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TH_03092019_Storage01

qemu testing on Debian 9.9 via the Phoronix Test Suite.

Test Systems:

NFS defaults

QVO NFS Defaults

QVO NFS with ZFS Sync disabled

EVO NFS with ZFS Sync disabled

iSCSI EVO

QVO NFS with ZFS Sync disabled direct

EVO NFS with ZFS Sync disabled direct

iSCSI EVO direct

Processor: Intel Xeon E5-2690 v2 @ 2.99GHz (1 Core), Motherboard: QEMU Standard PC (i440FX + PIIX 1996) (rel-1.11.2-0-gf9626ccb91-prebuilt.qemu-project.org BIOS), Memory: 1 x 1024 MB RAM QEMU, Disk: 11GB QEMU HDD, Graphics: bochsdrmfb

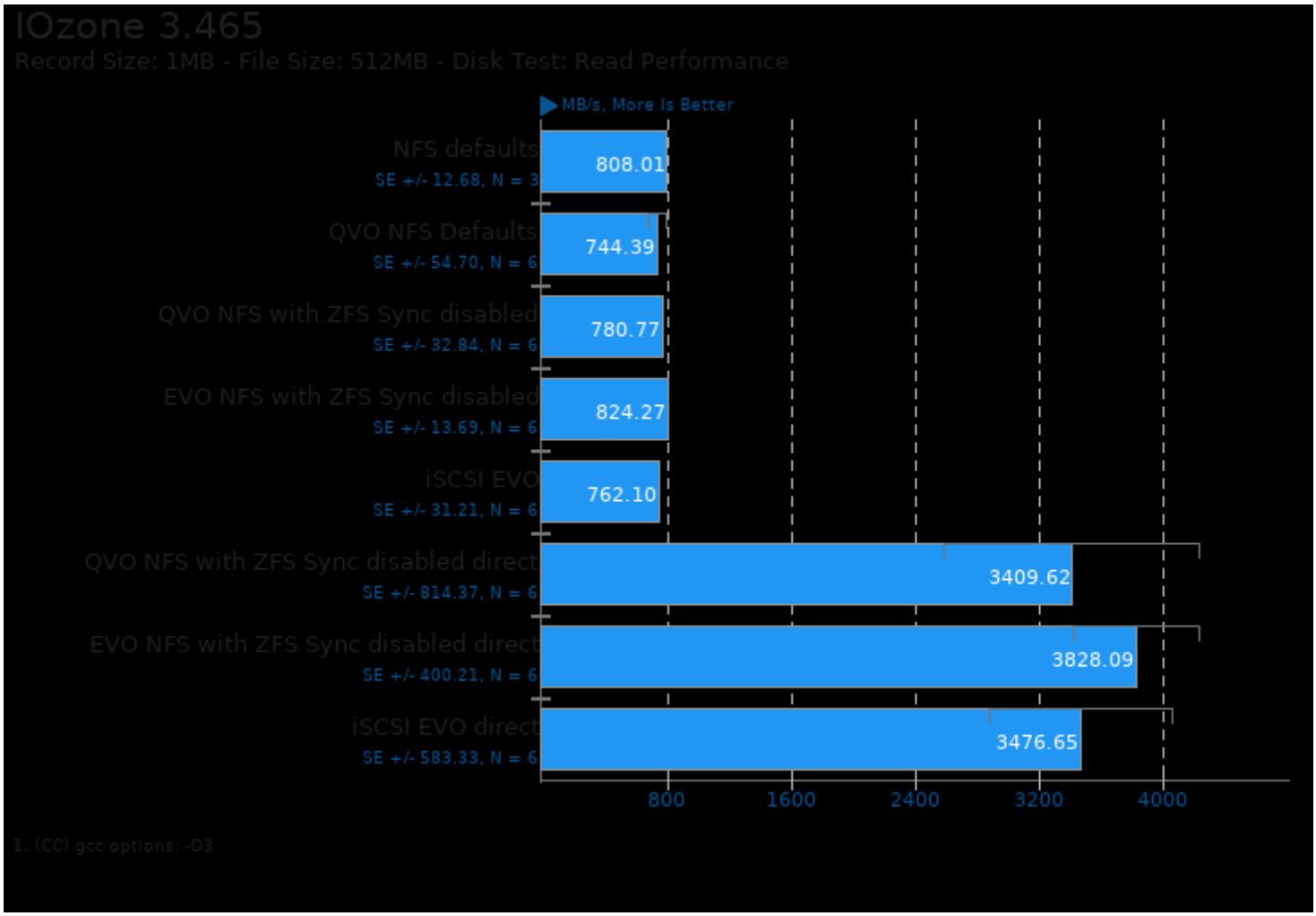
OS: Debian 9.9, Kernel: 4.9.0-8-amd64 (x86_64), Compiler: GCC 6.3.0 20170516, File-System: ext4, Screen Resolution: 1024x768, System Layer: qemu

