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testserv

2 x Intel Xeon E5-2637 v3 testing with a HP ProLiant DL360 Gen9 (P89 BIOS) and Matrox MGA G200EH on Ubuntu 18.04 via the Phoronix Test Suite.

Automated Executive Summary

DL360 Gen9 2xE5-2637v3 6x16384MB DDR4-2133MT had the most wins, coming in first place for 61% of the tests.

Based on the geometric mean of all complete results, the fastest (DL360 Gen9 2xE5-2678v3 8x16384MB DDR4-2133MT) was 1.699x the speed of the slowest (DL380 G7 2x5670 8x4096MB DDR3-1333MT). DL360 Gen9 2xE5-2637v3 6x16384MB DDR4-2133MT was 0.854x the speed of DL360 Gen9 2xE5-2678v3 8x16384MB DDR4-2133MT, DL360p 2xE5-2690v1 8x16384MB DDR3-1333MT was 0.842x the speed of DL360 Gen9 2xE5-2637v3 6x16384MB DDR4-2133MT, DL380 G7 2x5670 8x4096MB DDR3-1333MT was 0.818x the speed of DL360p 2xE5-2690v1 8x16384MB DDR3-1333MT.

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

John The Ripper (Test: MD5) at 4.413x

Stream (Type: Add) at 4.011x

OpenSSL (RSA 4096-bit Performance) at 3.741x

Stream (Type: Copy) at 3.336x

7-Zip Compression (Compress Speed Test) at 2.276x

Parallel BZIP2 Compression (256MB File Compression) at 2.007x

CacheBench (Test: Write) at 2.004x

CacheBench (Test: Read / Modify / Write) at 1.94x

John The Ripper (Test: Blowfish) at 1.881x

Apache Benchmark (Static Web Page Serving) at 1.596x.

Test Systems:

DL380 G7 2x5670 8x4096MB DDR3-1333MT

Processor: 2 x Intel Xeon X5670 @ 2.93GHz (12 Cores), Motherboard: HP ProLiant DL380 G7 (P67 BIOS), Chipset: Intel 5520 I/O + ICH10, Memory: 8 x 4096 MB DDR3-1333MT/s, Disk: 2 x 512GB LOGICAL VOLUME, Graphics: AMD ES1000, Monitor: BenQ FP73G, Network: 4 x Broadcom NetXtreme II BCM5709

OS: Ubuntu 18.04, Kernel: 5.4.0-65-generic (x86_64), Display Server: X Server 1.20.8, Compiler: GCC 7.5.0, File-System: overlayfs, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: madvise

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,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-offload-targets=nvptx-none --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-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v

Processor Notes: Scaling Governor: pcc-cpufreq performance - CPU Microcode: 0x1f

Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Vulnerable: Clear buffers attempted no microcode; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW RSB filling + srbs: Not affected + tsx_async_abort: Not affected

DL360p 2xE5-2690v1 8x16384MB DDR3-1333MT

Processor: 2 x Intel Xeon E5-2690 v1 @ 2.90GHz (16 Cores), Motherboard: HP ProLiant DL360p Gen8 (P71 BIOS), Chipset: Intel Xeon E5/Core, Memory: 8 x 16384 MB DDR3-1333MT/s, Disk: 4 x 600GB HUC106060CSS600, Graphics: Matrox MGA G200EH, Monitor: BenQ FP73G, Network: 4 x Broadcom NetXtreme BCM5719 PCIe

OS: Ubuntu 18.04, Kernel: 5.4.0-80-generic (x86_64), Display Server: X Server 1.20.8, Compiler: GCC 7.5.0, File-System: overlayfs, Screen Resolution: 1280x1024

Kernel Notes: Transparent Huge Pages: madvise

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,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-offload-targets=nvptx-none --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-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v

Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x71a

Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW RSB filling + srbs: Not affected + tsx_async_abort: Not affected

DL360 Gen9 2xE5-2678v3 8x16384MB DDR4-2133MT

Processor: 2 x Intel Xeon E5-2678 v3 @ 3.30GHz (24 Cores), Motherboard: HP ProLiant DL360 Gen9 (P89 BIOS), Chipset: Intel Xeon E7 v3/Xeon, Memory: 8 x 16384 MB DDR4-2133MT/s 752369-081, Disk: 63GB, Graphics: Matrox

MGA G200EH, Monitor: BenQ FP73G, Network: 4 x Broadcom NetXtreme BCM5719 PCIe

OS: Ubuntu 18.04, Kernel: 5.4.0-80-generic (x86_64), Display Server: X Server 1.20.8, Compiler: GCC 7.5.0, File-System: overlayfs, Screen Resolution: 1280x1024

Kernel Notes: Transparent Huge Pages: madvise

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,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-offload-targets=nvptx-none --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-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v

Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x46

Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW RSB filling + srbd: Not affected + tsx_async_abort: Not affected

DL360 Gen9 2xE5-2637v3 6x16384MB DDR4-2133MT

Processor: 2 x Intel Xeon E5-2637 v3 @ 3.70GHz (8 Cores), Motherboard: HP ProLiant DL360 Gen9 (P89 BIOS), Chipset: Intel Xeon E7 v3/Xeon, Memory: 6 x 16384 MB DDR4-2133MT/s, Disk: 1000GB Samsung SSD 980 PRO 1TB + LUN 00 Media 0, Graphics: Matrox MGA G200EH, Monitor: LCD73V, Network: 4 x Broadcom NetXtreme BCM5719 PCIe + 2 x Intel 10-Gigabit X540-AT2

OS: Ubuntu 18.04, Kernel: 5.4.0-80-generic (x86_64), Display Server: X Server 1.20.8, Compiler: GCC 7.5.0, File-System: overlayfs, Screen Resolution: 1280x1024

Kernel Notes: Transparent Huge Pages: madvise

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,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-offload-targets=nvptx-none --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-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v

Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x46

Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW RSB filling + srbd: Not affected + tsx_async_abort: Not affected

