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# HP DL380 generations comparison

Comparing difference generations of HP DL380 servers

**Automated Executive Summary**

*Desktop i7-4790K 16GB SSD had the most wins, coming in first place for 64% of the tests.*

*Based on the geometric mean of all complete results, the fastest (G9 2xE5-2620v3 32GB 5x10K RAID5-2GB) was 5.45x the speed of the slowest (G4 2x3.60GHz 12GB 4x15K RAID5). Desktop i7-4790K 16GB SSD was 0.868x the speed of G9 2xE5-2620v3 32GB 5x10K RAID5-2GB, G8 E5-2620v2 16GB 4x10K RAID10 was 0.763x the speed of Desktop i7-4790K 16GB SSD, G5 2xE5440 4GB 4x10K RAID5 was 0.661x the speed of G8 E5-2620v2 16GB 4x10K RAID10, G7 E5620 8GB 4x10K RAID10noWCache was 0.755x the speed of G5 2xE5440 4GB 4x10K RAID5, G5 E5430 4GB 6x10K RAID10noWCache was 0.784x the speed of G7 E5620 8GB 4x10K RAID10noWCache, G6 E5504 4GB 4x10K RAID10noWCache was 0.842x the speed of G5 E5430 4GB 6x10K RAID10noWCache, G4 2x3.60GHz 12GB 4x15K RAID5 was 0.841x the speed of G6 E5504 4GB 4x10K RAID10noWCache.*

## Test Systems:

## G4 2x3.60GHz 12GB 4x15K RAID5

Processor: 2 x Intel Xeon @ 3.60GHz (4 Cores), Motherboard: HP ProLiant DL380 G4, Memory: 12288MB, Disk: 1045GB

OS: CentOS 6.6, Kernel: 2.6.32-504.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
System Notes: Python 2.6.6. SELinux: Enabled.
Disk Mount Options Notes: barrier=1,data=ordered,relatime,rw,seclabel

## G5 E5430 4GB 6x10K RAID10noWCache

Processor: Intel Xeon E5430 @ 2.67GHz (4 Cores), Motherboard: HP ProLiant DL380 G5, Chipset: Intel 5000P MCH, Memory: 4096MB, Disk: 20GB, Graphics: ATI ES1000, Monitor: ATEN + UP91, Network: Broadcom NetXtreme II BCM5708 Gigabit

OS: CentOS 6.0, Kernel: 2.6.32-71.el6.x86_64 (x86_64), Desktop: GNOME, Display Driver: radeon 6.13.0, Compiler: GCC 4.4.4 20100726, File-System: ext4, Screen Resolution: 1024x768

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
System Notes: Python 2.6.5.
Disk Mount Options Notes: barrier=1,data=ordered,relatime,rw

## G5 2xE5440 4GB 4x10K RAID5

Processor: 2 x Intel Xeon E5440 @ 2.83GHz (8 Cores), Motherboard: HP ProLiant DL380 G5, Chipset: Intel 5000P MCH, Memory: 4096MB, Disk: 9GB, Graphics: AMD ES1000 128MB, Monitor: HP W1972a, Network: Broadcom NetXtreme II BCM5708 Gigabit

OS: CentOS 6.7, Kernel: 2.6.32-573.1.1.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4, Screen Resolution: 1024x768

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
System Notes: Python 2.6.6.
Disk Mount Options Notes: barrier=1,data=ordered,noatime,rw

## G6 E5504 4GB 4x10K RAID10noWCache

Processor: Intel Xeon E5504 @ 2.00GHz (4 Cores), Motherboard: HP ProLiant DL380 G6, Chipset: Intel 5520 I/O + ICH10, Memory: 4096MB, Disk: 294GB LOGICAL VOLUME + 600GB LOGICAL VOLUME + 2000GB My Book 1140, Graphics: AMD ES1000 128MB, Monitor: BenQ T720, Network: Broadcom NetXtreme II BCM5709 Gigabit

OS: CentOS 6.7, Kernel: 2.6.32-431.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4, Screen Resolution: 1280x1024

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
System Notes: Disk Scheduler: CFQ. Python 2.6.6.

## G7 E5620 8GB 4x10K RAID10noWCache

Processor: Intel Xeon E5620 @ 2.40GHz (8 Cores), Motherboard: HP ProLiant DL380 G7, Memory: 8192MB, Disk: 600GB LOGICAL VOLUME + 900GB LOGICAL VOLUME, Graphics: 128MB

OS: CentOS 6.6, Kernel: 2.6.32-504.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4, Screen Resolution: 1024x768

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
System Notes: Disk Scheduler: CFQ. Python 2.6.6. SELinux: Enabled.

## G8 E5-2620v2 16GB 4x10K RAID10

Processor: Intel Xeon E5-2620 v2 @ 2.10GHz (12 Cores), Motherboard: HP ProLiant DL380p Gen8, Chipset: Intel Xeon E7 v2/Xeon, Memory: 16384MB, Disk: 300GB LOGICAL VOLUME + 3601GB LOGICAL VOLUME, Graphics: Matrox s MGA G200EH, Monitor: Smart Cable, Network: Broadcom NetXtreme BCM5719 Gigabit PCIe

OS: CentOS 6.6, Kernel: 2.6.32-504.1.3.el6.x86_64 (x86_64), Display Driver: modesetting 0.8.0, 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,stripe=64
Processor Notes: Scaling Governor: pcc-cpufreq userspace
System Notes: Disk Scheduler: CFQ. Python 2.6.6.

## G9 2xE5-2620v3 32GB 5x10K RAID5-2GB

Processor: 2 x Intel Xeon E5-2620 v3 @ 2.40GHz (24 Cores), Motherboard: HP ProLiant DL380 Gen9, Chipset: Intel Haswell-E DMI2, Memory: 32768MB, Disk: 3601GB LOGICAL VOLUME, Graphics: Matrox s MGA G200EH, Monitor: LCD Monitor 1 + 7", Network: Broadcom NetXtreme BCM5719 Gigabit PCIe

OS: Red Hat Enterprise Linux 7.0, Kernel: 3.10.0-123.el7.x86_64 (x86_64), Desktop: GNOME Shell 3.8.4, Display Driver: modesetting 0.8.0, Compiler: GCC 4.8.2 20140120, File-System: ext4, Screen Resolution: 1280x1024

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 / data=ordered,relatime,rw,stripe=256
Processor Notes: Scaling Governor: pcc-cpufreq performance
System Notes: Disk Scheduler: DEADLINE. Python 2.7.5.

## Desktop i7-4790K 16GB SSD

Processor: Intel Core i7-4790K @ 4.00GHz (8 Cores), Motherboard: ASUS GRYPHON Z97 ARMOR EDITION, Chipset: Intel 4th Gen Core DRAM, Memory: 16384MB, Disk: 256GB Samsung SSD 850, Graphics: Intel Xeon E3-1200 v3/4th Gen Core IGP, Audio: C-Media CMI8788, Monitor: E2350, Network: Intel Connection

OS: CentOS 6.6, Kernel: 2.6.32-504.el6.x86_64 (x86_64), Compiler: GCC 4.4.7 20120313, File-System: ext4, Screen Resolution: 1920x1080

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: acpi-cpufreq ondemand
System Notes: Disk Scheduler: CFQ. Python 2.6.6. SELinux: Enabled.

