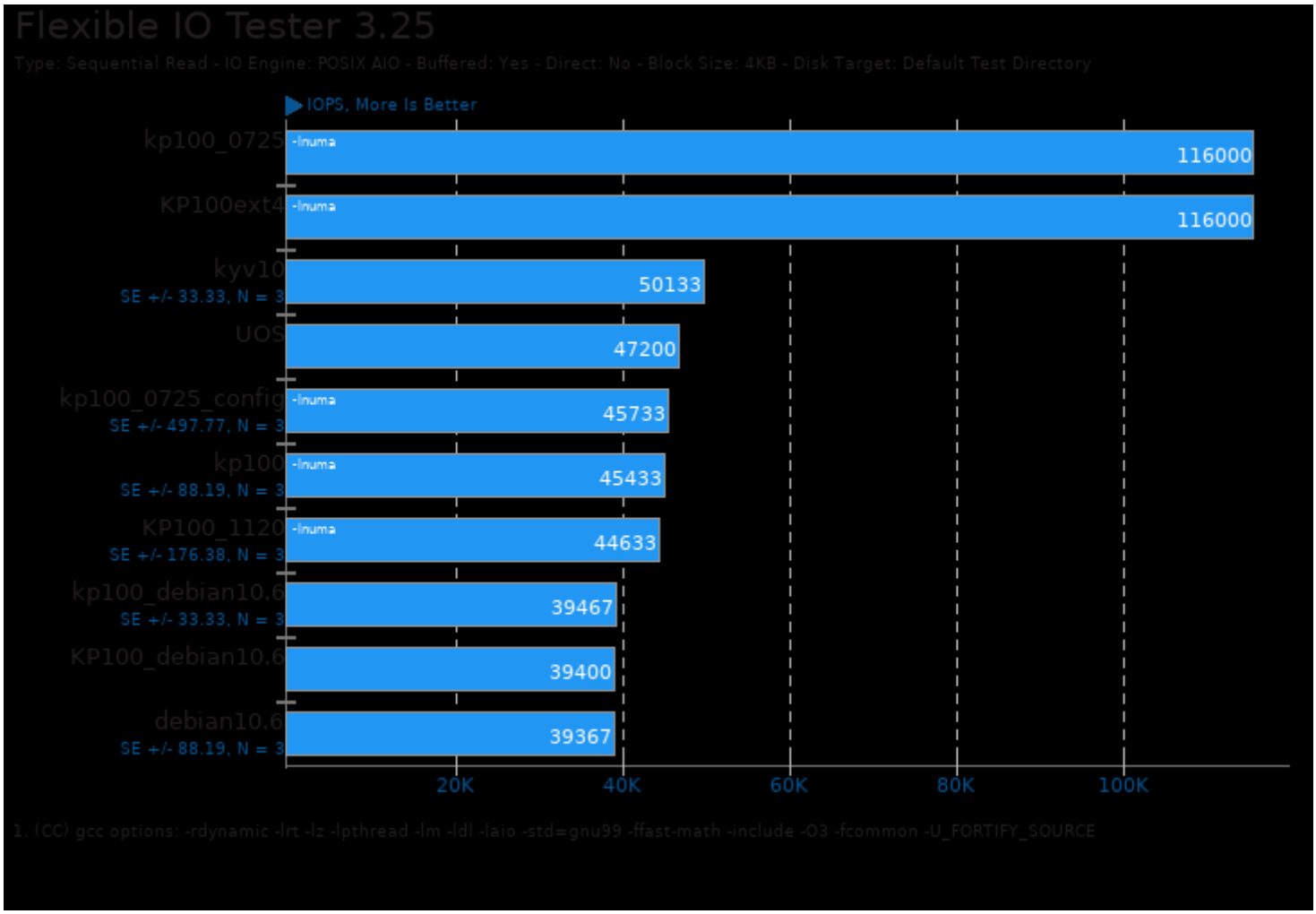
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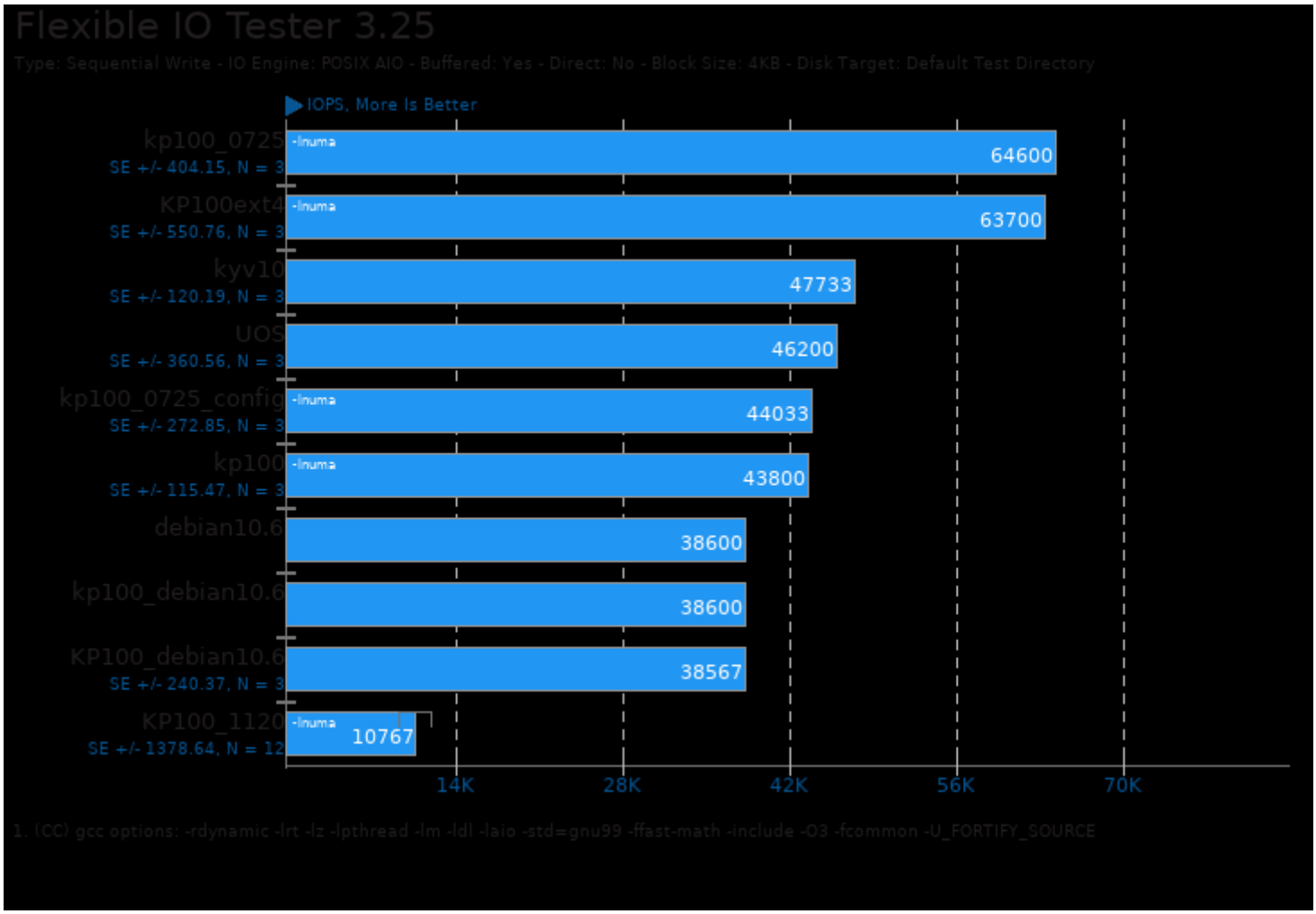
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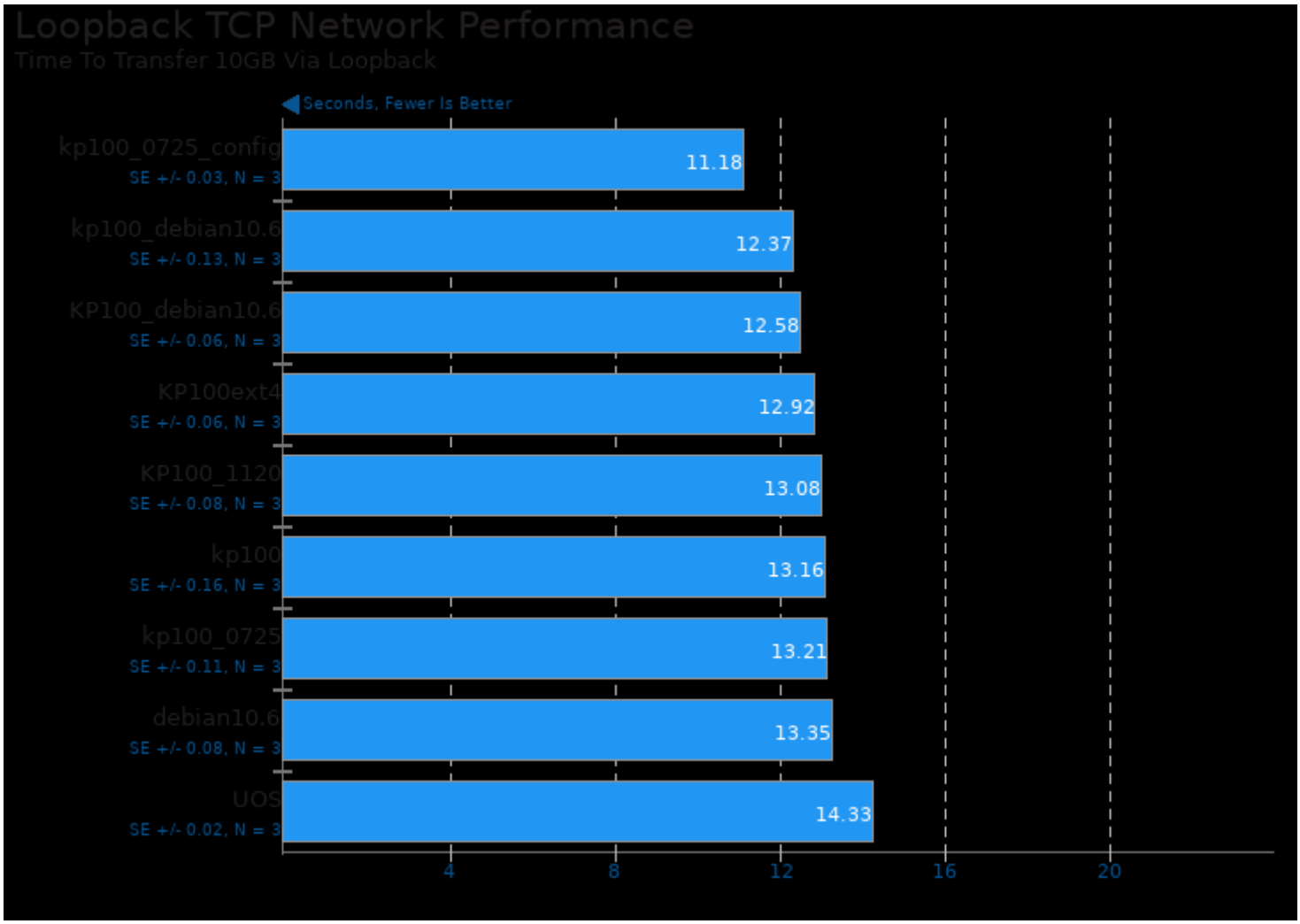