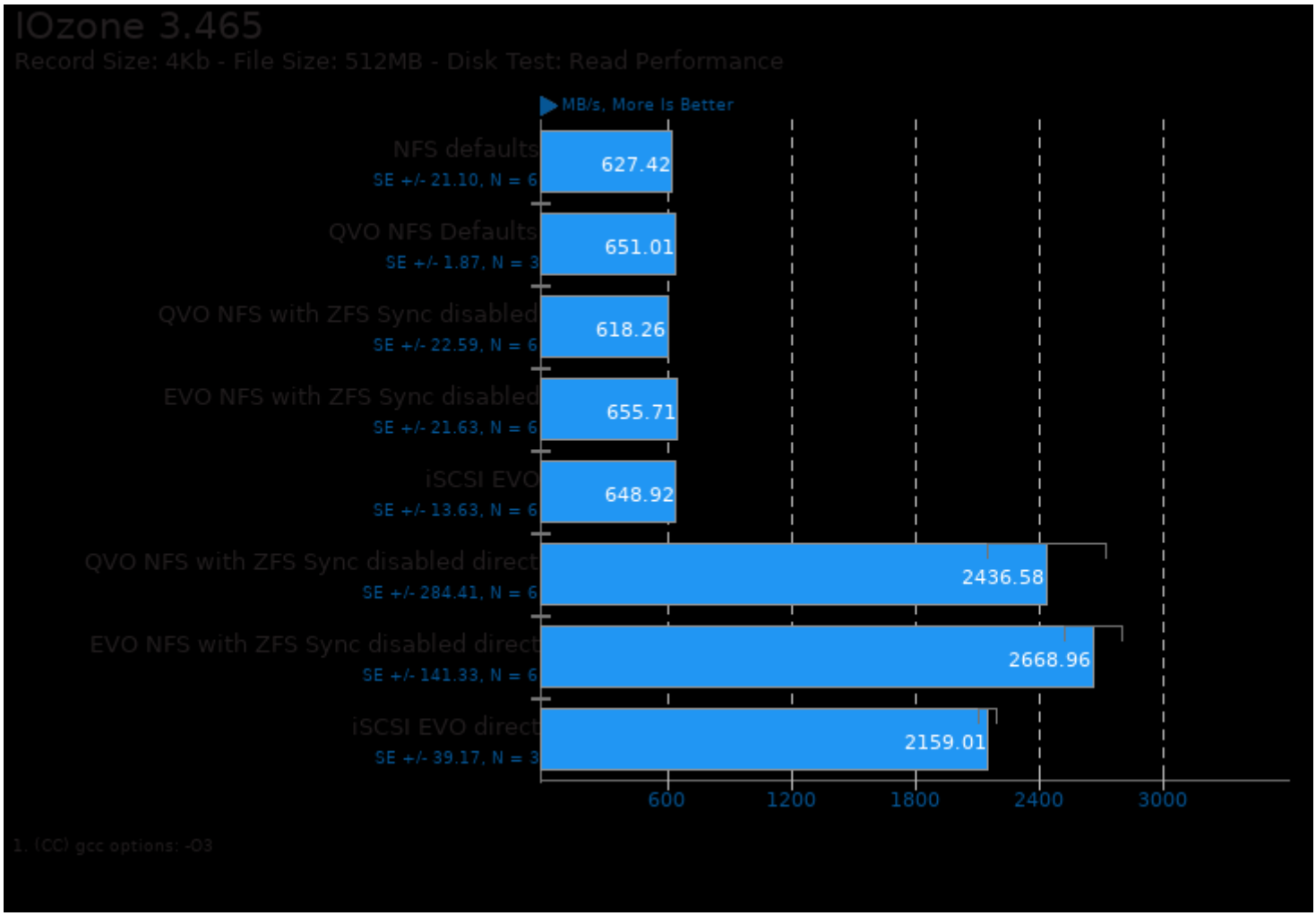
Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --disable-vtable-verify --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-gtk-cairo --enable-java-awt=gtk --enable-java-home --enable-languages=c,ada,c++,java,go,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-arch-directory=amd64 --with-default-libstdcxx-abi=new --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic -v
Disk Notes: CFQ / data=ordered,errors=remount-ro,relatime,rw
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW Protection