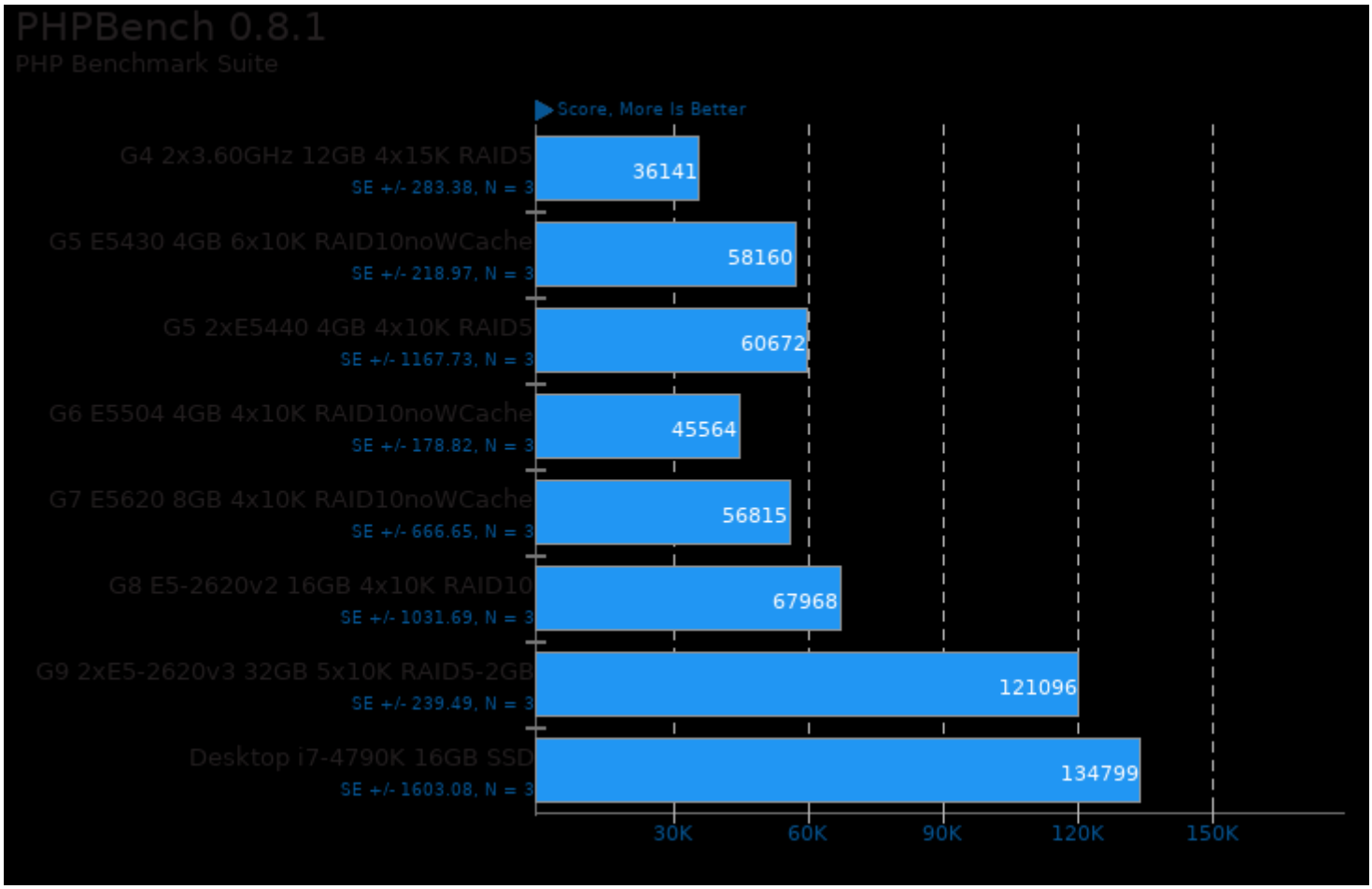
# HP DL380 generations comparison

| | G4 2x3.60GHz 12GB 4x15K RAID5 | G5 E5430 4GB 6x10K RAID10no WCache | G5 2xE5440 4GB 4x10K RAID5 | G6 E5504 4GB 4x10K RAID10no WCache | G7 E5620 8GB 4x10K RAID10no WCache | G8 E5-2620v2 16GB 4x10K RAID10 | G9 2xE5-2620 v3 32GB 5x10K RAID5-2G | Desktop i7-4790K 16GB SSD |
|---|---|---|---|---|---|---|---|---|
| **PHPBench - P.B.S (Score)** | **36141** | 58160 | 60672 | 45564 | 56815 | 67968 | 121096 | **134799** |
| **Normalized** | 26.81% | 43.15% | 45.01% | 33.8% | 42.15% | 50.42% | 89.83% | 100% |
| **Standard Deviation** | 1.4% | 0.7% | 3.3% | 0.7% | 2% | 2.6% | 0.3% | 2.1% |
| **Apache Benchmark - S.W.P.S (Reqs/sec)** | **4955** | 8499 | 12745 | 10258 | 11426 | 17373 | 21815 | **28979** |
| **Normalized** | 17.1% | 29.33% | 43.98% | 35.4% | 39.43% | 59.95% | 75.28% | 100% |
| **Standard Deviation** | 0.2% | 3.3% | 0.1% | 0.3% | 1.4% | 0.9% | 1.2% | 0.5% |
| **PyBench - T.F.A.T.T (Milliseconds)** | **6607** | 4044 | 3677 | 5421 | 4025 | 3726 | 2192 | **1721** |
| **Normalized** | 26.05% | 42.56% | 46.8% | 31.75% | 42.76% | 46.19% | 78.51% | 100% |
| **Standard Deviation** | 0.5% | 0.1% | 0.3% | 0.1% | 0.2% | 0.1% | 0.3% | 0.1% |
| **PostgreSQL pgbench - T.B.T.P.S (TPS)** | **59.81** | 247.63 | 1673 | 230.78 | 401.29 | **7412** | | 985.68 |
| **Normalized** | 0.81% | 3.34% | 22.57% | 3.11% | 5.41% | 100% | | 13.3% |
| **Standard Deviation** | 1.2% | 0.5% | 0.6% | 0.2% | 0.8% | 0.1% | | 0.2% |
| **OpenSSL - R.4.b.P (Signs/sec)** | **69.90** | 230.70 | 487.53 | 178.30 | 238.37 | 537.10 | **1284** | 729.27 |
| **Normalized** | 5.44% | 17.97% | 37.97% | 13.88% | 18.56% | 41.83% | 100% | 56.79% |
| **Standard Deviation** | 0% | 0.4% | 0.8% | 0.1% | 0.2% | 0% | 0.1% | 0.4% |
| **System XZ Decompression - P.T.S.v.2.1 (sec)** | | 6.93 | 6.31 | **8.47** | | 6.49 | 4.99 | **3.70** |
| **Normalized** | | 53.39% | 58.64% | 43.68% | | 57.01% | 74.15% | 100% |
| **Standard Deviation** | | 1.3% | 0.2% | 0.1% | | 0% | 0.2% | 0.3% |
| **GnuPG - 1.F.E (sec)** | 17.52 | 19.02 | 18.32 | **27.74** | 22.08 | 12.37 | 9.33 | **6.64** |
| **Normalized** | 37.9% | 34.91% | 36.24% | 23.94% | 30.07% | 53.68% | 71.17% | 100% |
| **Standard Deviation** | 0.2% | 0.5% | 3.4% | 0.6% | 0.2% | 0.6% | 1.6% | 1% |
| **LAME MP3 Encoding - WAV To MP3 (sec)** | **35.73** | 24.75 | 23.18 | 31.07 | 24.84 | 20.03 | 15.31 | **10.87** |
| **Normalized** | 30.42% | 43.92% | 46.89% | 34.99% | 43.76% | 54.27% | 71% | 100% |
| **Standard Deviation** | 0.2% | 0.5% | 0.2% | 0% | 0.1% | 0.1% | 1.4% | 0.2% |
| **Gzip Compression - 2.F.C (sec)** | 22.99 | 17.42 | 18.65 | **23.54** | 19.03 | 17.93 | 13.25 | **9.33** |
| **Normalized** | 40.58% | 53.56% | 50.03% | 39.63% | 49.03% | 52.04% | 70.42% | 100% |
| **Standard Deviation** | 0.3% | 0.5% | 8.1% | 3.1% | 0.2% | 0.7% | 0.3% | 1.4% |
| **Parallel BZIP2 Compression - 2.F.C (sec)** | **37.74** | 19.29 | 7.36 | 21.19 | 11.71 | 7.54 | **3.28** | 6.11 |
| **Normalized** | 8.69% | 17% | 44.57% | 15.48% | 28.01% | 43.5% | 100% | 53.68% |
| **Standard Deviation** | 0.5% | 20.2% | 3.7% | 0.2% | 0.5% | 0.1% | 0.9% | 5.3% |
| **Timed PHP Compilation - Time To Compile (sec)** | **117.84** | 49.92 | 31.52 | 57.69 | 36.96 | 26.98 | **16.90** | 20.19 |
| **Normalized** | 14.34% | 33.85% | 53.62% | 29.29% | 45.73% | 62.64% | 100% | 83.7% |
| **Standard Deviation** | 0.1% | 0.1% | 0.5% | 0.1% | 0.2% | 0.2% | 1.1% | 1% |

# HP DL380 generations comparison

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Loopback TCP Network Performance - T.T.T.1.V.L (sec)** | | **37.88** | | 25.32 | | **21.07** | | |
| **Normalized** | | 55.62% | | 83.21% | | 100% | | |
| **Standard Deviation** | | 1.3% | | 1.1% | | 7.7% | | |
| **Unpacking The Linux Kernel - linux-2.6.32.tar.bz2** | **25.34** | 12.46 | 12.23 | 19.49 | 14.71 | 12.16 | 9.40 | **6.67** |
| **Normalized** | 26.32% | 53.53% | 54.54% | 34.22% | 45.34% | 54.85% | 70.96% | 100% |
| **Standard Deviation** | 5.1% | 2.6% | 3.6% | 2.9% | 0.9% | 3.5% | 2.4% | 2.5% |
| **SQLite - D.T.D (sec)** | **659.82** | 382.06 | 8.98 | 390.52 | 407.35 | 6.54 | **4.03** | 97.10 |
| **Normalized** | 0.61% | 1.05% | 44.88% | 1.03% | 0.99% | 61.62% | 100% | 4.15% |
| **Standard Deviation** | 1.2% | 1% | 3.5% | 1% | 1.2% | 0.3% | 1.5% | 0.3% |
| **AIO-Stress - Rand Write (MB/s)** | 635.05 | 95.04 | **75.49** | 110.60 | 930.59 | 2349 | 1985 | **4624** |
| **Normalized** | 13.73% | 2.06% | 1.63% | 2.39% | 20.13% | 50.79% | 42.92% | 100% |
| **Standard Deviation** | 4.5% | 21.9% | 12.1% | 13.3% | 1.1% | 0.4% | 1.3% | 0.7% |

# HP DL380 generations comparison



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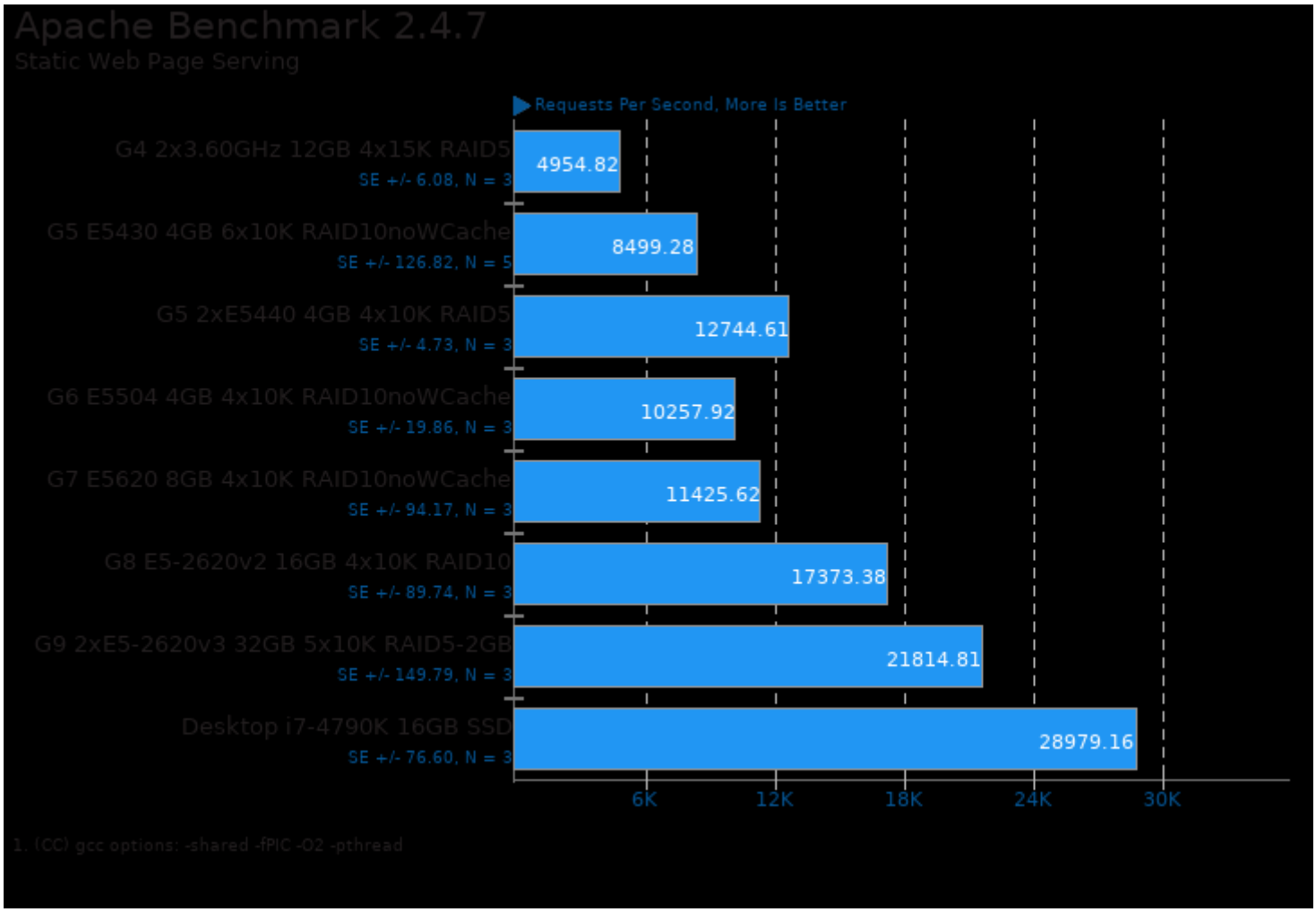

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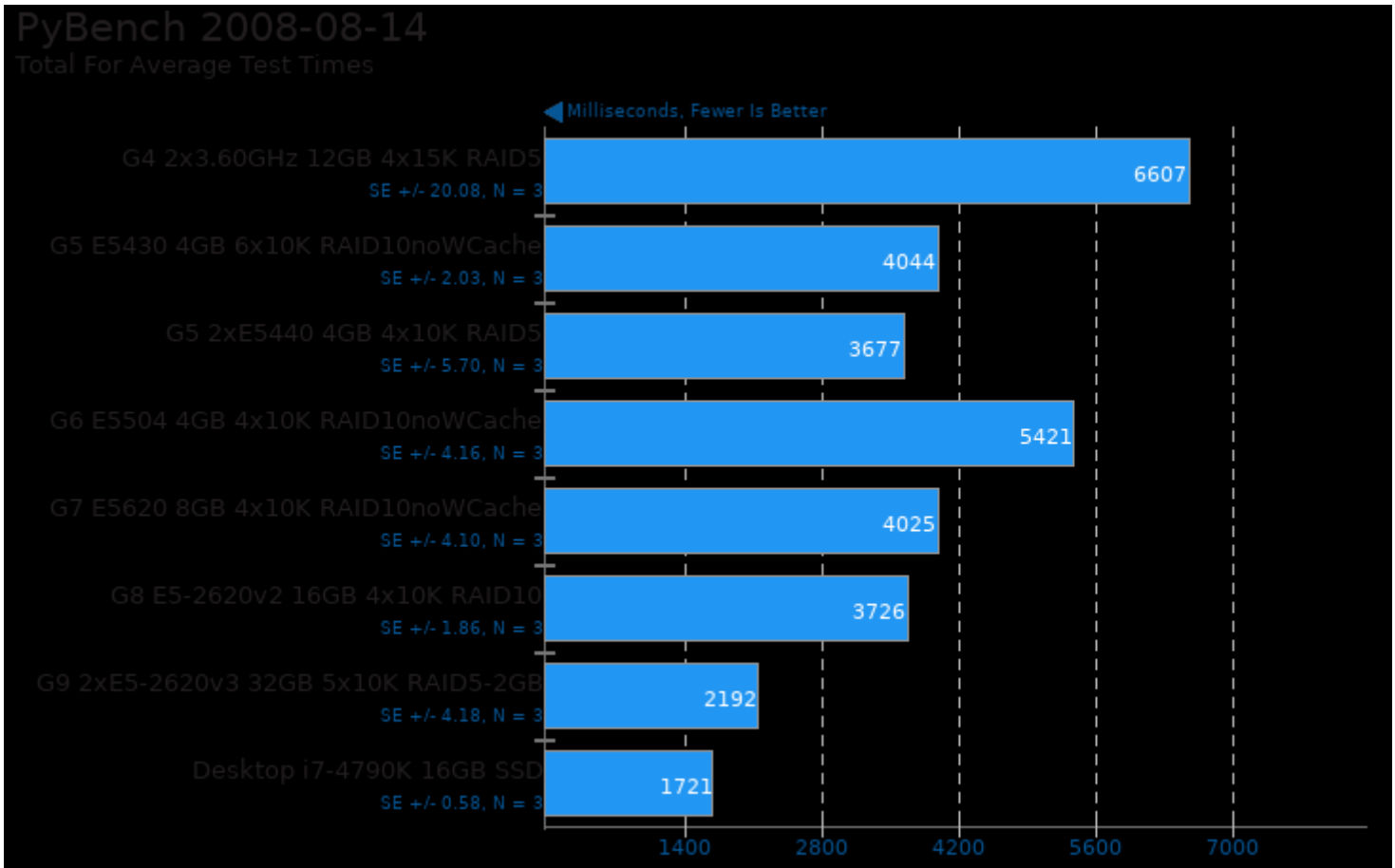