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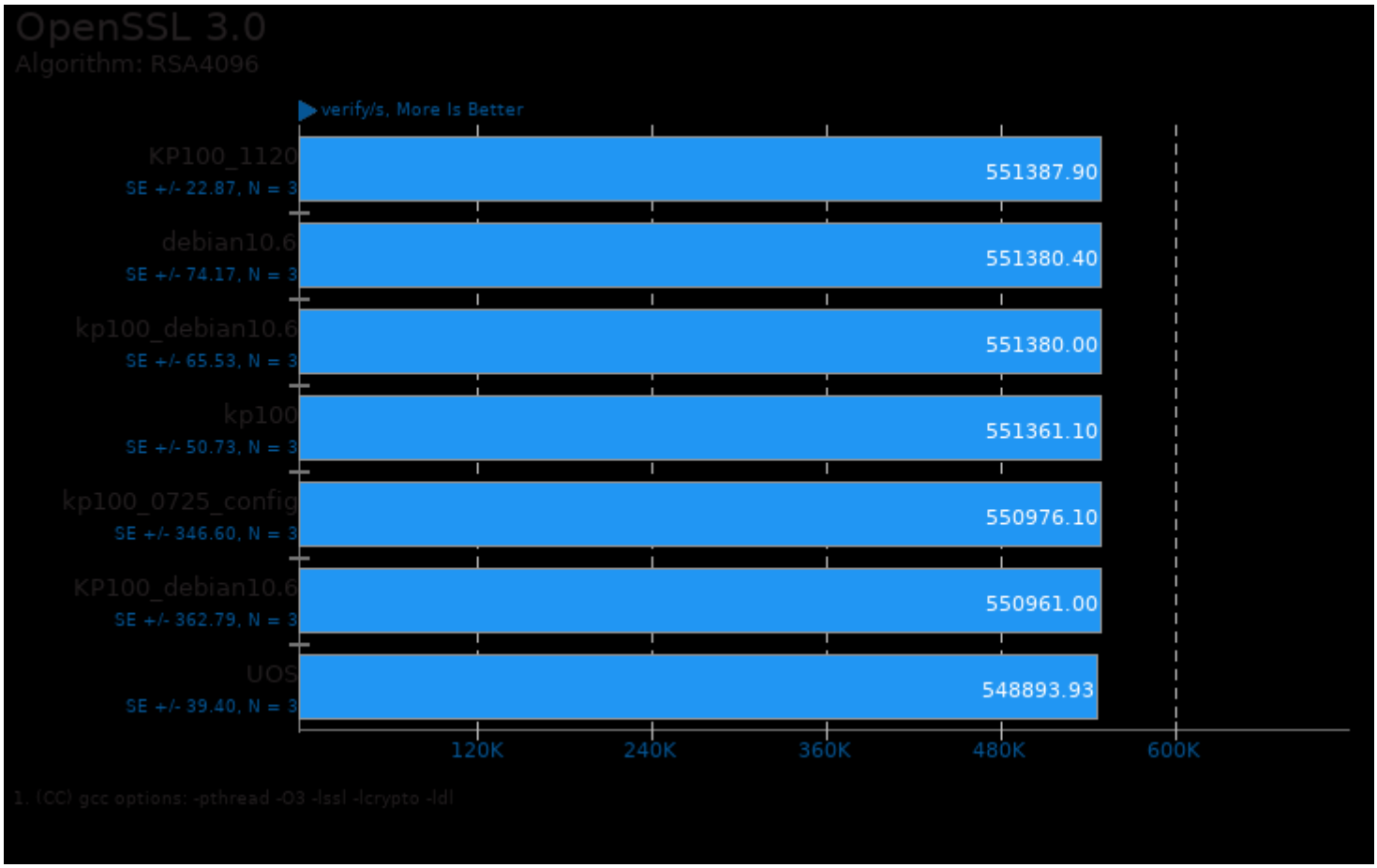
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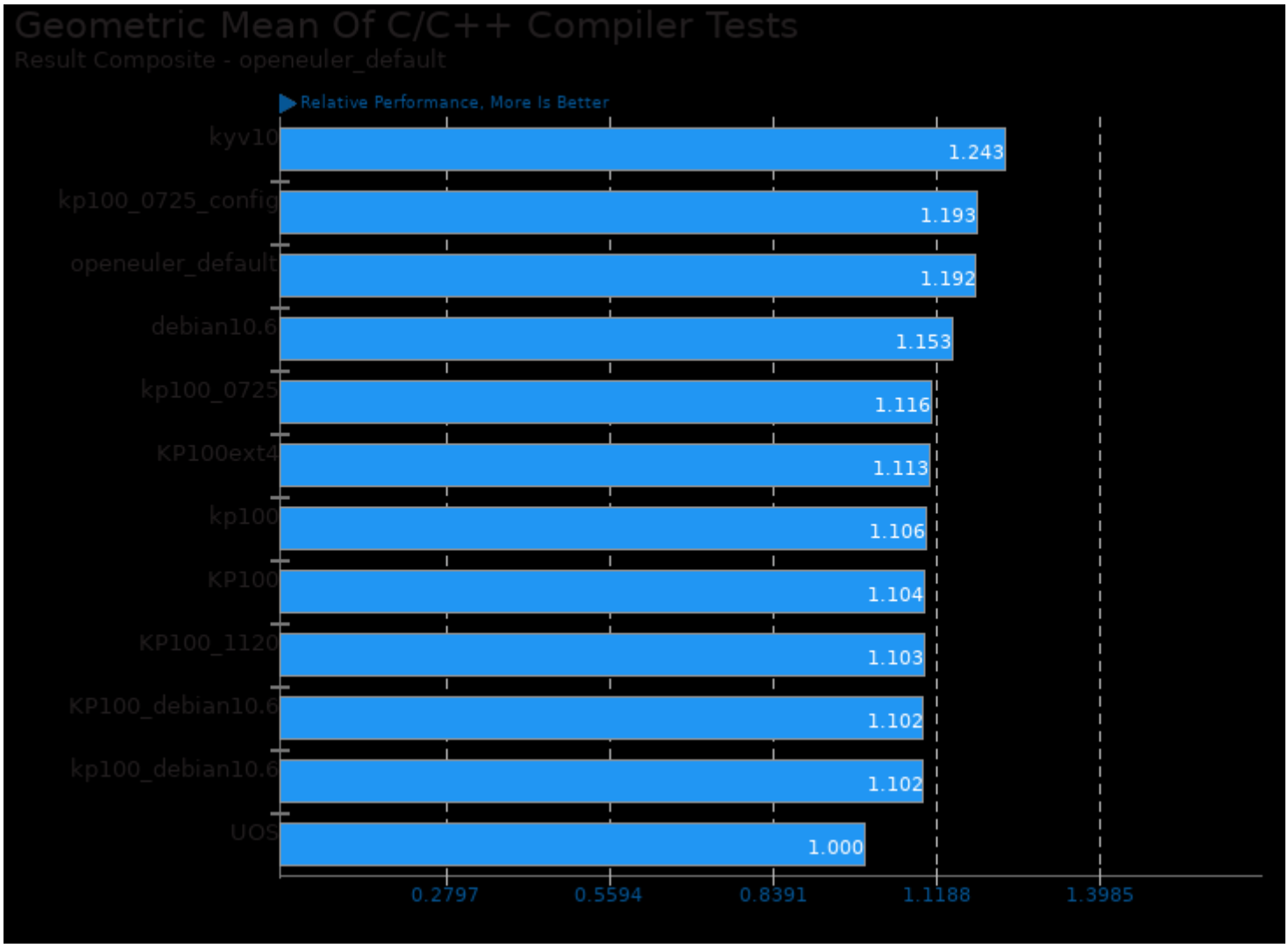