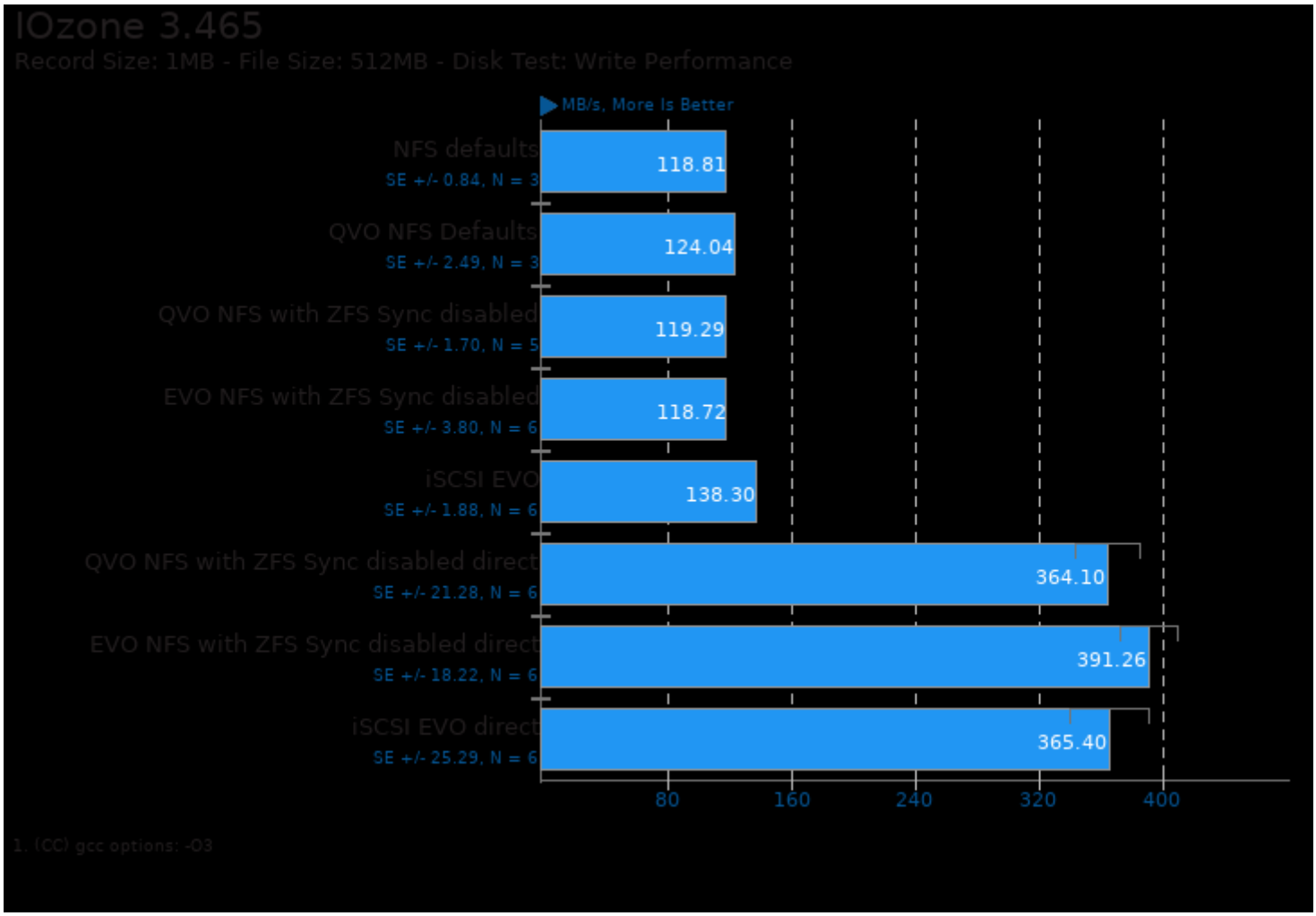
	NFS defaults	QVO NFS Defaults	QVO NFS with ZFS Sync disabled	EVO NFS with ZFS Sync disabled	iSCSI EVO	QVO NFS with ZFS Sync disabled direct	EVO NFS with ZFS Sync disabled direct	iSCSI EVO direct
IOzone - 1MB - 512MB - Read Performance (MB/s)	808.01	**744.39**	780.77	824.27	762.10	3410	**3828**	3477
Normalized	21.11%	19.45%	20.4%	21.53%	19.91%	89.07%	100%	90.82%
Standard Deviation	2.7%	18%	10.3%	4.1%	10%	58.5%	25.6%	41.1%
IOzone - 4Kb - 512MB - Read Performance (MB/s)	627.42	651.01	**618.26**	655.71	648.92	2437	**2669**	2159
Normalized	23.51%	24.39%	23.16%	24.57%	24.31%	91.29%	100%	80.89%
Standard Deviation	8.2%	0.5%	9%	8.1%	5.1%	28.6%	13%	3.1%
IOzone - 1MB - 512MB - Write Performance (MB/s)	118.81	124.04	119.29	**118.72**	138.30	364.10	**391.26**	365.40
Normalized	30.37%	31.7%	30.49%	30.34%	35.35%	93.06%	100%	93.39%
Standard Deviation	1.2%	3.5%	3.2%	7.8%	3.3%	14.3%	11.4%	17%
IOzone - 4Kb - 512MB - Write Performance (MB/s)	113.41	**110.66**	112.22	113.73	129.94	340.90	**351.82**	342.75
Normalized	32.24%	31.45%	31.9%	32.33%	36.93%	96.9%	100%	97.42%
Standard Deviation	3%	1%	1.7%	3.9%	4.7%	16.9%	11.7%	3.5%
IOzone - 64Kb - 512MB - Read Performance (MB/s)	824.68	**675.41**	804.40	805.36	828.17	4102	**4433**	2968
Normalized	18.6%	15.24%	18.15%	18.17%	18.68%	92.53%	100%	66.96%
Standard Deviation	1.1%	18.1%	7.3%	1.1%	6.7%	23.3%	21.7%	20.5%