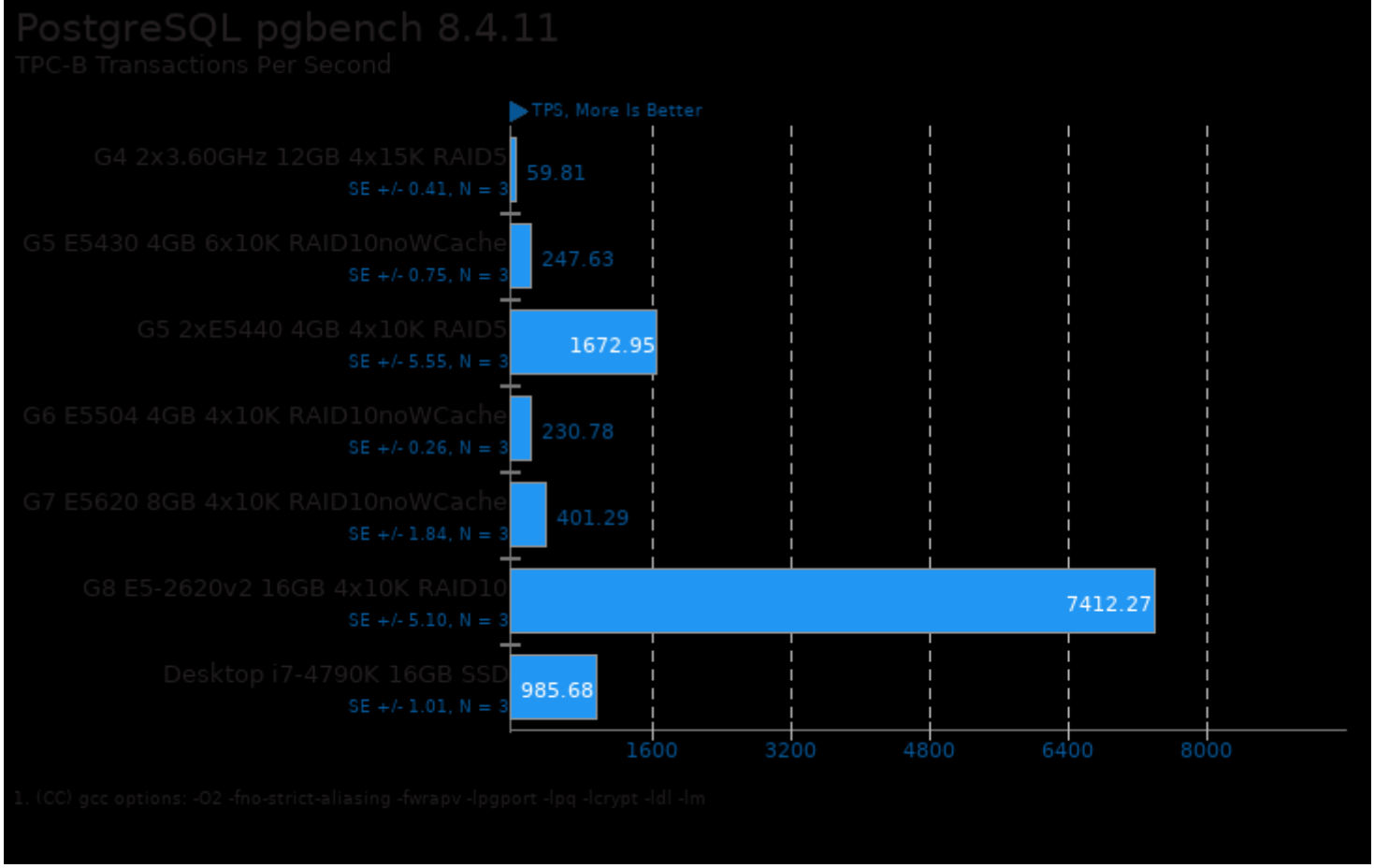

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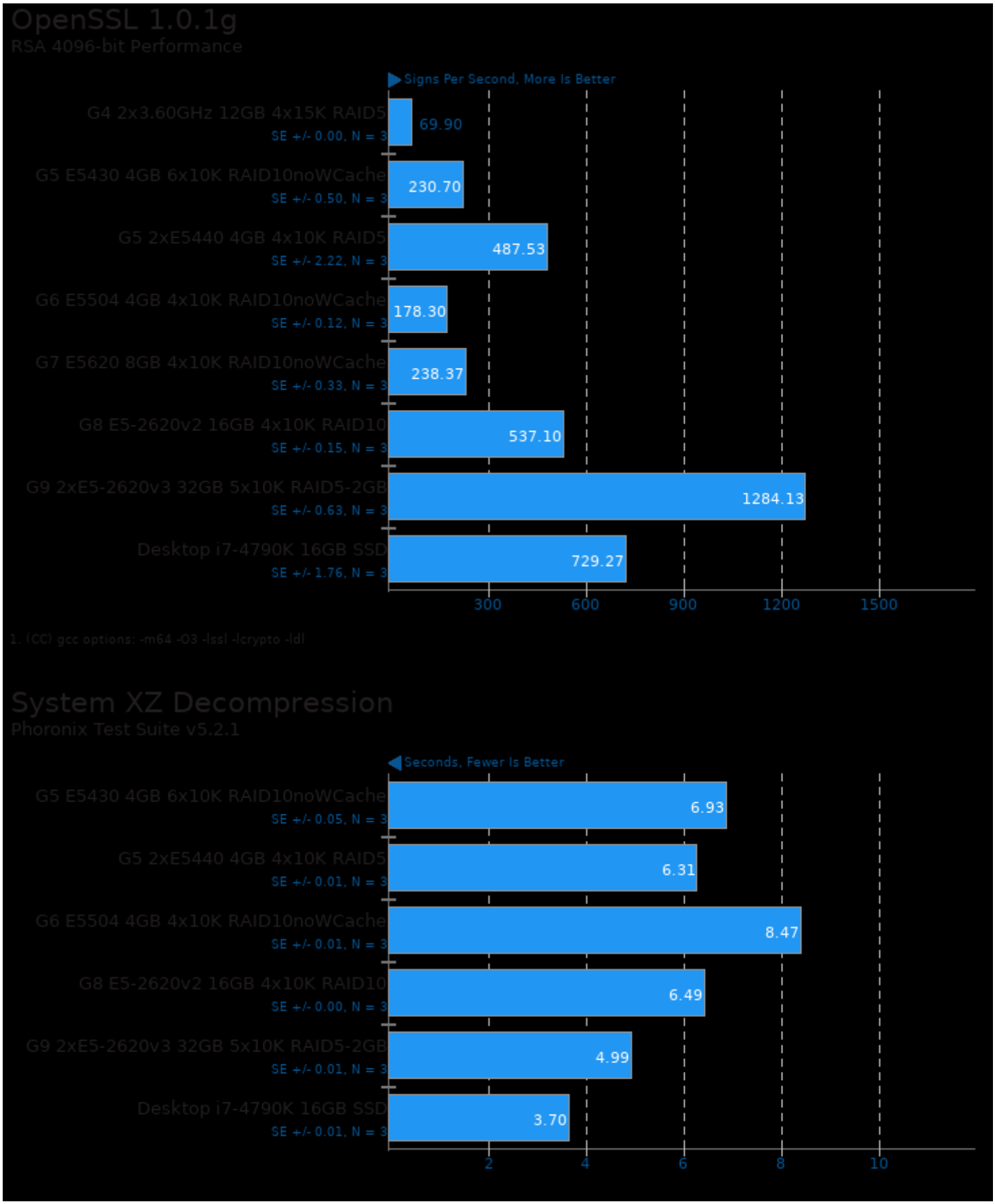

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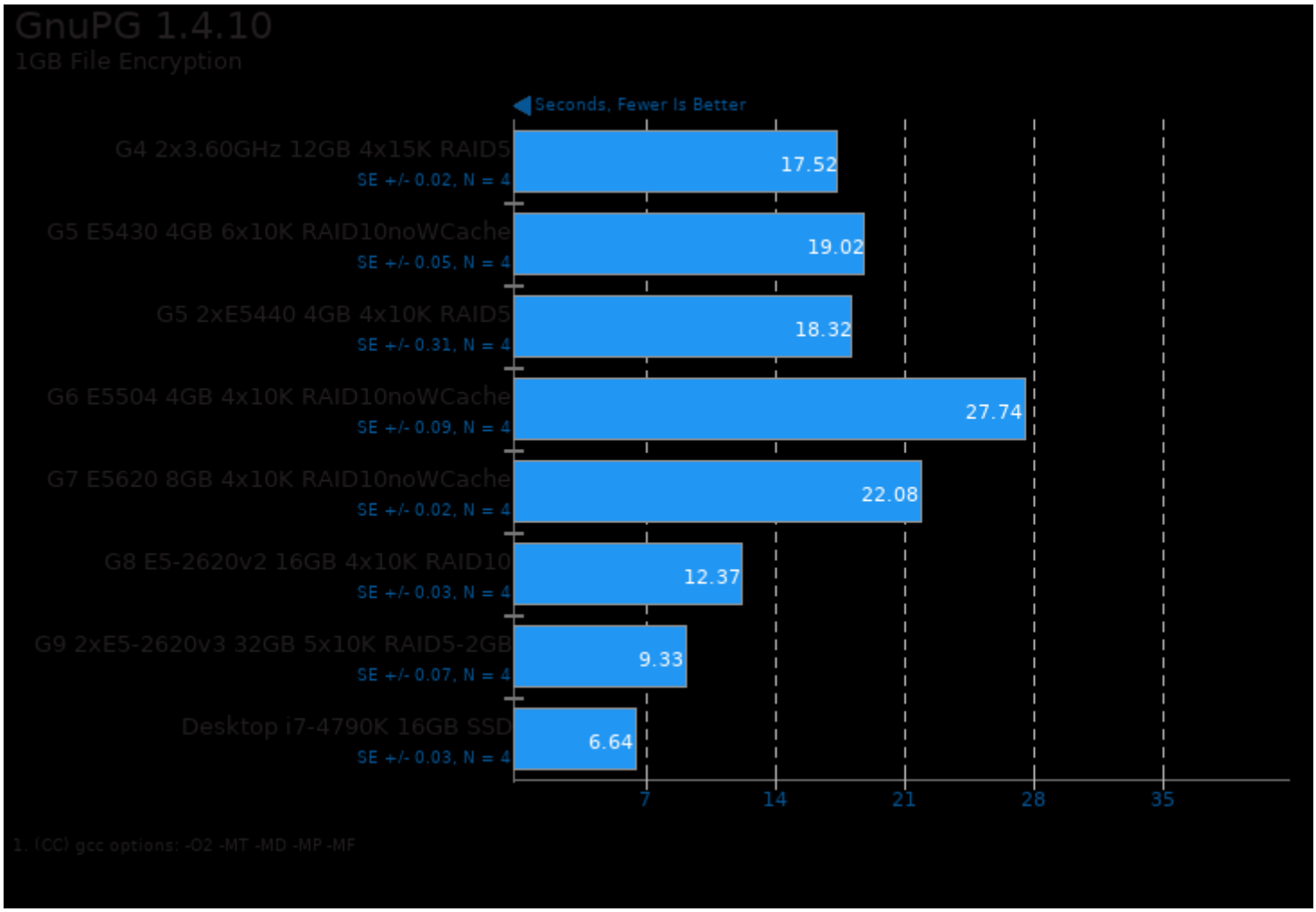