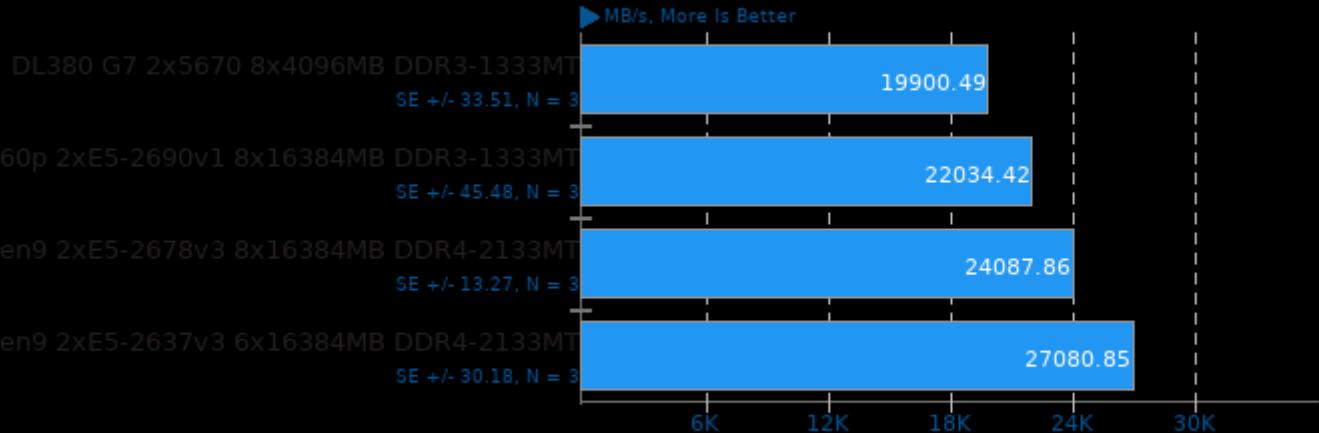
	DL380 G7 2x5670	DL360p	DL360 Gen9	DL360 Gen9
RAMspeed SMP - Add - Integer (MB/s)	19900	22034	24088	27081
Normalized	73.49%	81.37%	88.95%	100%
Standard Deviation	0.3%	0.4%	0.1%	0.2%
RAMspeed SMP - Copy - Integer	17466	16967	20521	22904
Normalized	76.26%	74.08%	89.59%	100%
Standard Deviation	1%	0.1%	0.1%	0%
RAMspeed SMP - Scale - Integer	17288	17168	20460	22978
Normalized	75.24%	74.71%	89.04%	100%
Standard Deviation	0.3%	0.1%	0.1%	0%
RAMspeed SMP - Triad - Integer	19549	19456	22314	25126
Normalized	77.8%	77.43%	88.81%	100%
Standard Deviation	0.3%	0.2%	0.2%	0.2%

RAMspeed SMP - Average - Integer	18510	18914	22002	24522
(MB/s)				
Normalized	75.48%	77.13%	89.72%	100%
Standard Deviation	0.3%	0.1%	0.1%	0.1%
RAMspeed SMP - Add - Floating Point	19752	18253	23386	26643
(MB/s)				
Normalized	74.14%	68.51%	87.78%	100%
Standard Deviation	0.2%	0.4%	0.2%	0.1%
RAMspeed SMP - Copy - Floating Point (MB/s)	17257	16907	20651	22895
Normalized	75.37%	73.84%	90.2%	100%
Standard Deviation	0.1%	0.1%	0%	0.1%
RAMspeed SMP - Scale - Floating Point (MB/s)	17554	16798	20326	22812
Normalized	76.95%	73.64%	89.1%	100%
Standard Deviation	0.3%	0.1%	0.2%	0%
RAMspeed SMP - Triad - Floating Point (MB/s)	19896	18227	23393	26447
Normalized	75.23%	68.92%	88.45%	100%
Standard Deviation	0.7%	0.1%	0%	0.1%
RAMspeed SMP - Average - Floating Point (MB/s)	18094	17557	21920	24703
Normalized	73.25%	71.07%	88.73%	100%
Standard Deviation	0.6%	0%	0.1%	0.1%
Stream - Copy (MB/s)	31305	53811	104426	64454
Normalized	29.98%	51.53%	100%	61.72%
Standard Deviation	0.1%	0.1%	1.2%	3.5%
Stream - Scale (MB/s)	19270	45077	76243	44834
Normalized	25.27%	59.12%	100%	58.8%
Standard Deviation	0.3%	0.1%	1%	8.4%
Stream - Triad (MB/s)	21179	50308	85502	49520
Normalized	24.77%	58.84%	100%	57.92%
Standard Deviation	0.1%	0.1%	0.8%	6.9%
Stream - Add (MB/s)	21222	50371	85124	49149
Normalized	24.93%	59.17%	100%	57.74%
Standard Deviation	0.3%	0.1%	1.6%	5.5%
CacheBench - Read (MB/s)	2534	2443	2775	3126
Normalized	81.05%	78.14%	88.76%	100%
Standard Deviation	0%	0%	0%	0%
CacheBench - Write (MB/s)	12158	18318	21625	24363
Normalized	49.9%	75.19%	88.76%	100%
Standard Deviation	0%	0%	0%	0%
CacheBench - R.M.W (MB/s)	24373	20759	35753	40265
Normalized	60.53%	51.56%	88.79%	100%
Standard Deviation	0.1%	0%	0%	0.1%
Crafty - Elapsed Time (Nodes/s)	5406060	4786143	6180559	6924819
Normalized	78.07%	69.12%	89.25%	100%
Standard Deviation	0.3%	0.1%	0.3%	0.1%
John The Ripper - Blowfish (Real C/S)	10396	13577	19554	10643
Normalized	53.17%	69.43%	100%	54.43%
Standard Deviation	2%	0.1%	4.8%	0%
John The Ripper - MD5 (Real C/S)	326255	604305	1439800	728482
Normalized	22.66%	41.97%	100%	50.6%
Standard Deviation	0.7%	0.8%	2.4%	0.1%