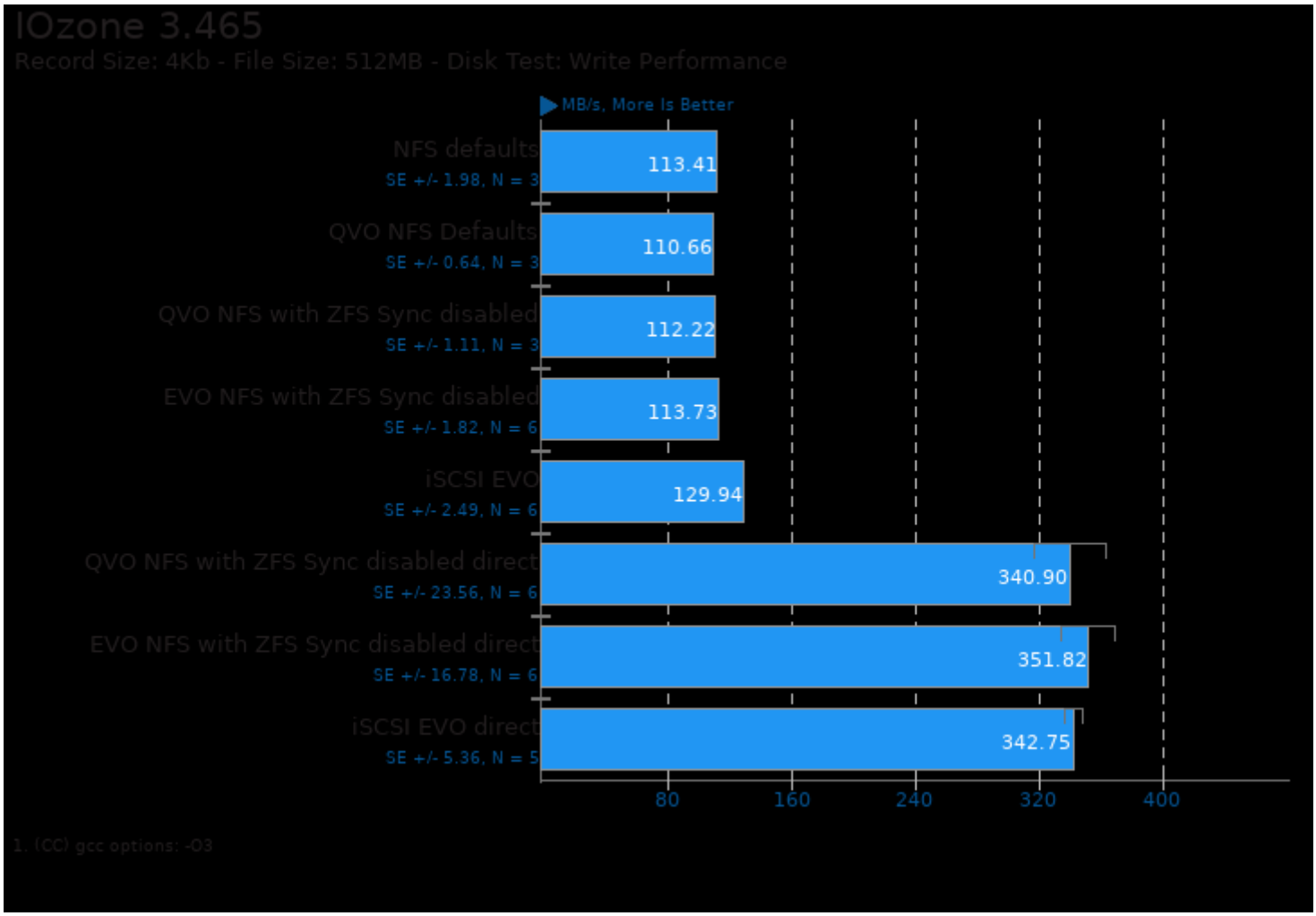
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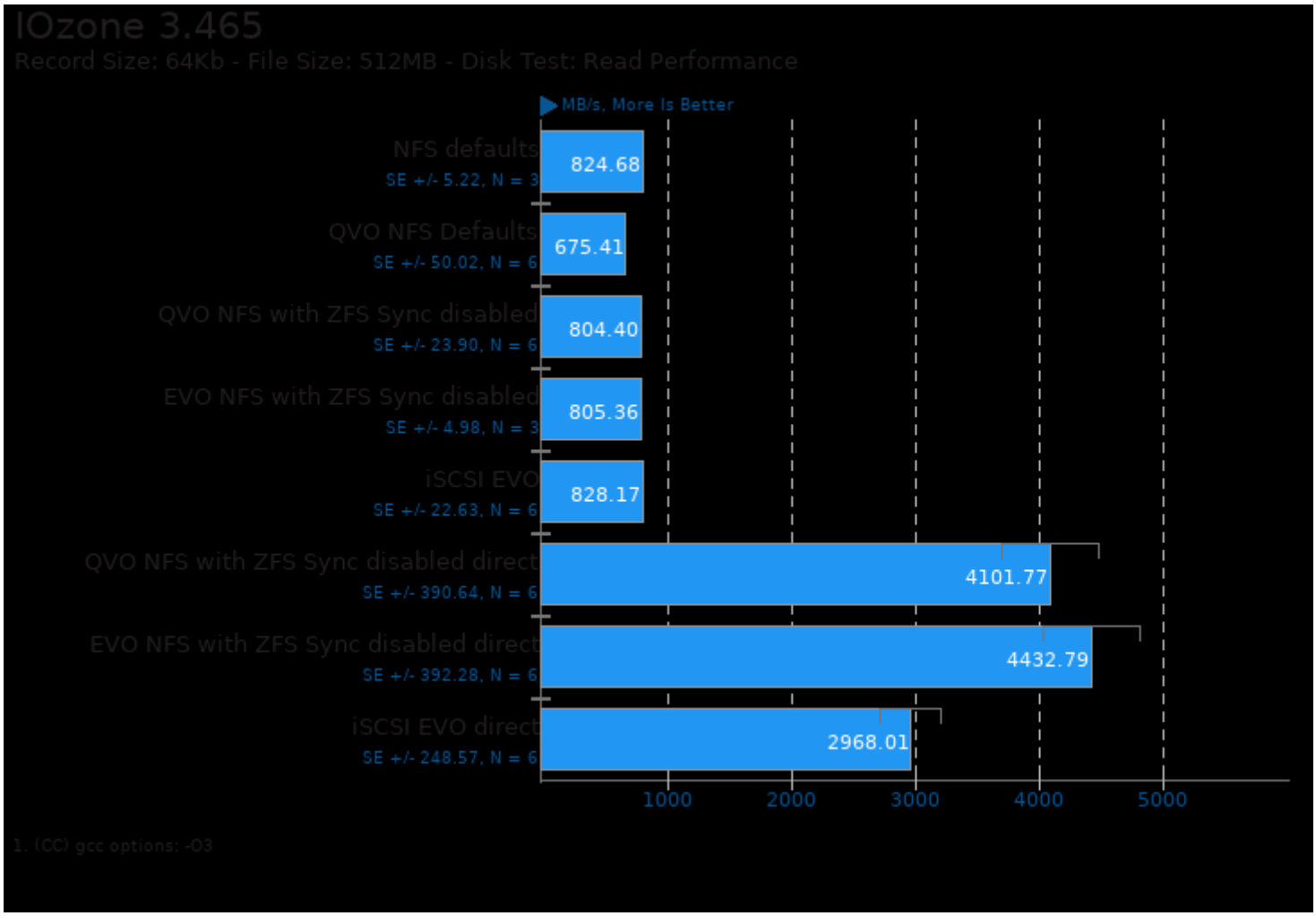
IOzone - 64Kb - 512MB - Write Performance (MB/s)	122.15	119.93	**115.27**	121.71	140.75	395.07	**413.08**	357.78
Normalized	29.57%	29.03%	27.91%	29.46%	34.07%	95.64%	100%	86.61%
Standard Deviation	3.3%	9.3%	2%	7.9%	2.8%	8.4%	6.6%	14.3%