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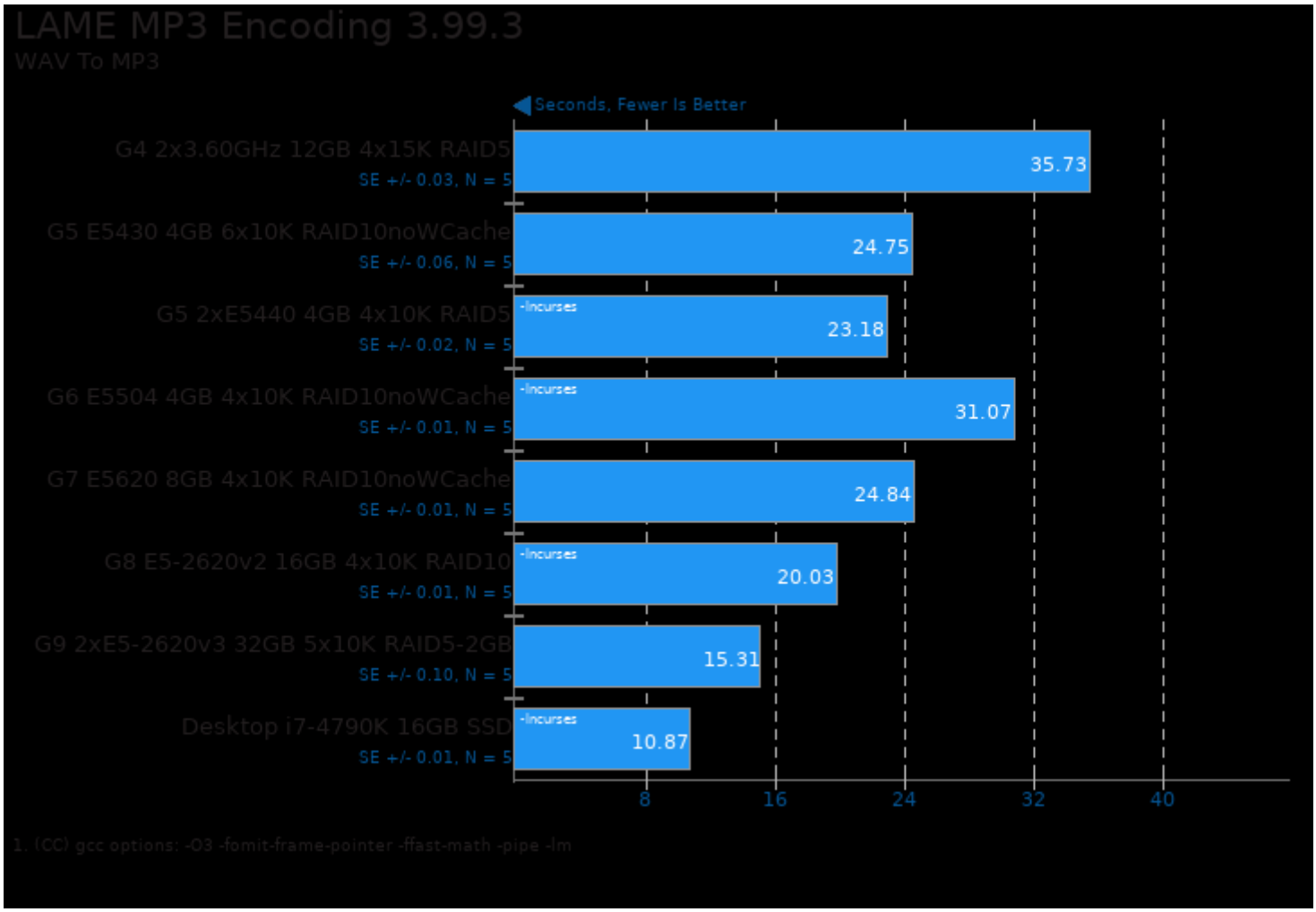

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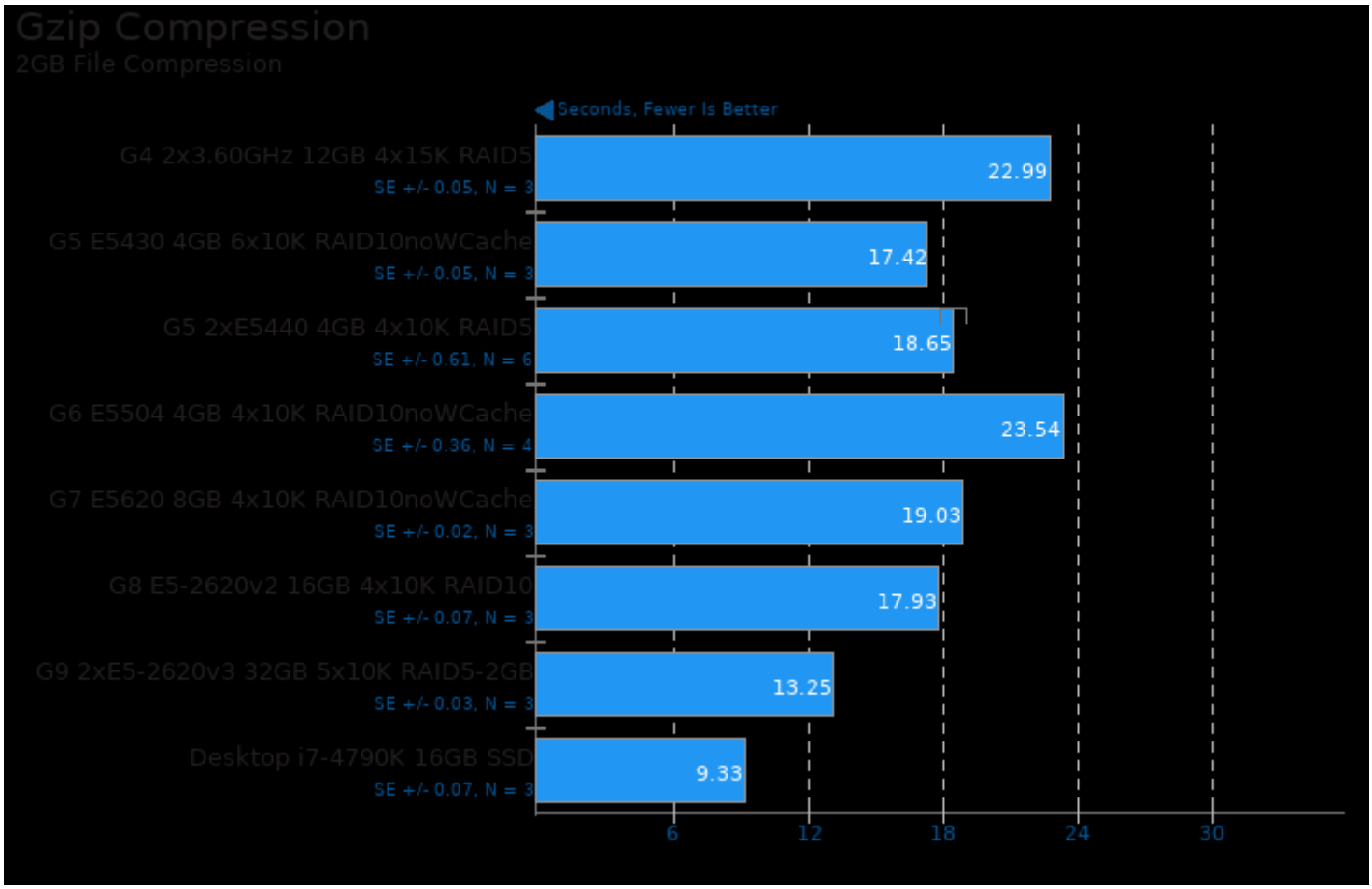

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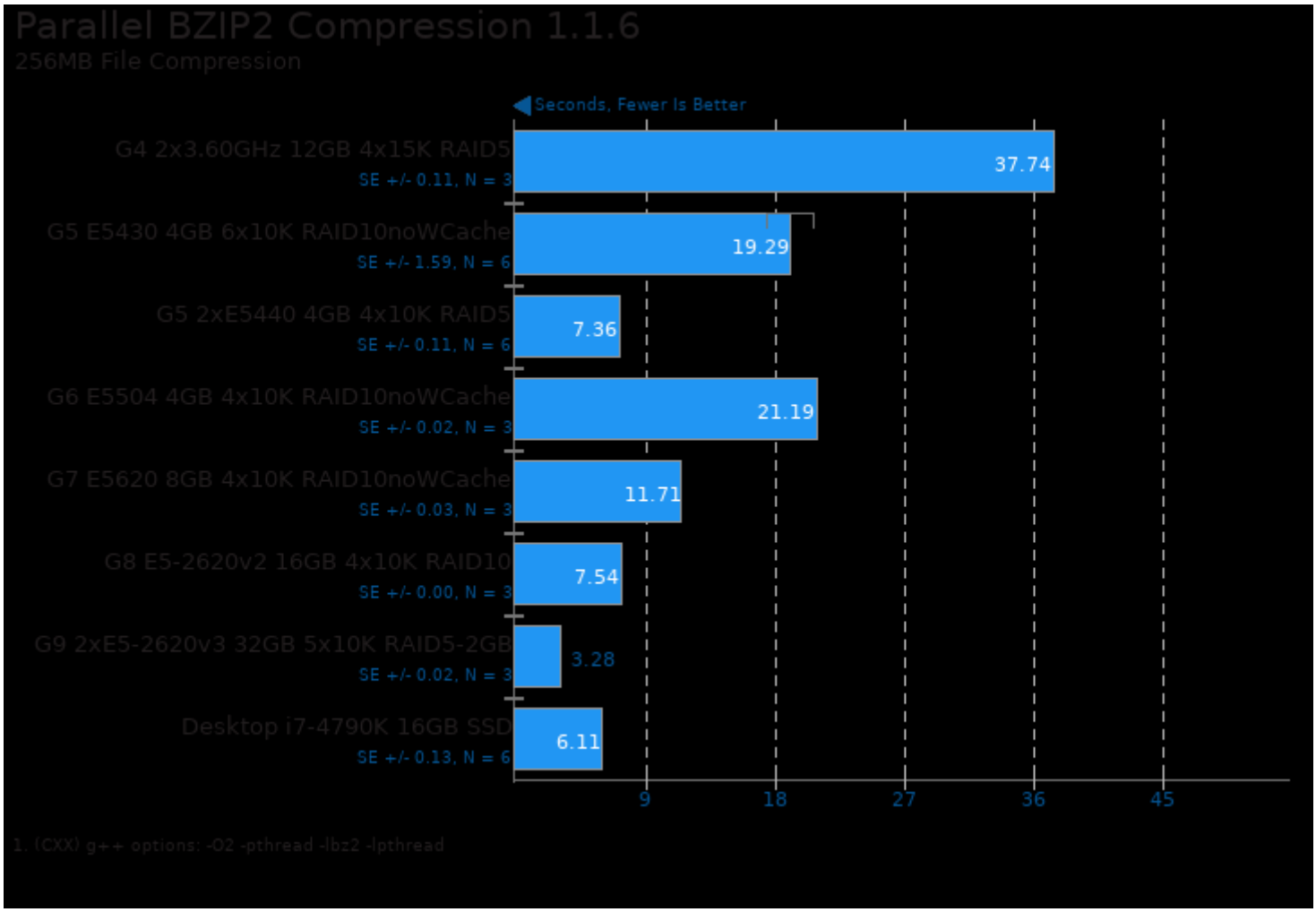

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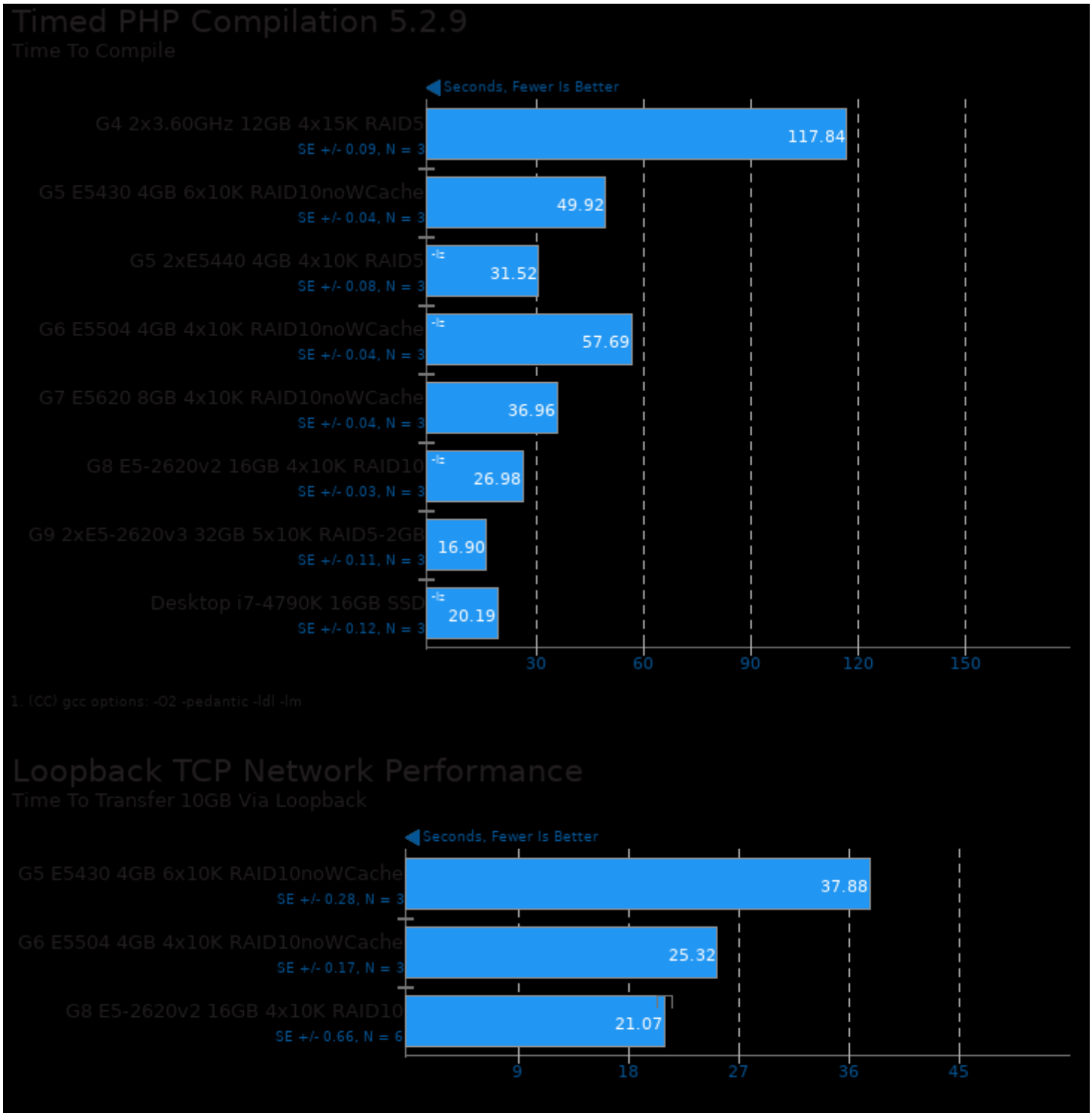