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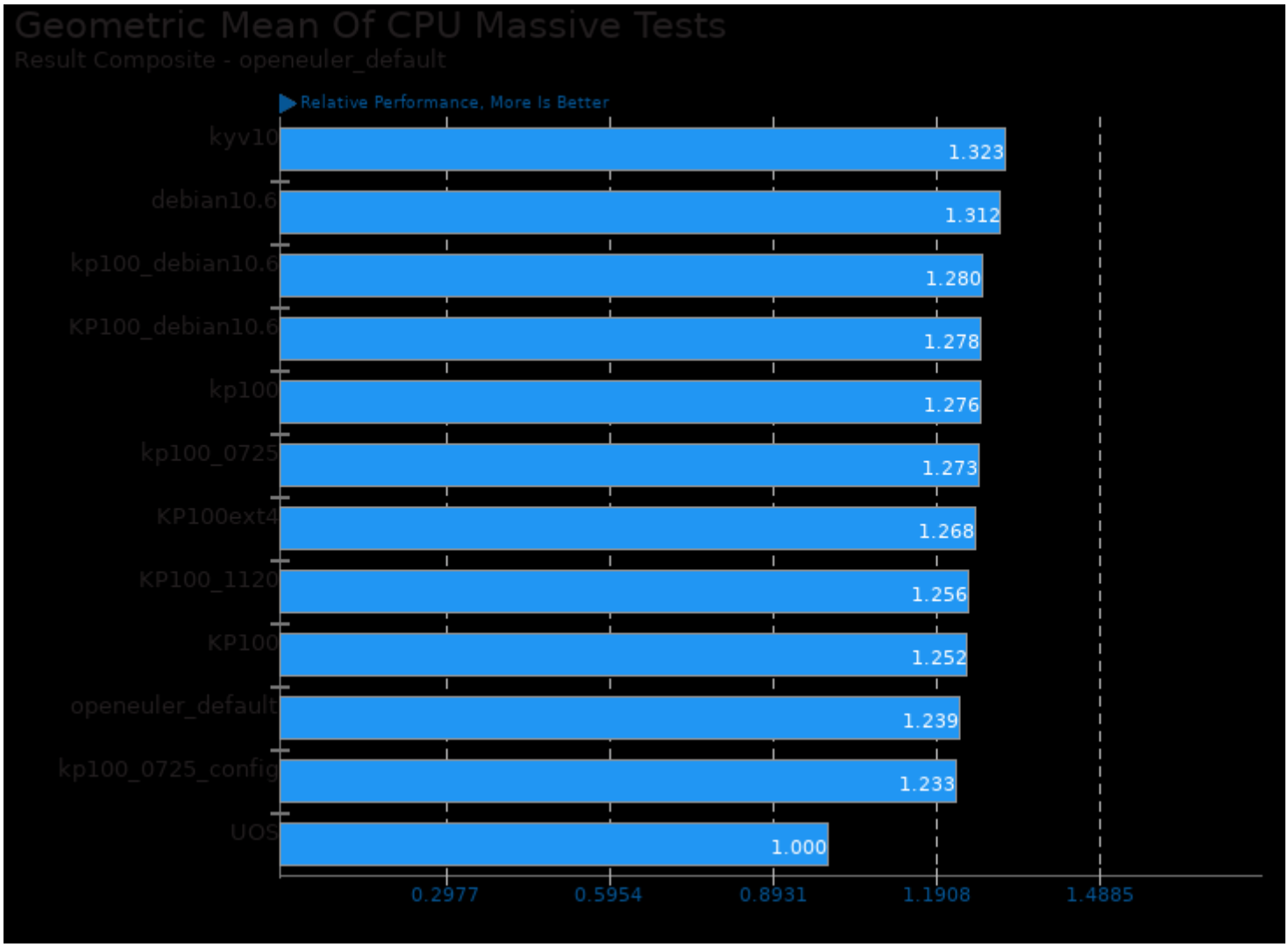
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These geometric means are based upon test groupings / test suites for this result file.