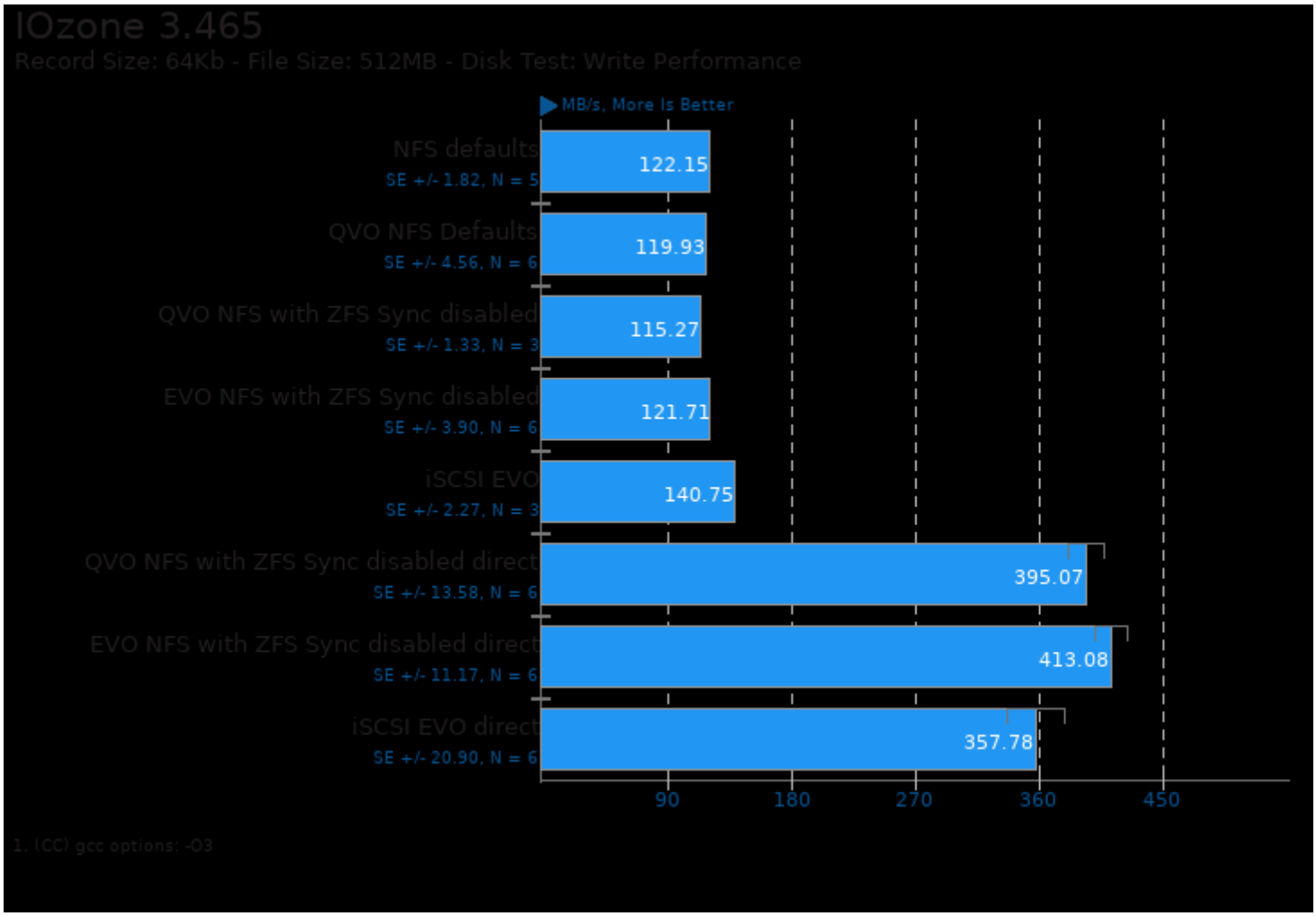

IOzone 3.465
Record Size: 1MB - File Size: 512MB - Disk Test: Read Performance
MB/s, More Is Better
NFS defaults
SE +/- 12.68, N = 3
808.01
QVO NFS Defaults
SE +/- 54.70, N = 6
744.39
QVO NFS with ZFS Sync disabled
SE +/- 32.84, N = 6
780.77
EVO NFS with ZFS Sync disabled
SE +/- 13.69, N = 6
824.27
iSCSI EVO
SE +/- 31.21, N = 6
762.10
QVO NFS with ZFS Sync disabled direct
SE +/- 814.37, N = 6
3409.62
EVO NFS with ZFS Sync disabled direct
SE +/- 400.21, N = 6
3828.09
iSCSI EVO direct
SE +/- 583.33, N = 6
3476.65
800
1600
2400
3200
4000
1. (CC) gcc options: -O3