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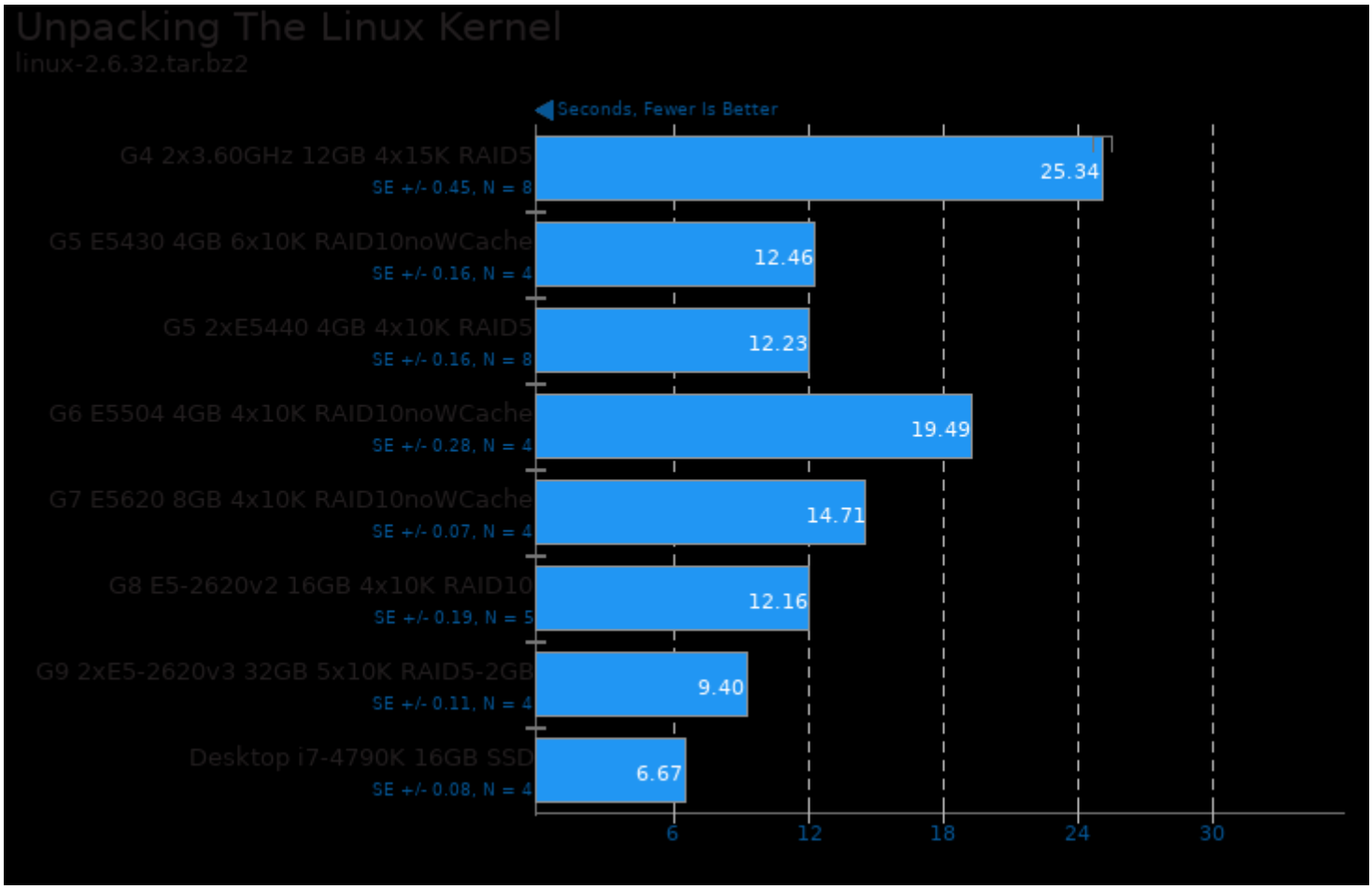

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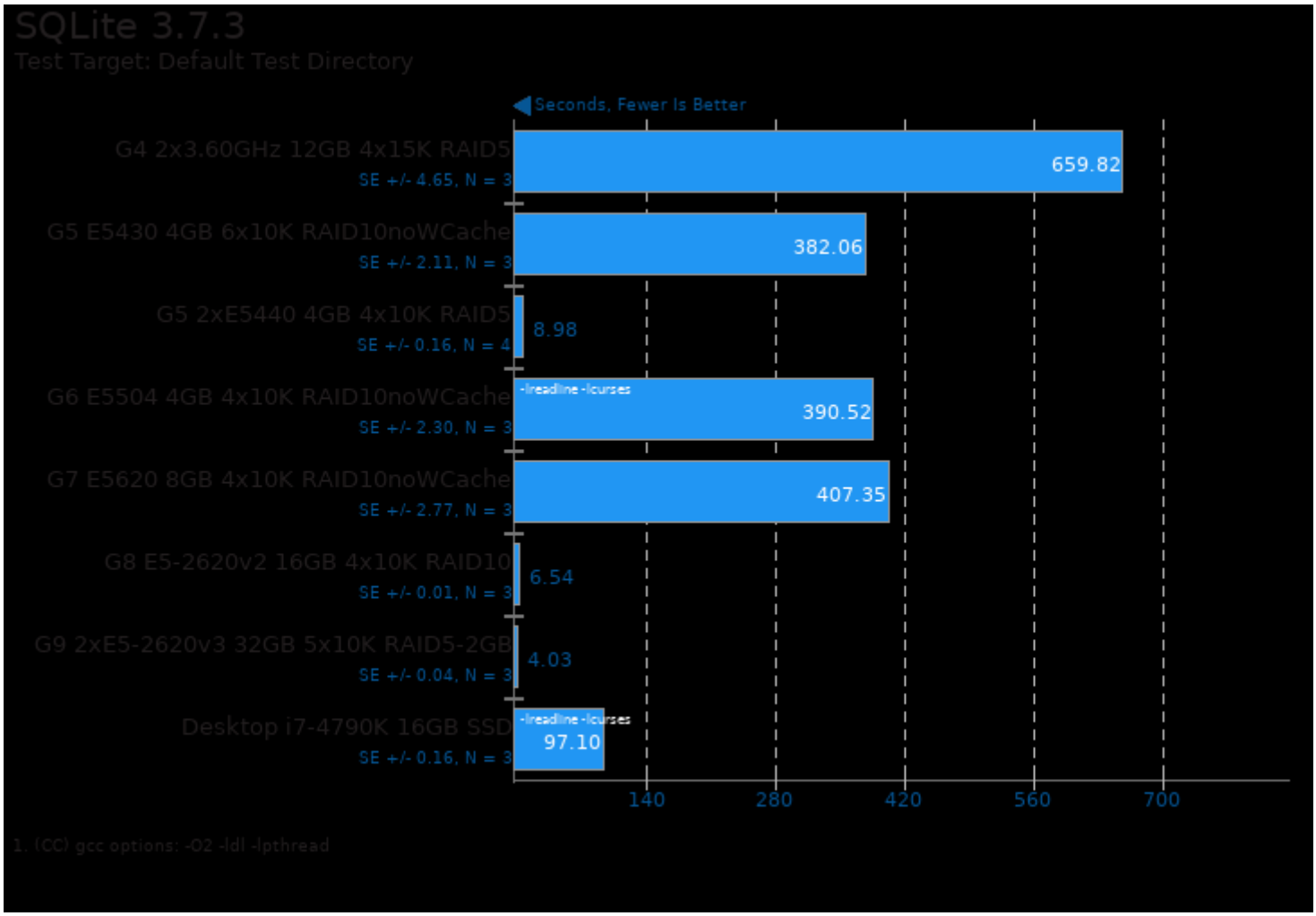

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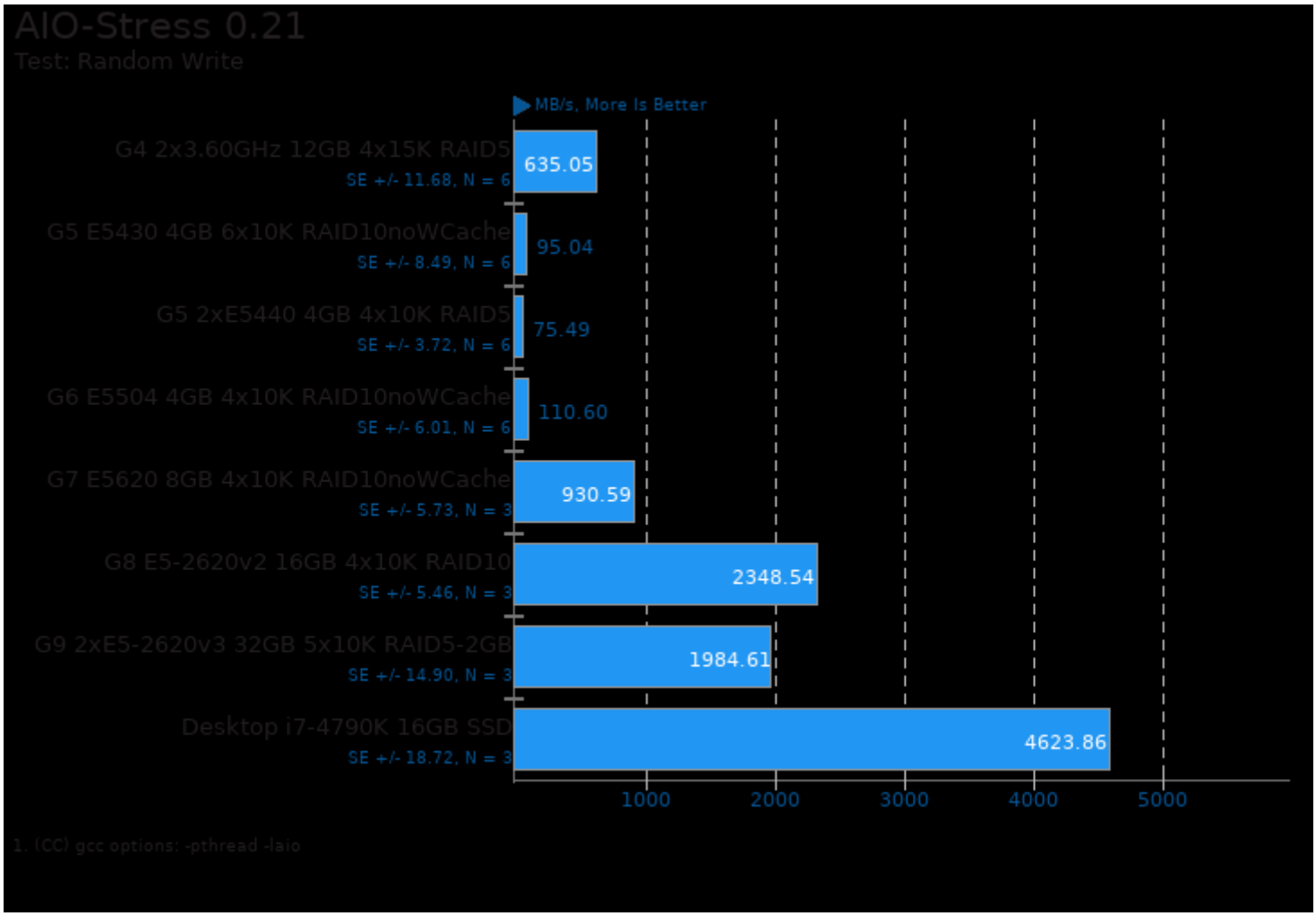
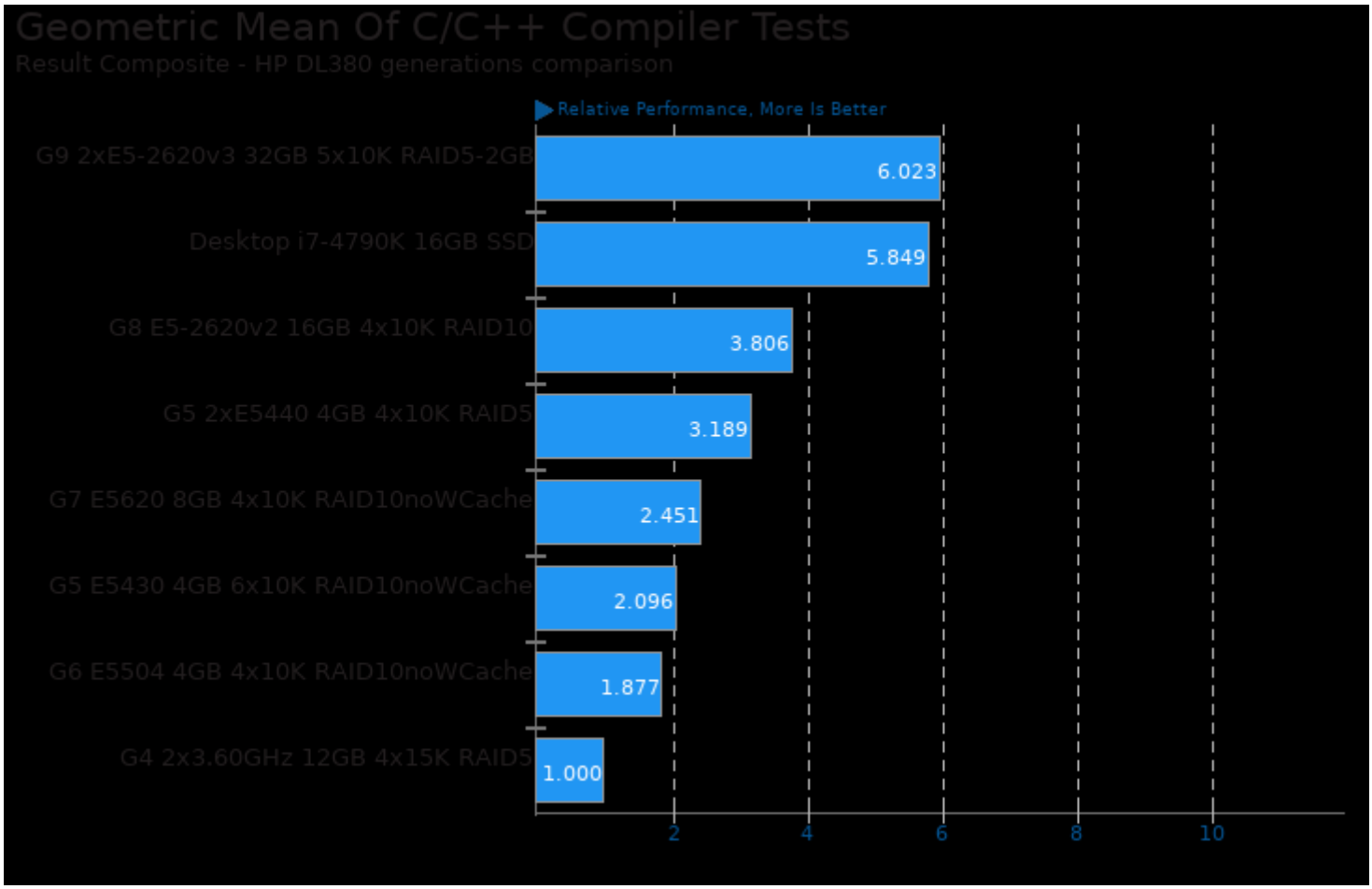