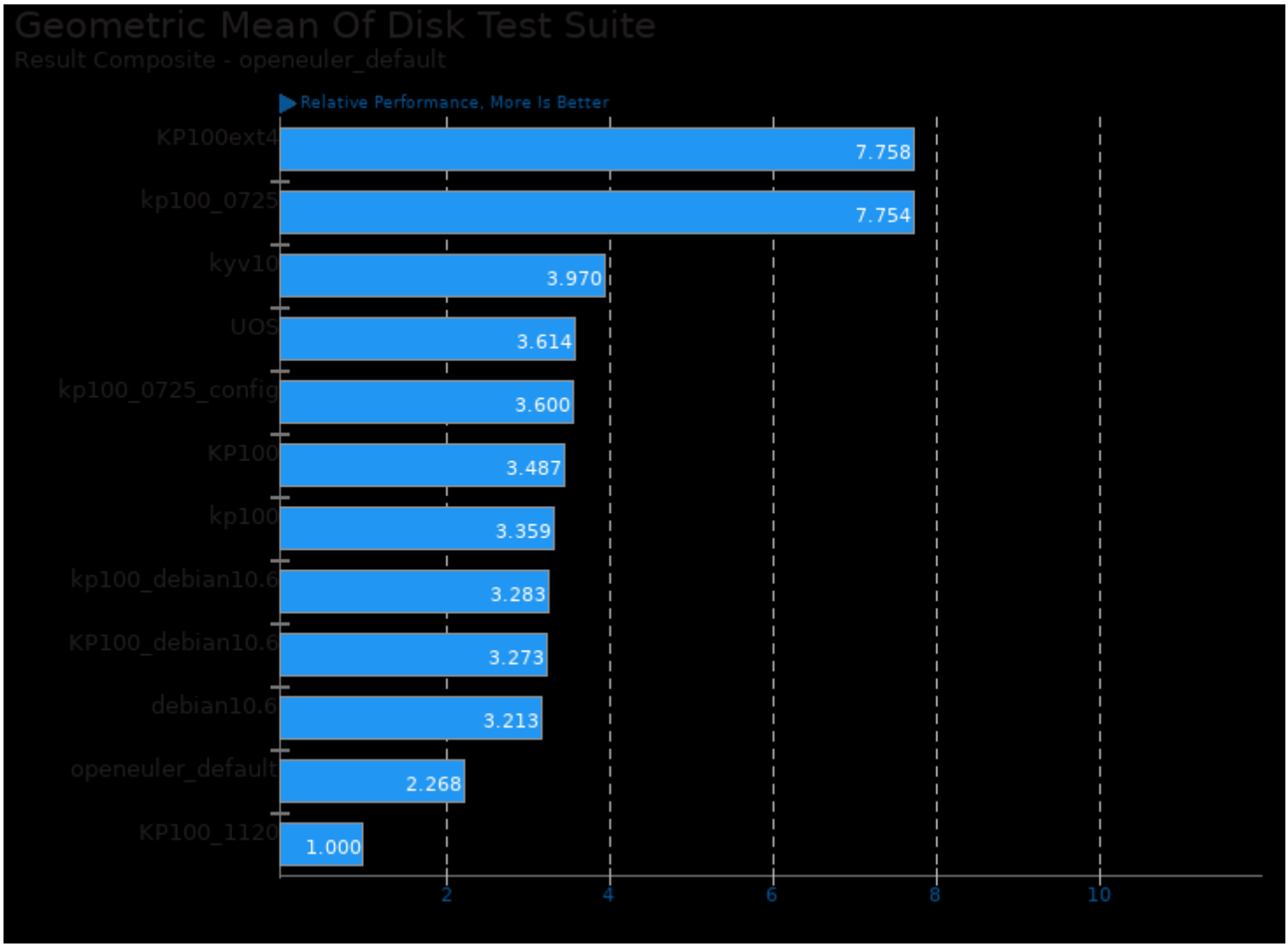
Geometric mean based upon tests: pts/mafft, pts/c-ray, pts/compress-7zip, pts/pgbench, pts/openssl and pts/nginx