IOzone 3.465
Record Size: 4Kb - File Size: 512MB - Disk Test: Read Performance
MB/s, More Is Better
NFS defaults
SE +/- 21.10, N = 6
627.42
QVO NFS Defaults
SE +/- 1.87, N = 3
651.01
QVO NFS with ZFS Sync disabled
SE +/- 22.59, N = 6
618.26
EVO NFS with ZFS Sync disabled
SE +/- 21.63, N = 6
655.71
iSCSI EVO
SE +/- 13.63, N = 6
648.92
QVO NFS with ZFS Sync disabled direct
SE +/- 284.41, N = 6
2436.58
EVO NFS with ZFS Sync disabled direct
SE +/- 141.33, N = 6
2668.96
iSCSI EVO direct
SE +/- 39.17, N = 3
2159.01
600
1200
1800
2400
3000
1. (CC) gcc options: -O3


IOzone 3.465
Record Size: 1MB - File Size: 512MB - Disk Test: Write Performance
MB/s, More Is Better
NFS defaults
SE +/- 0.84, N = 3
118.81
QVO NFS Defaults
SE +/- 2.49, N = 3
124.04
QVO NFS with ZFS Sync disabled
SE +/- 1.70, N = 5
119.29
EVO NFS with ZFS Sync disabled
SE +/- 3.80, N = 6
118.72
iSCSI EVO
SE +/- 1.88, N = 6
138.30
QVO NFS with ZFS Sync disabled direct
SE +/- 21.28, N = 6
364.10
EVO NFS with ZFS Sync disabled direct
SE +/- 18.22, N = 6
391.26
iSCSI EVO direct
SE +/- 25.29, N = 6
365.40
80
160
240
320
400
1. (CC) gcc options: -O3


IOzone 3.465
Record Size: 4Kb - File Size: 512MB - Disk Test: Write Performance
MB/s, More Is Better
NFS defaults
SE +/- 1.98, N = 3
113.41
QVO NFS Defaults
SE +/- 0.64, N = 3
110.66
QVO NFS with ZFS Sync disabled
SE +/- 1.11, N = 3
112.22
EVO NFS with ZFS Sync disabled
SE +/- 1.82, N = 6
113.73
iSCSI EVO
SE +/- 2.49, N = 6
129.94
QVO NFS with ZFS Sync disabled direct
SE +/- 23.56, N = 6
340.90
EVO NFS with ZFS Sync disabled direct
SE +/- 16.78, N = 6
351.82
iSCSI EVO direct
SE +/- 5.36, N = 5
342.75
80
160
240
320
400
1. (CC) gcc options: -O3


IOzone 3.465
Record Size: 64Kb - File Size: 512MB - Disk Test: Read Performance
MB/s, More Is Better
NFS defaults
SE +/- 5.22, N = 3
824.68
QVO NFS Defaults
SE +/- 50.02, N = 6
675.41
QVO NFS with ZFS Sync disabled
SE +/- 23.90, N = 6
804.40
EVO NFS with ZFS Sync disabled
SE +/- 4.98, N = 3
805.36
iSCSI EVO
SE +/- 22.63, N = 6
828.17
QVO NFS with ZFS Sync disabled direct
SE +/- 390.64, N = 6
4101.77
EVO NFS with ZFS Sync disabled direct
SE +/- 392.28, N = 6
4432.79
iSCSI EVO direct
SE +/- 248.57, N = 6
2968.01
1000
2000
3000
4000
5000
1. (CC) gcc options: -O3



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 20:46.