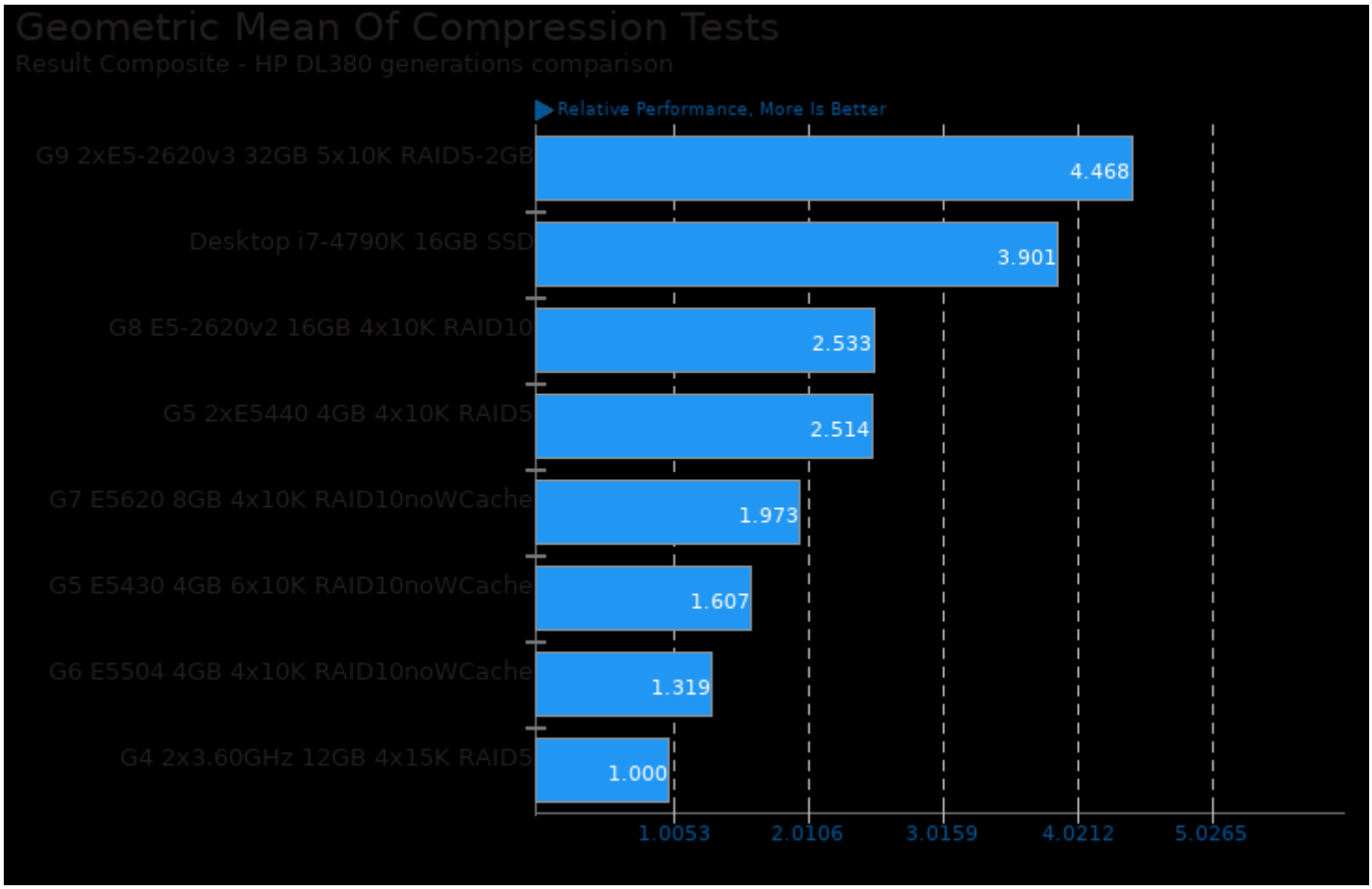
# HP DL380 generations comparison

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



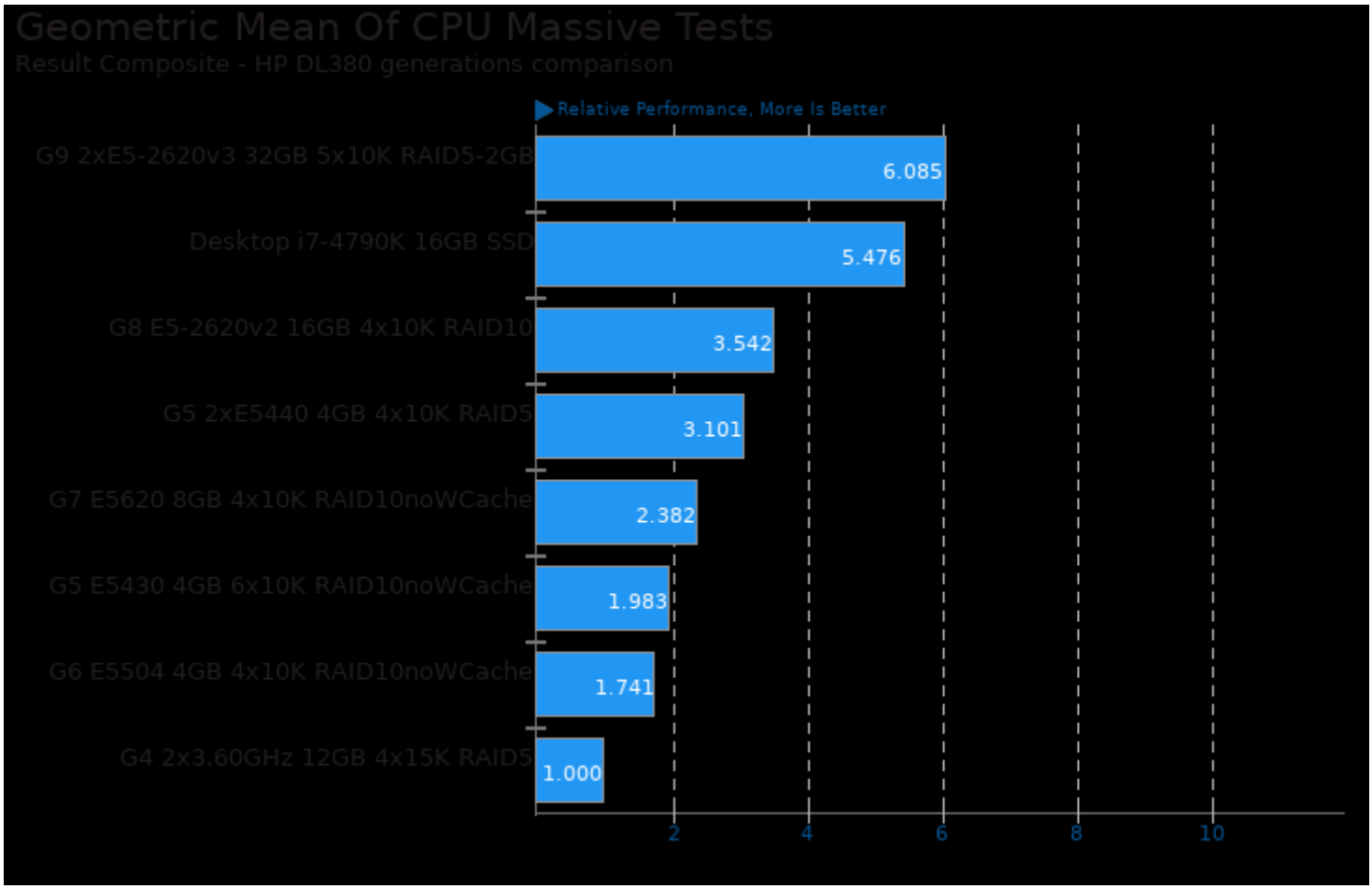

Geometric mean based upon tests: pts/build-php, pts/encode-mp3, pts/pgbench, pts/apache and pts/openssl

# HP DL380 generations comparison



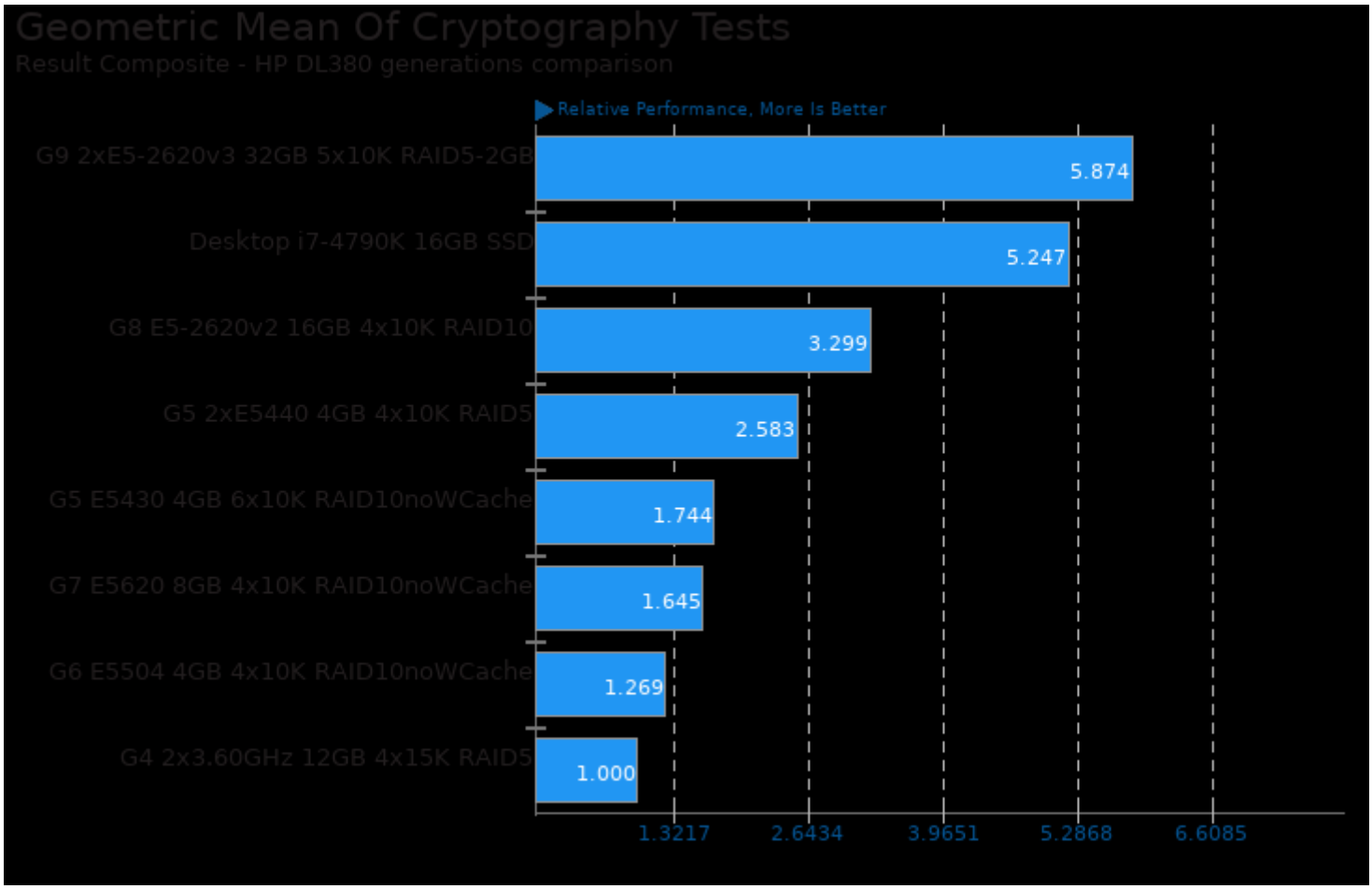

Geometric mean based upon tests: pts/compress-gzip, pts/compress-pbzip2 and pts/system-decompress-xz