7-Zip Compression - C.S.T (MIPS)	31644	45651	68995	30308
Normalized	45.86%	66.17%	100%	43.93%
Standard Deviation	1.2%	0.1%	1.6%	1.7%
Timed PHP Compilation - Time To Compile (sec)	78.943	75.746	53.678	74.397
Normalized	68%	70.87%	100%	72.15%
Standard Deviation	0.8%	0.1%	0.5%	0.2%
Parallel BZIP2 Compression - 2.F.C (sec)	6.456	4.559	3.217	6.445
Normalized	49.83%	70.56%	100%	49.91%
Standard Deviation	1.1%	0.3%	0.4%	1%
Gzip Compression - L.S.T.A.T.t.g (sec)	46.407	50.982	43.341	37.926
Normalized	81.72%	74.39%	87.51%	100%
Standard Deviation	0.2%	0.1%	0.5%	0.1%
OpenSSL - R.4.b.P (Signs/sec)	830.6	1596	3107	1292
Normalized	26.73%	51.36%	100%	41.59%
Standard Deviation	0.3%	0%	0.2%	0.3%
Apache Benchmark - S.W.P.S (Req/sec)	16021	15797	19388	25211
Normalized	63.55%	62.66%	76.91%	100%
Standard Deviation	0.8%	0.2%	1.9%	0.8%

RAMspeed SMP 3.5.0

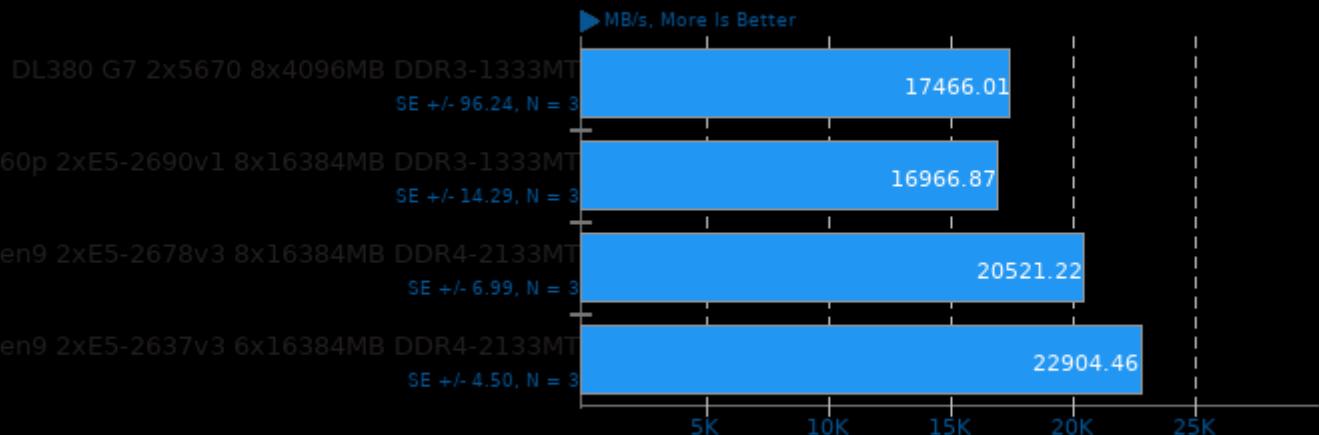
Type: Add - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

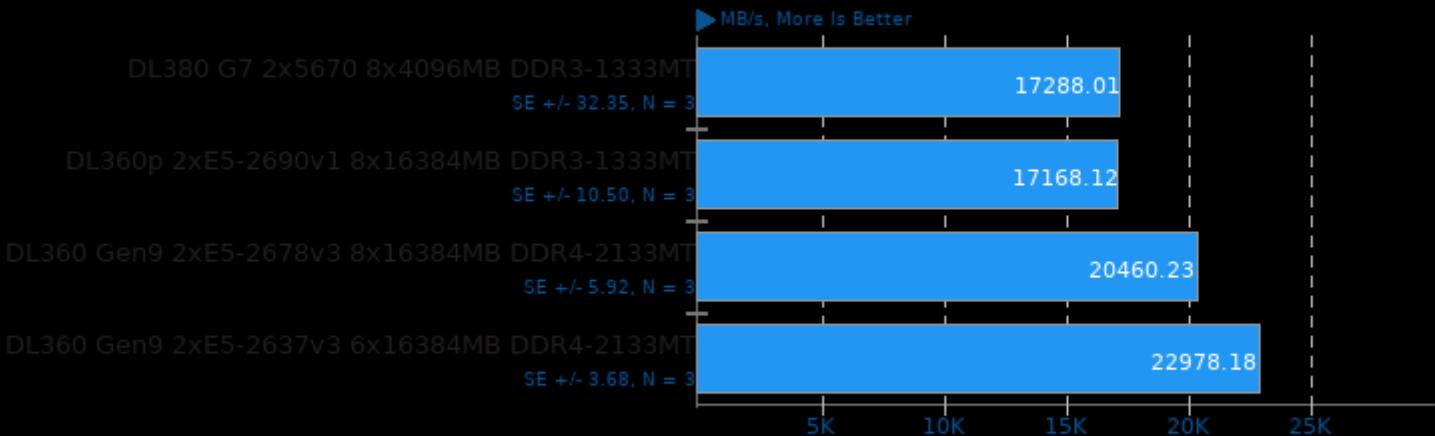
Type: Copy - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