openeuler_default



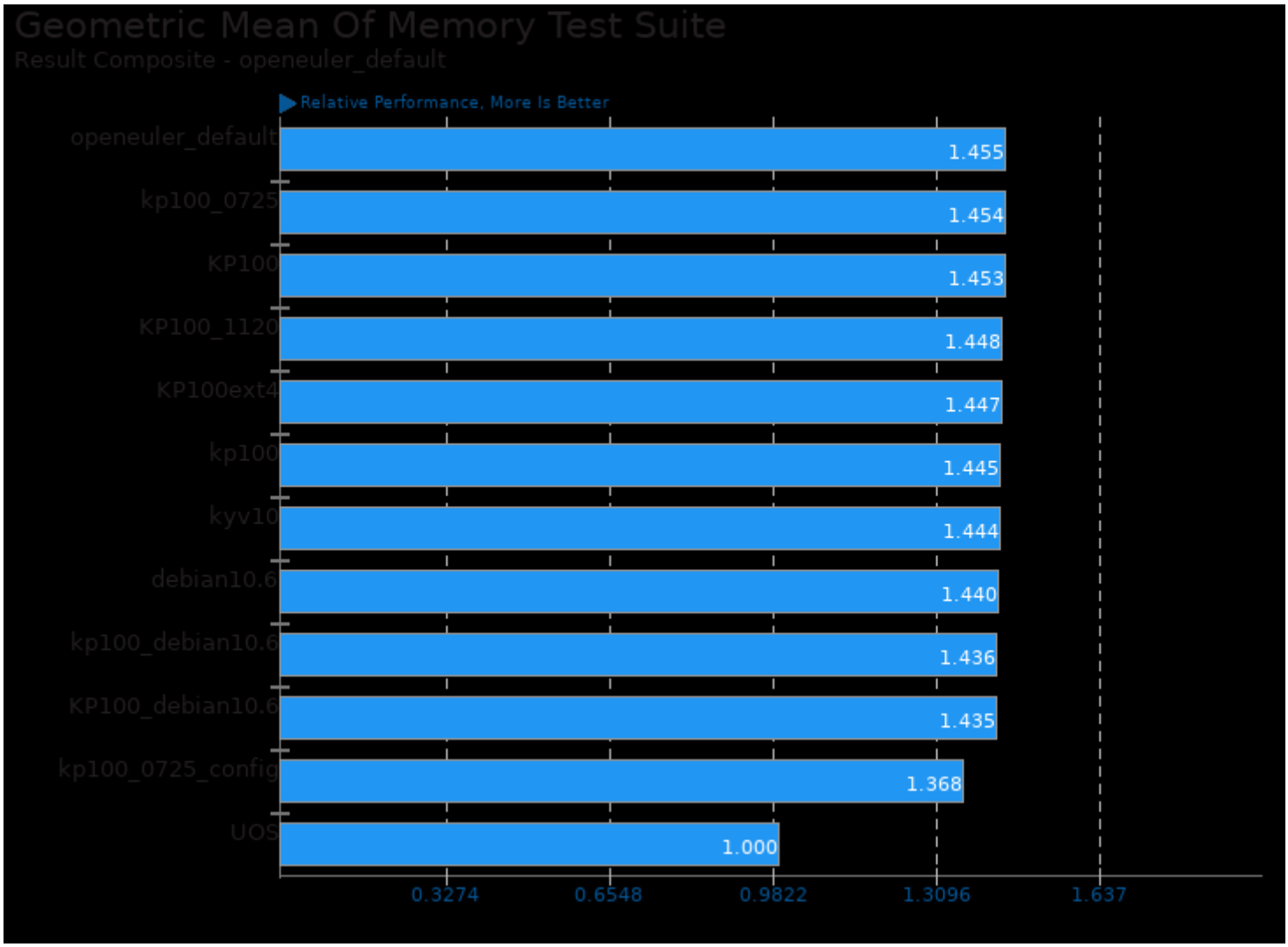
Geometric mean based upon tests: pts/blogbench, pts/c-ray, pts/cachebench, pts/compilebench, pts/compress-7zip, pts/openssl, pts/mafft, pts/nginx, pts/pgbench, pts/phpbench, pts/ramspeed and pts/stream