# HP DL380 generations comparison



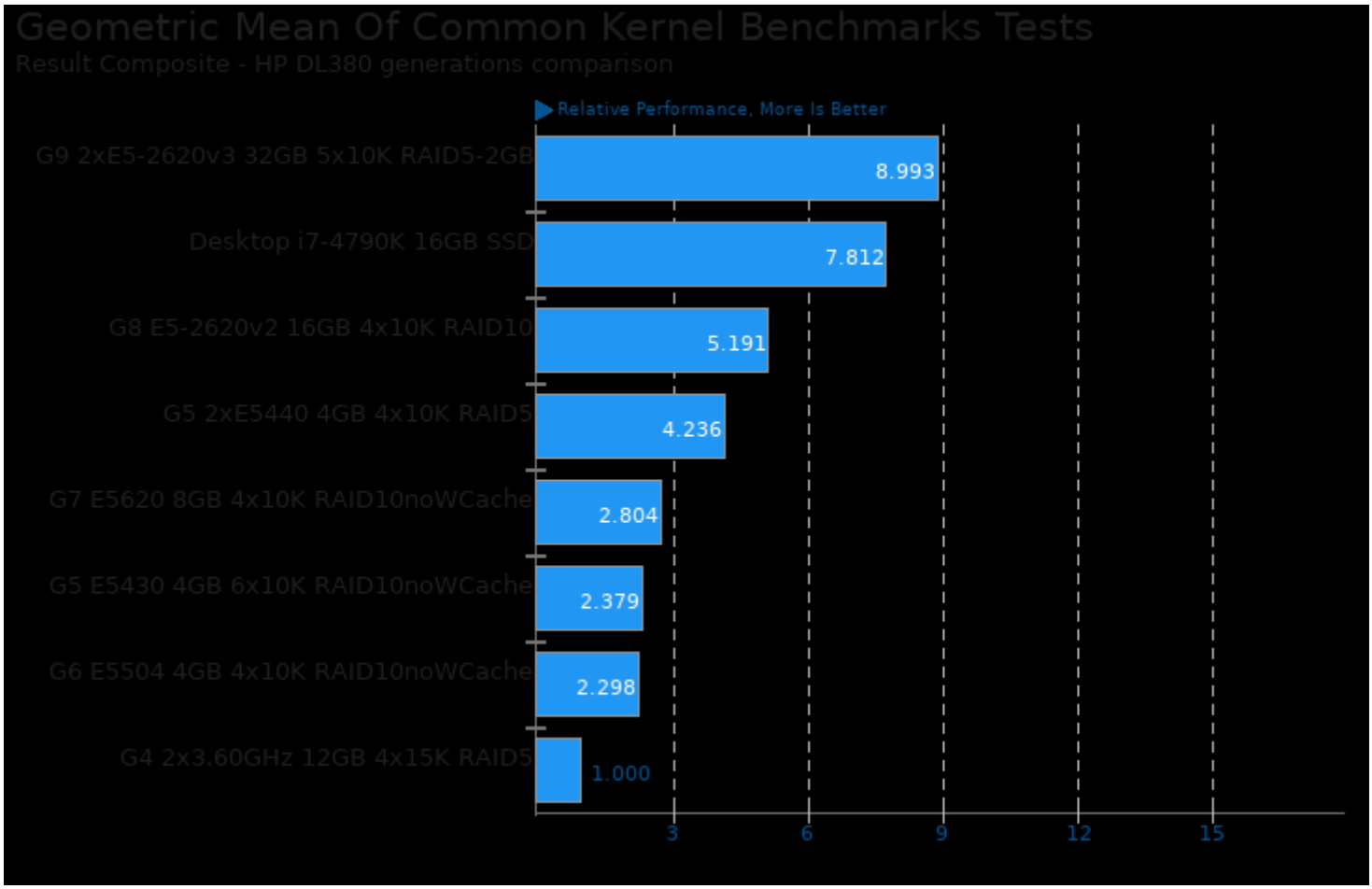

Geometric mean based upon tests: pts/apache, pts/build-php, pts/compress-pbzip2, pts/encode-mp3, pts/openssl, pts/pgbench and pts/phpbench