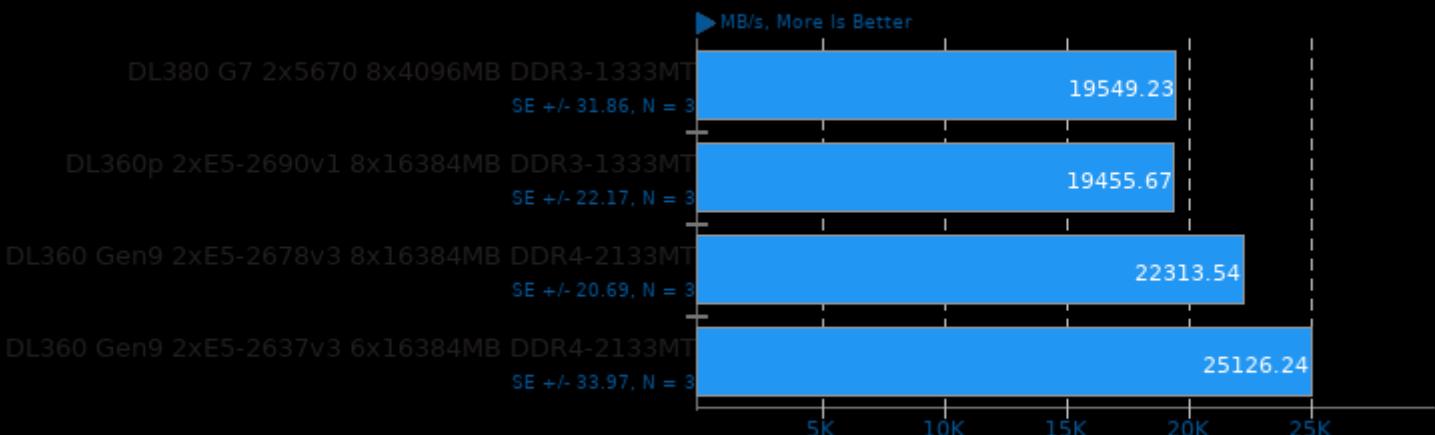
Type: Scale - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

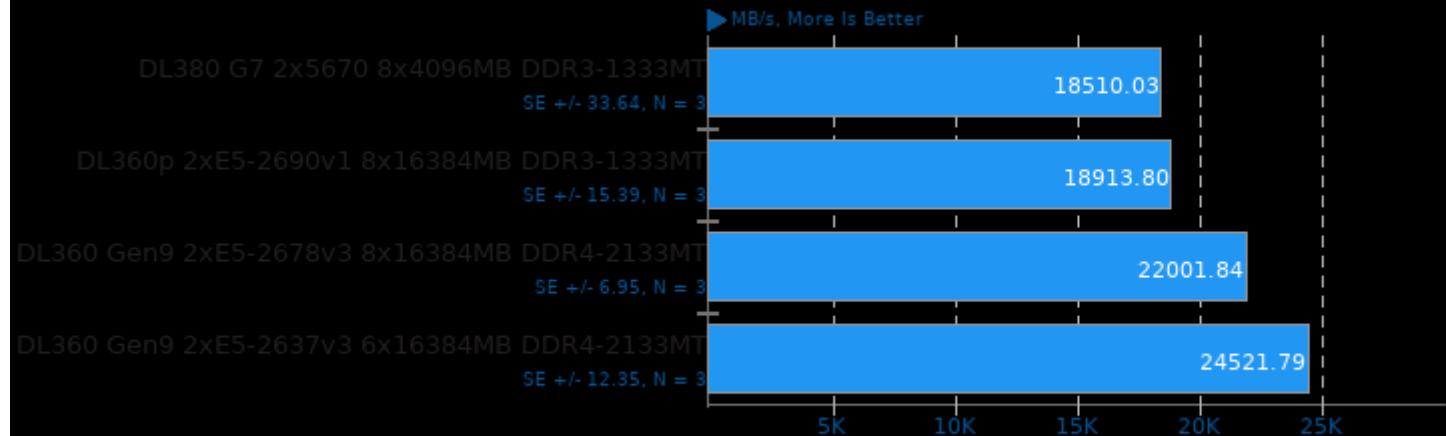
Type: Triad - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

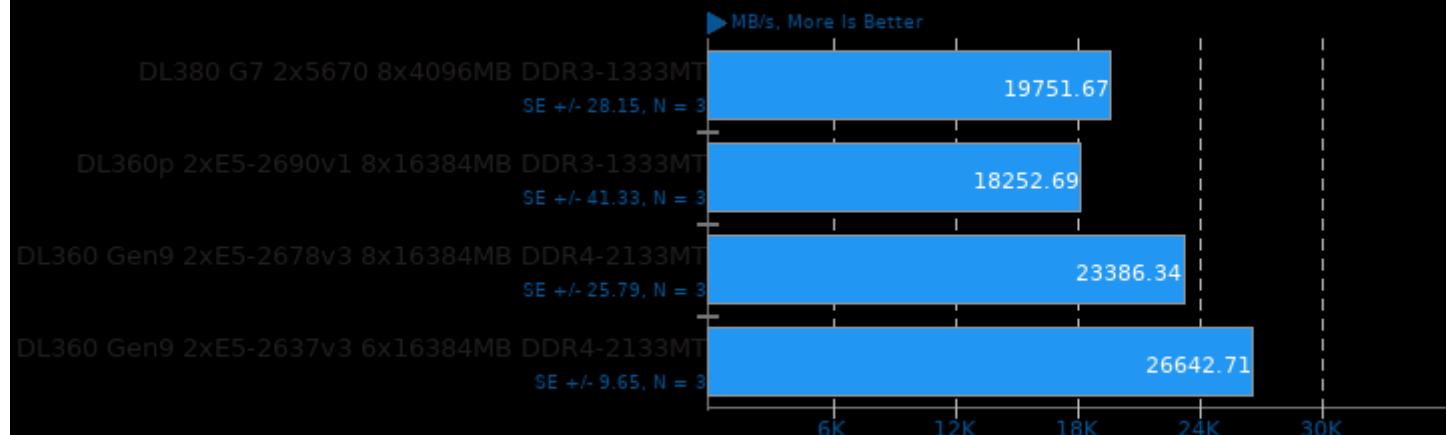
Type: Average - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