openeuler_default

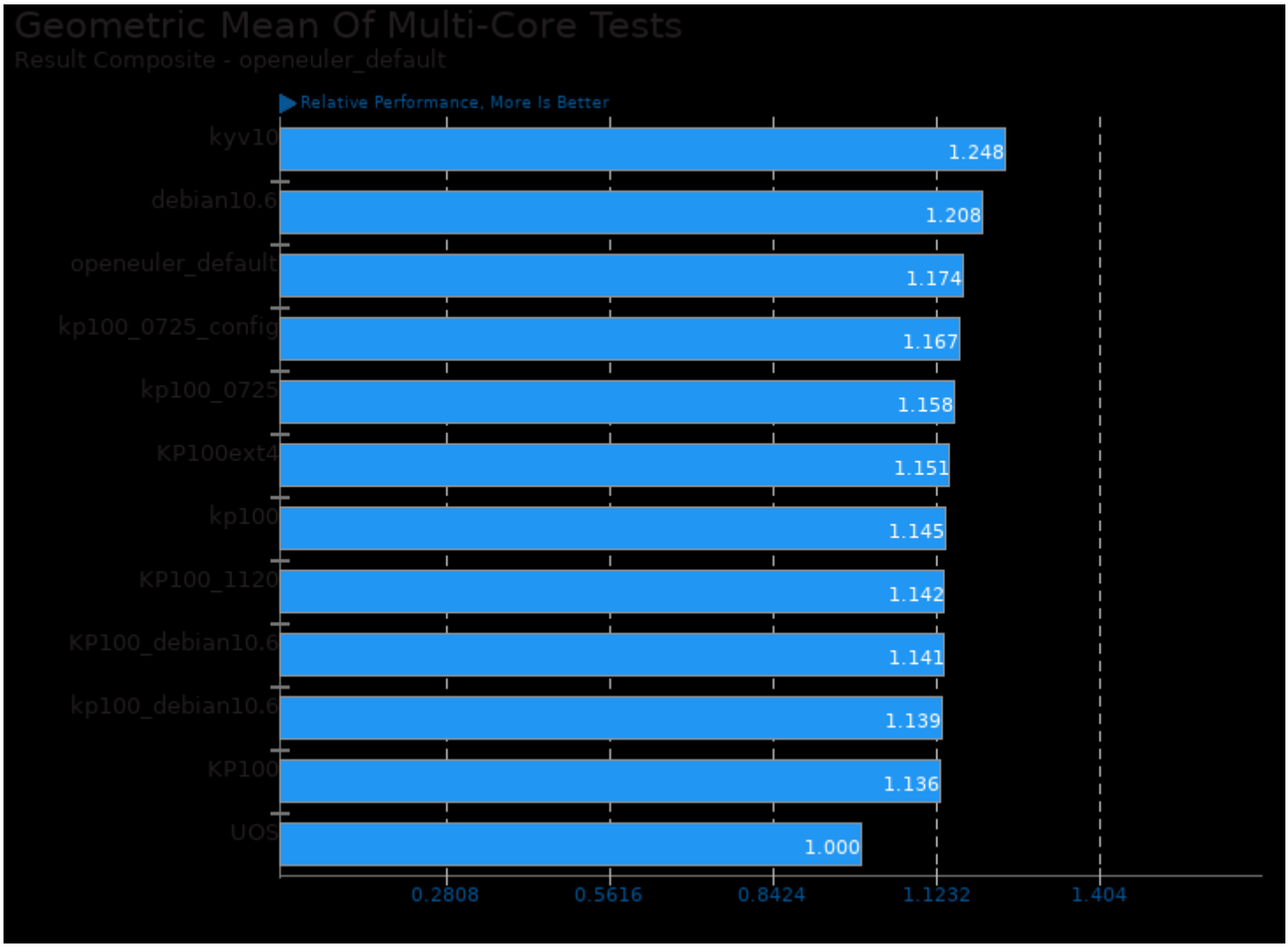


Geometric mean based upon tests: pts/fs-mark, pts/compilebench, pts/iozone, pts/dbench, pts/postmark and pts/fio