# HP DL380 generations comparison



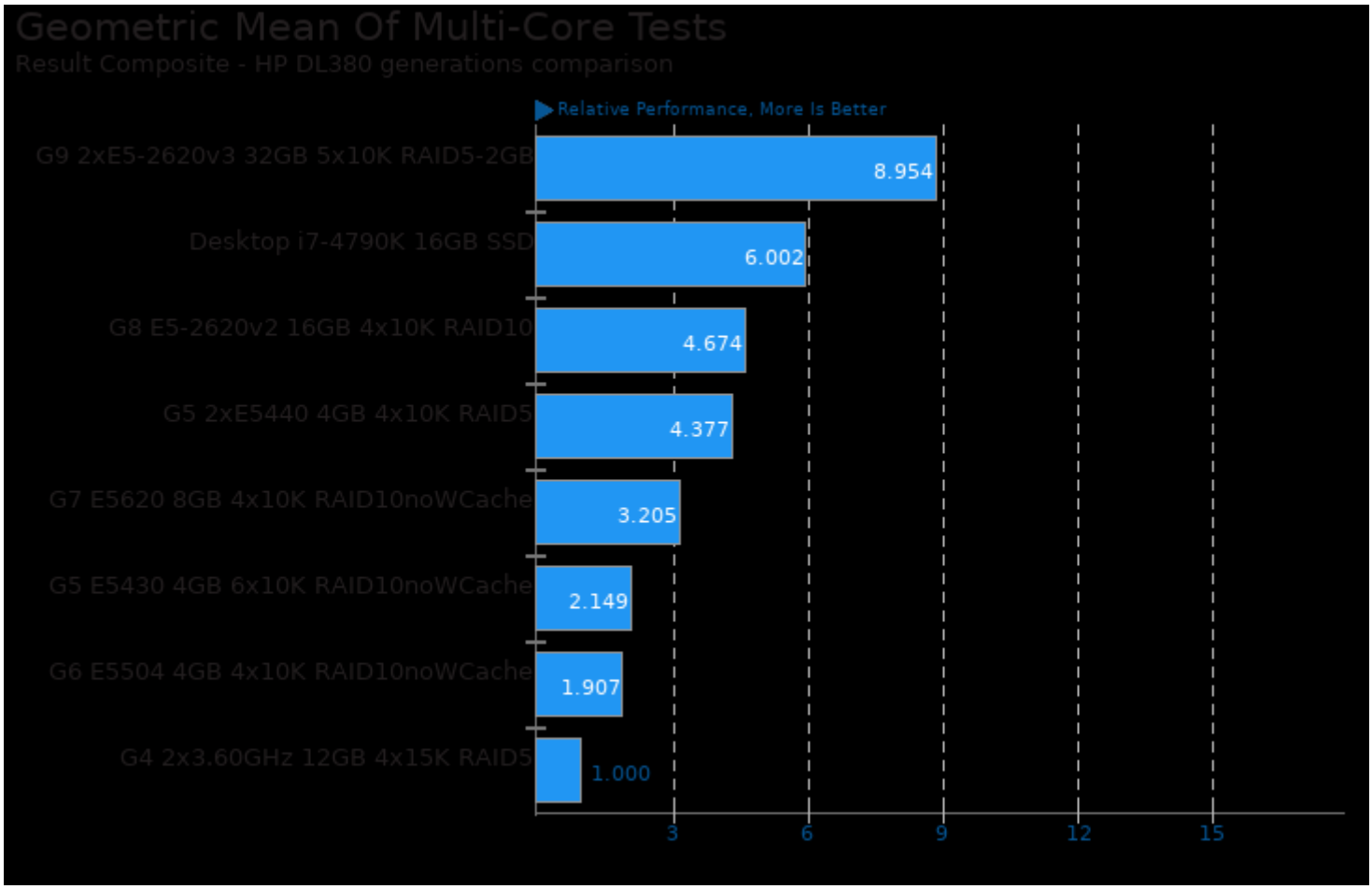

Geometric mean based upon tests: pts/gnupg and pts/openssl

# HP DL380 generations comparison



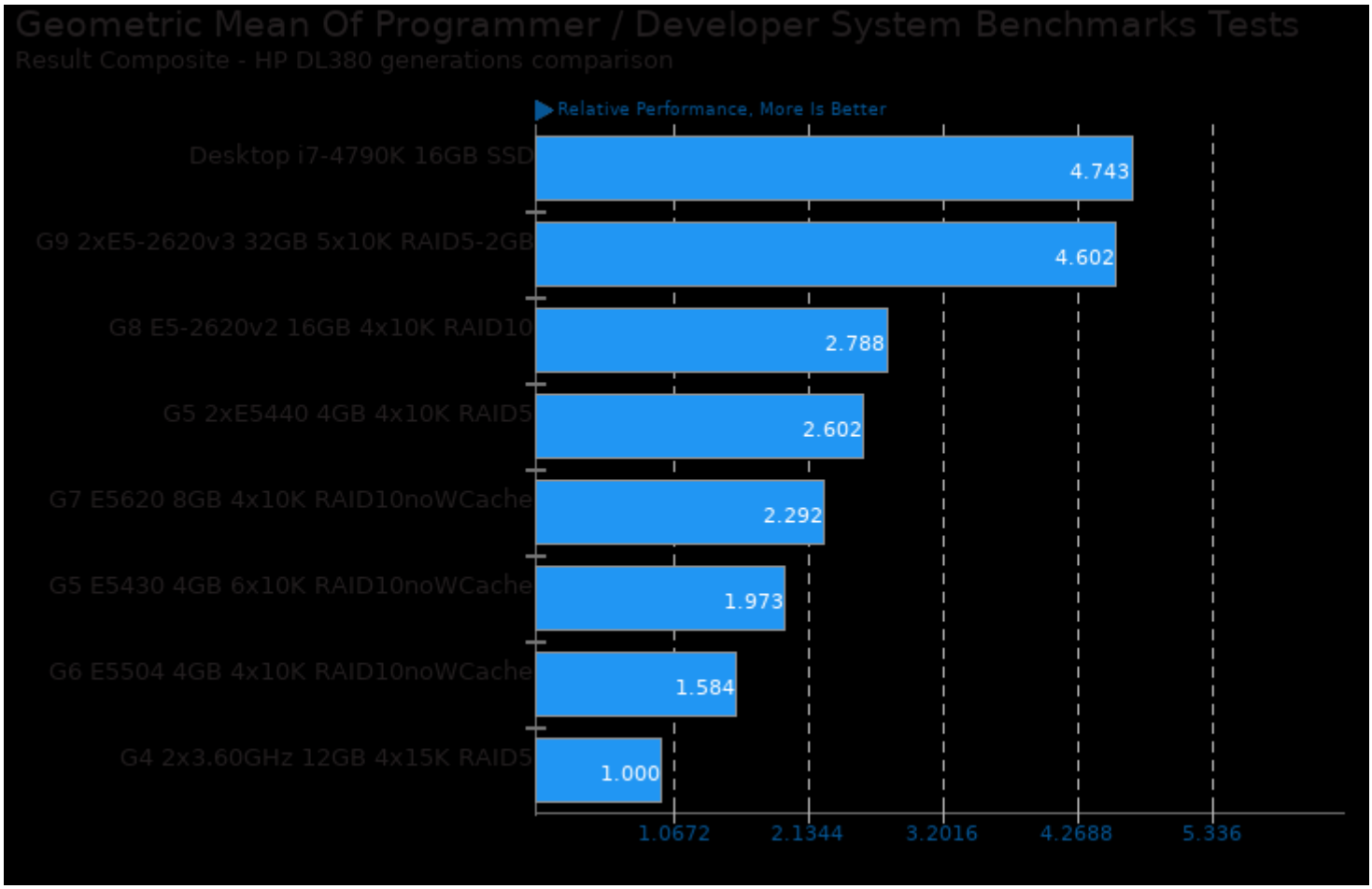

Geometric mean based upon tests: pts/apache, pts/pgbench and pts/openssl

# HP DL380 generations comparison



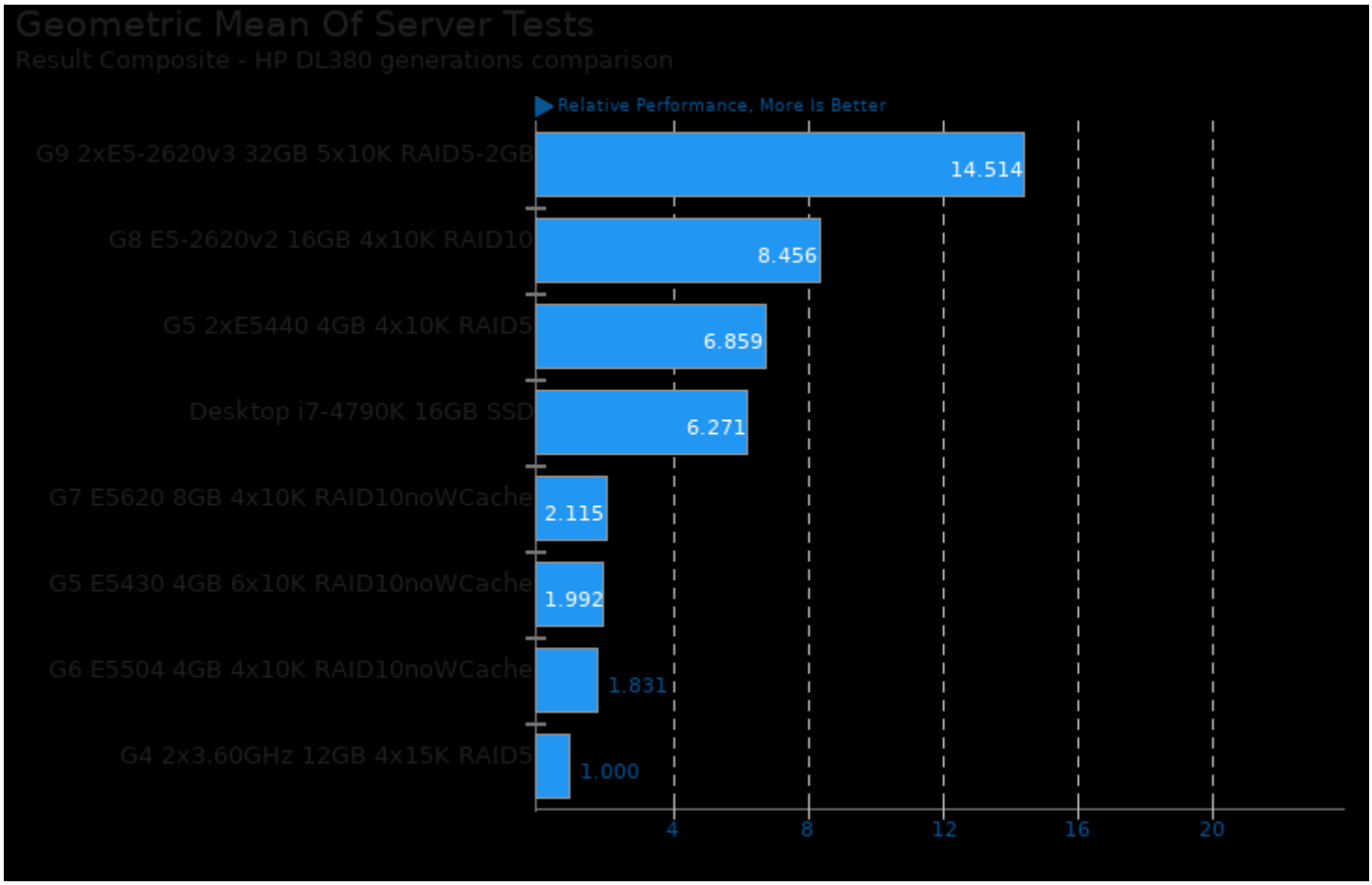

Geometric mean based upon tests: pts/compress-pbzip2, pts/build-php and pts/pgbench

# HP DL380 generations comparison



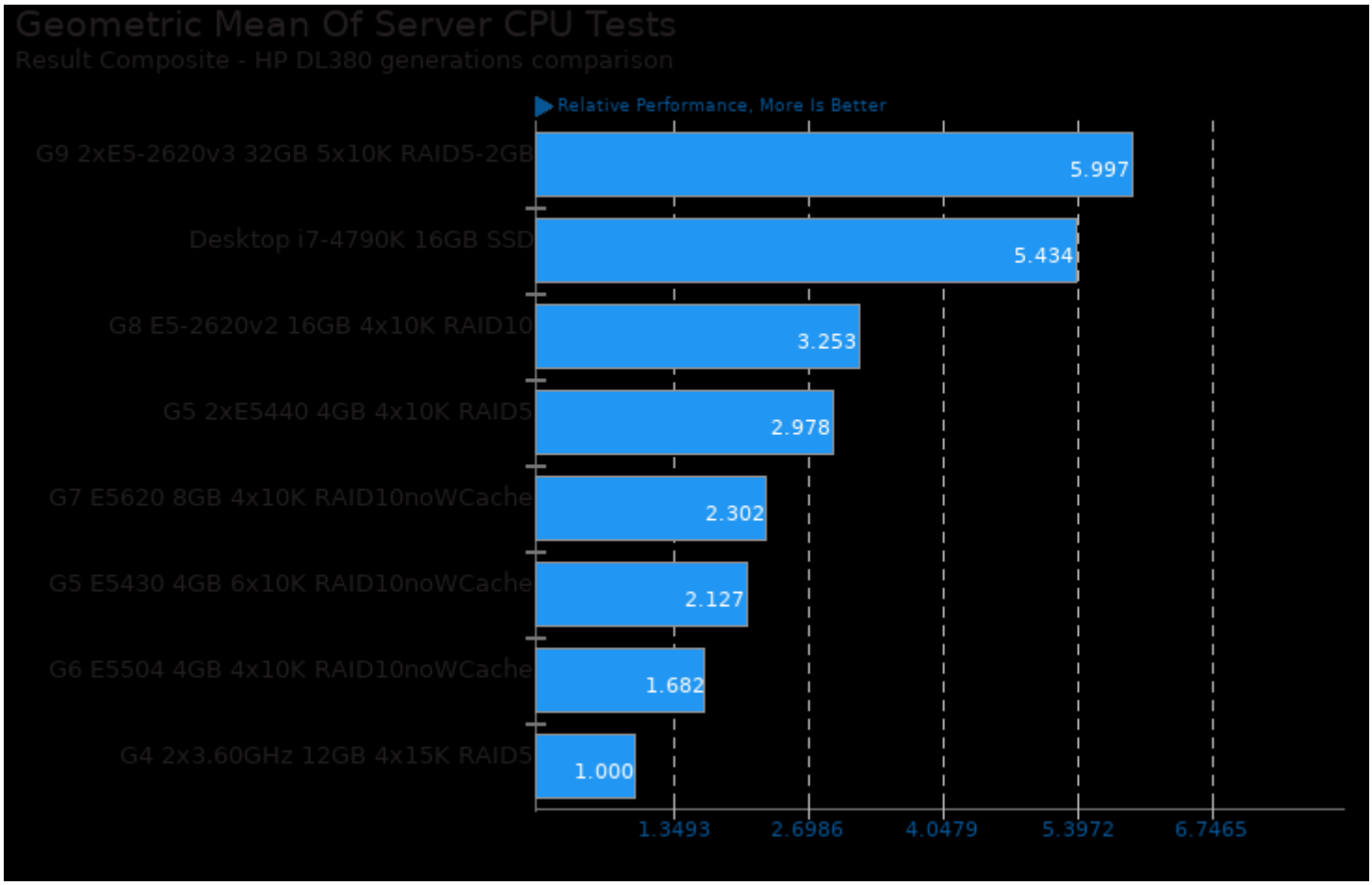

Geometric mean based upon tests: pts/pybench and pts/build-php

# HP DL380 generations comparison



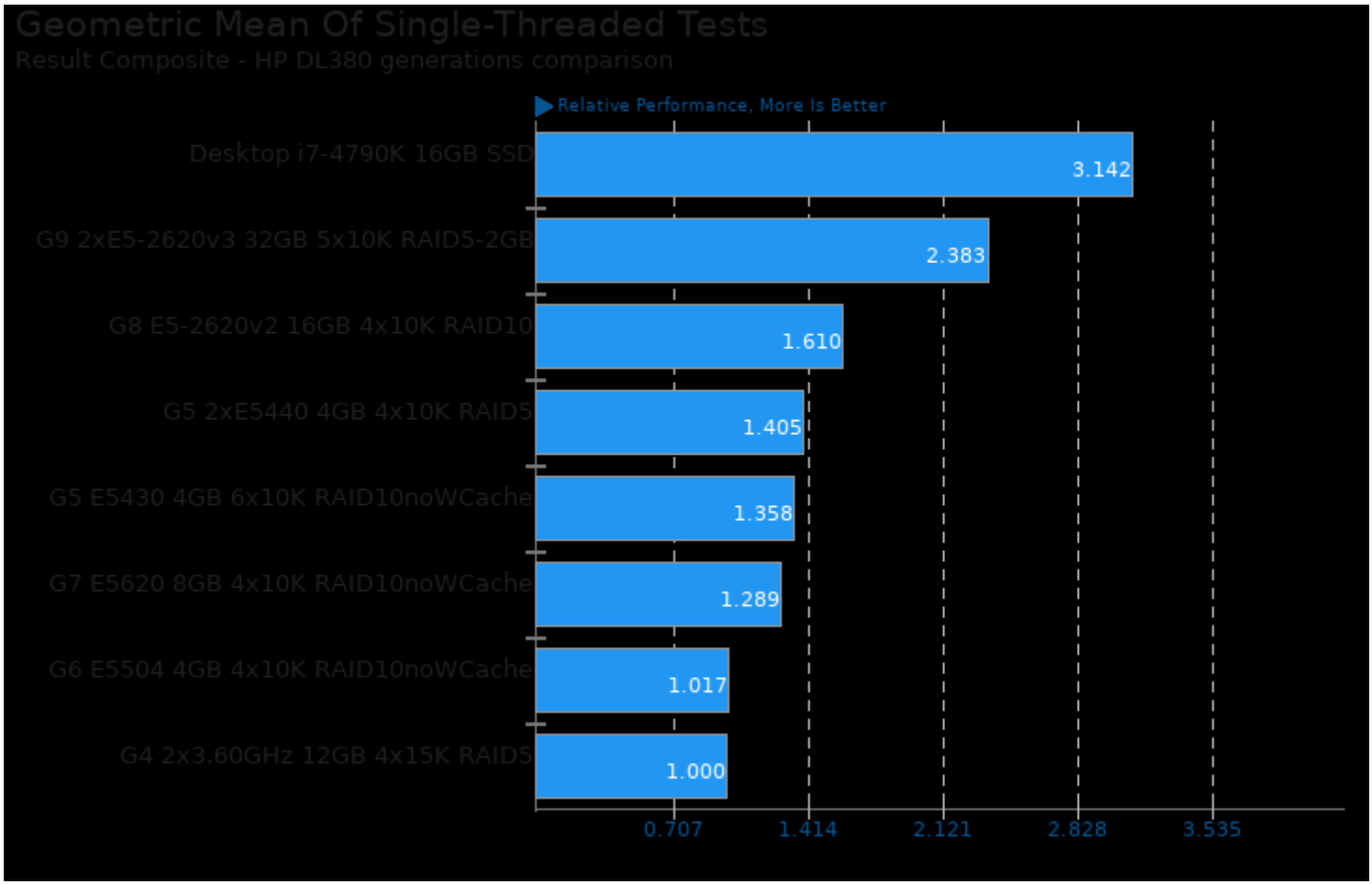

Geometric mean based upon tests: pts/apache, pts/pgbench, pts/phpbench, pts/openssl and pts/sqlite

# HP DL380 generations comparison




Geometric mean based upon tests: pts/build-php, pts/openssl, pts/pybench and pts/phpbench

# HP DL380 generations comparison




Geometric mean based upon tests: pts/compress-gzip, pts/encode-mp3, pts/gnupg, pts/pybench and pts/phpbench

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 12:12.*