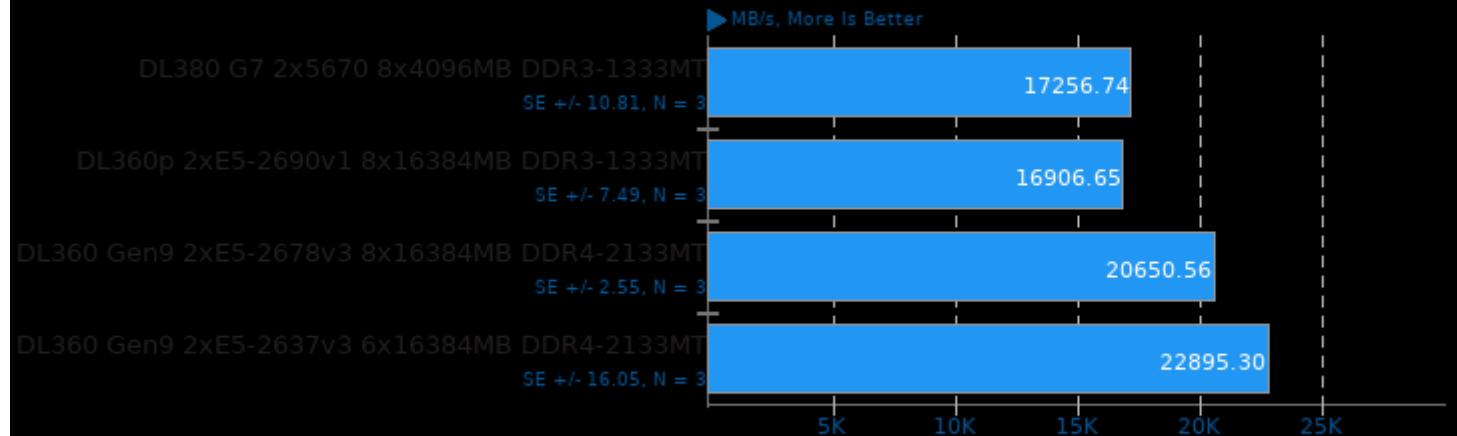
Type: Add - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

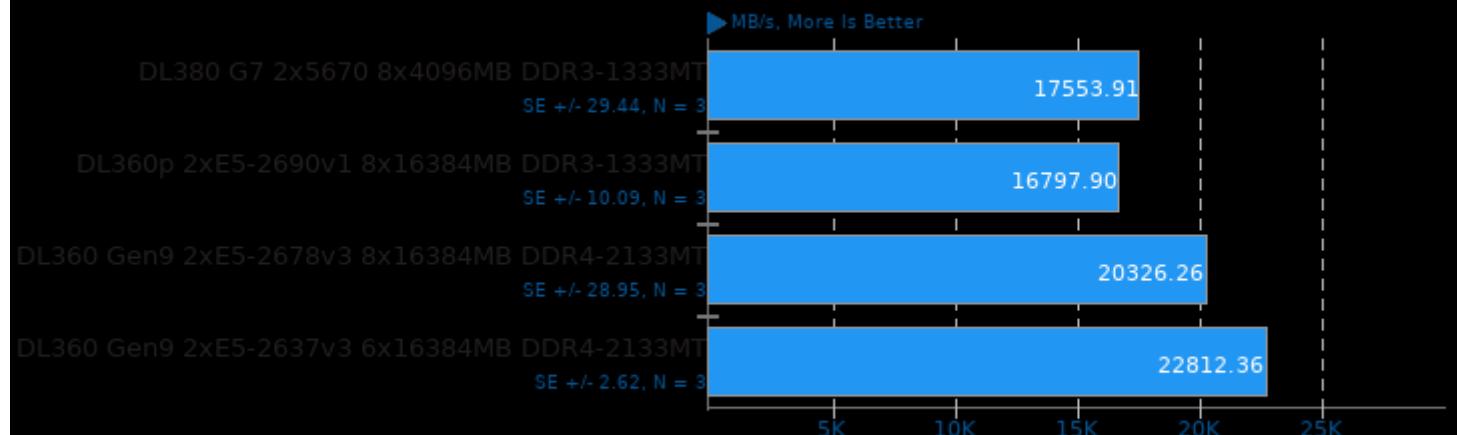
Type: Copy - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

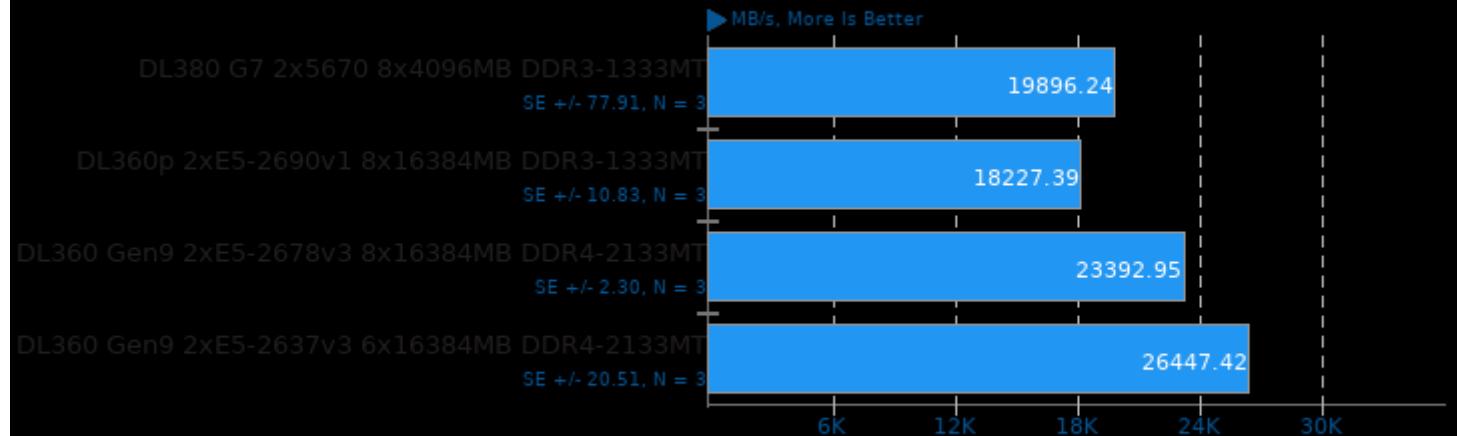
Type: Scale - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