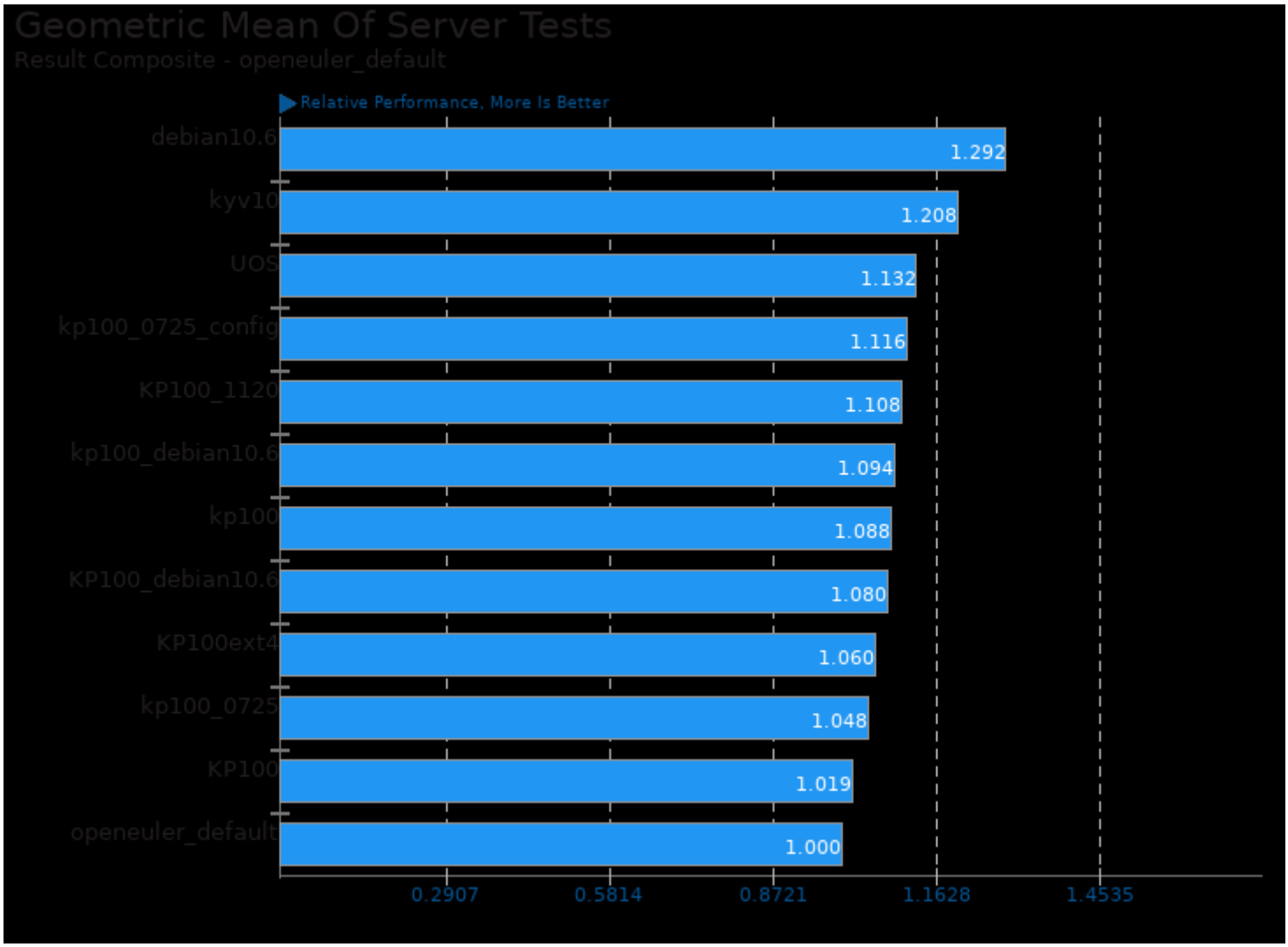
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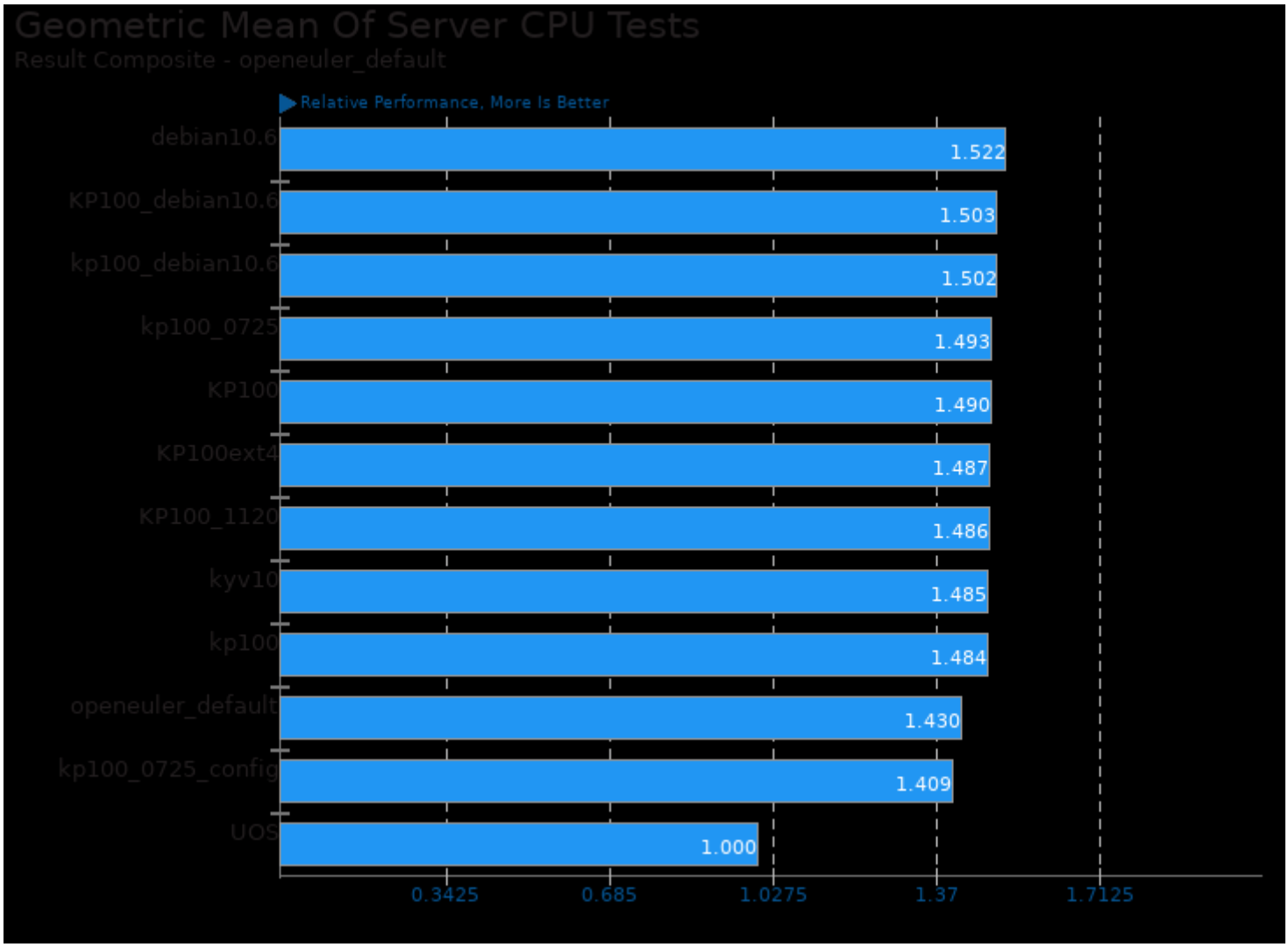
Geometric mean based upon tests: pts/ramspeed, pts/stream and pts/cachebench