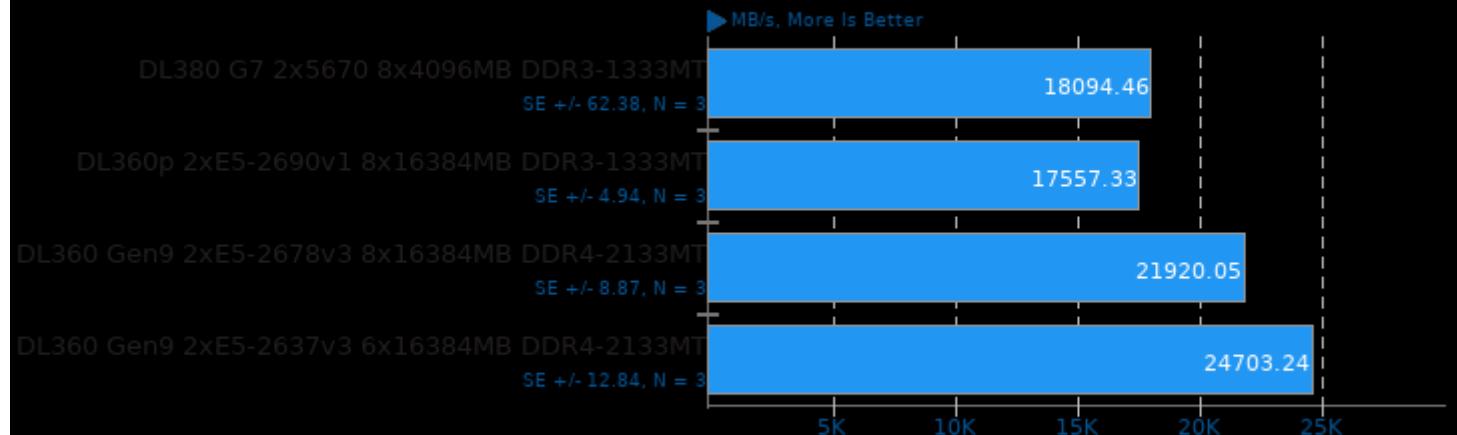
Type: Triad - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

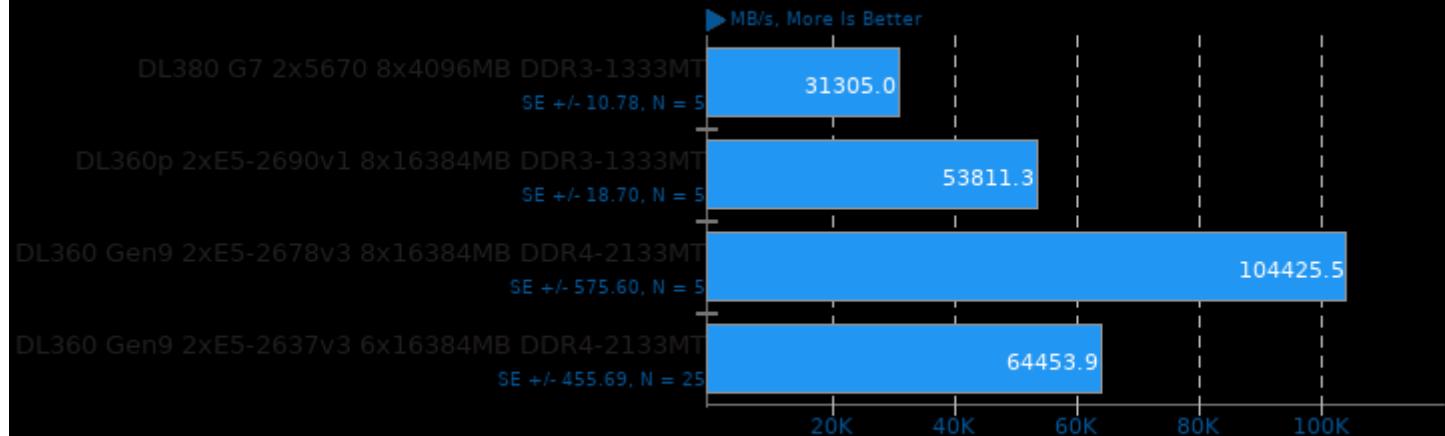
Type: Average - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

Stream 2013-01-17

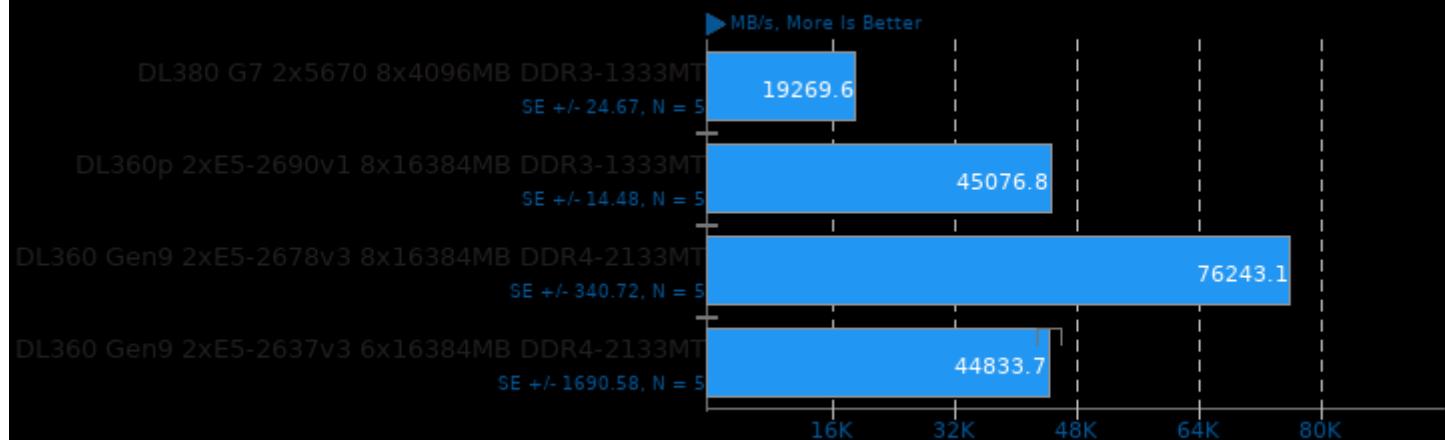
Type: Copy



1. (CC) gcc options: -O3 -march=native -fopenmp

Stream 2013-01-17

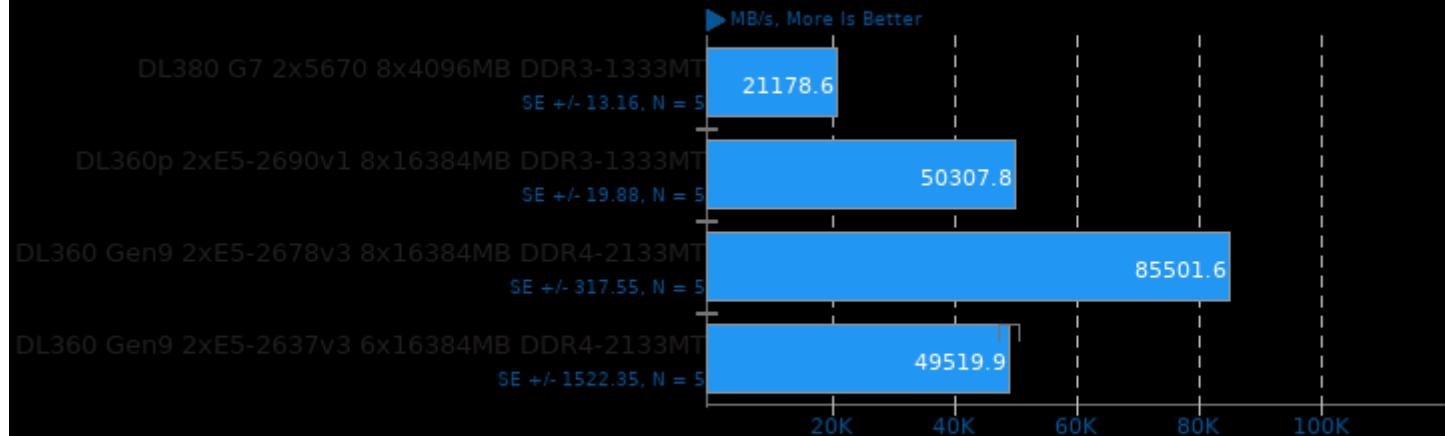
Type: Scale



1. (CC) gcc options: -O3 -march=native -fopenmp

Stream 2013-01-17

Type: Triad



1. (CC) gcc options: -O3 -march=native -fopenmp

Stream 2013-01-17

Type: Add



1. (CC) gcc options: -O3 -march=native -fopenmp

CacheBench

Test: Read



1. (CC) gcc options: -lrt

CacheBench

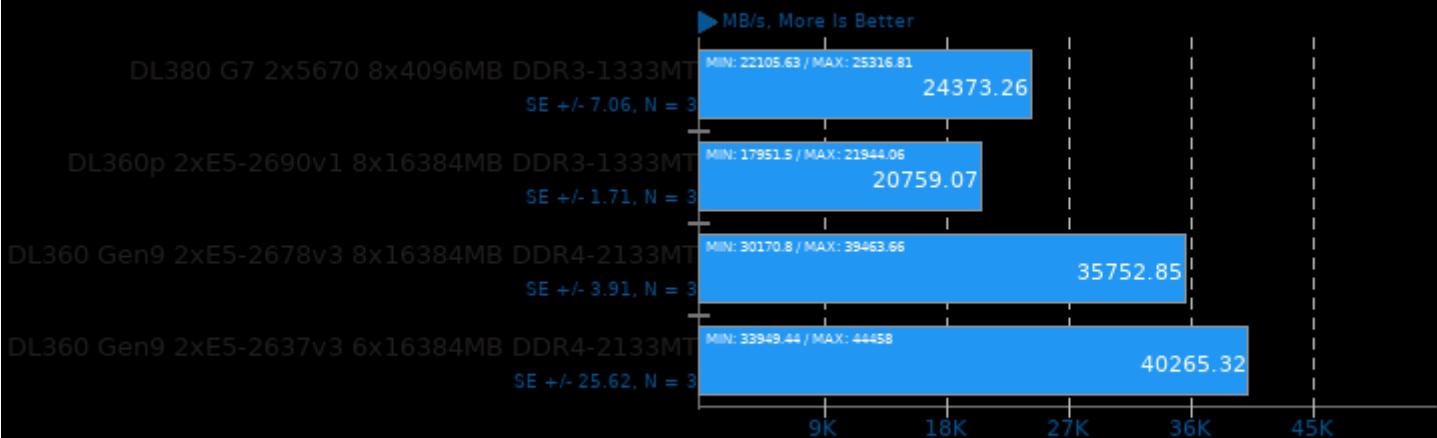
Test: Write



1. (CC) gcc options: -lrt