Geometric mean based upon tests: pts/c-ray, pts/compress-7zip and pts/pgbench

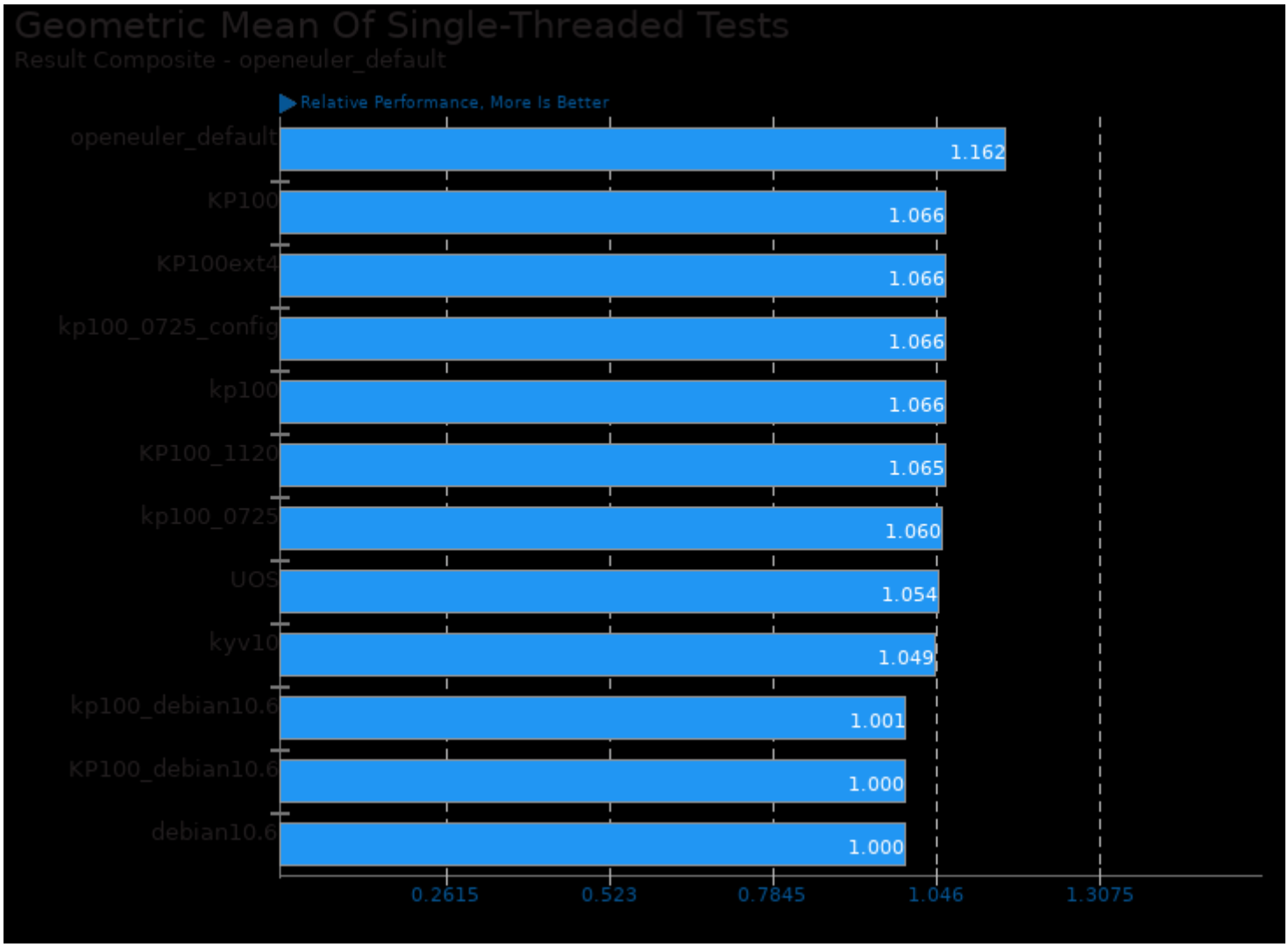


Geometric mean based upon tests: pts/nginx, pts/blogbench, pts/pgbench, pts/phpbench and pts/openssl



Geometric mean based upon tests: pts/compress-7zip, pts/c-ray, pts/openssl, pts/phpbench, pts/ramspeed and pts/stream

openeuler_default



Geometric mean based upon tests: pts/cachebench, pts/phpbench and pts/nginx

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 09:04.