CacheBench

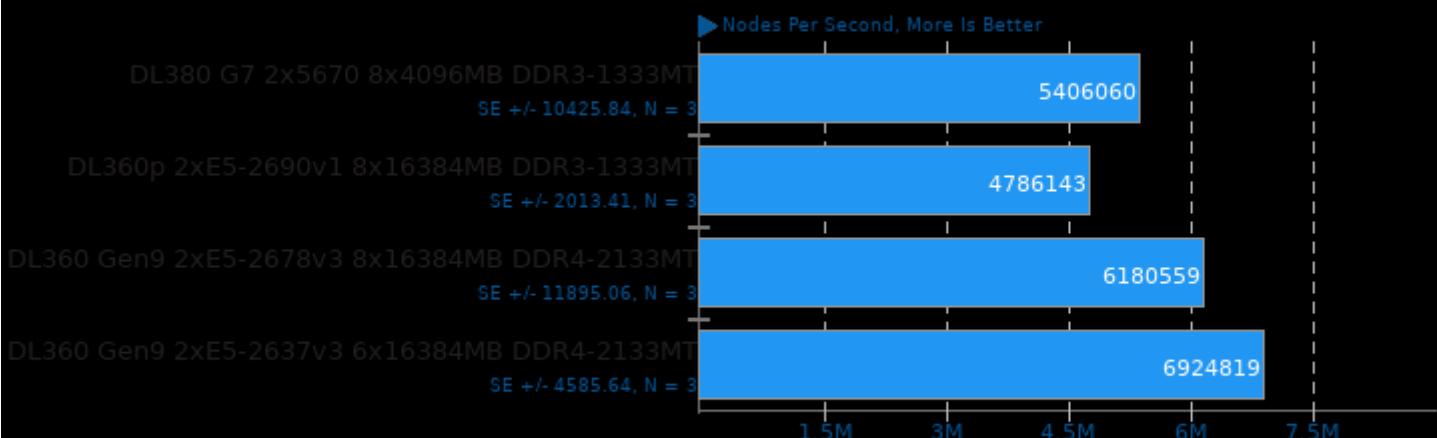
Test: Read / Modify / Write



1. (CC) gcc options: -lrt

Crafty 25.2

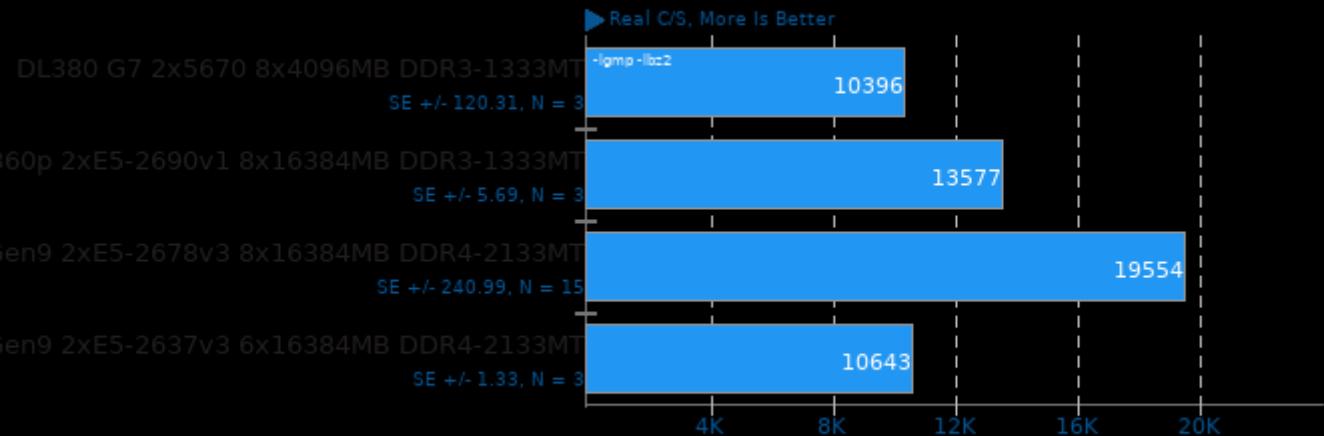
Elapsed Time



1. (CC) gcc options: -pthread -lstdc++ -fprofile-use -lm

John The Ripper 1.9.0-jumbo-1

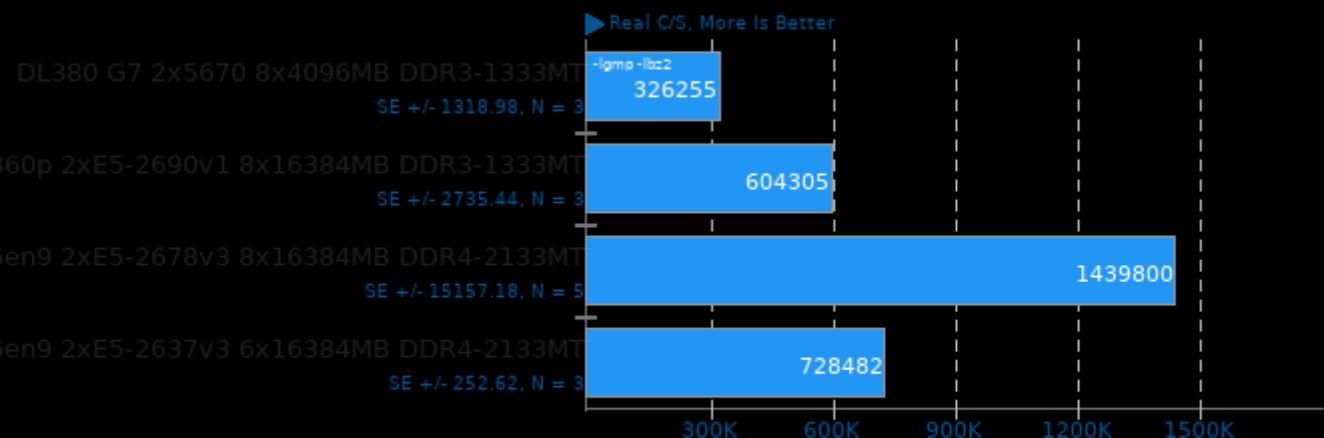
Test: Blowfish



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -pthread -lm -lz -ldl -lcrypt

John The Ripper 1.9.0-jumbo-1

Test: MD5



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -pthread -lm -lz -ldl -lcrypt

7-Zip Compression 16.02

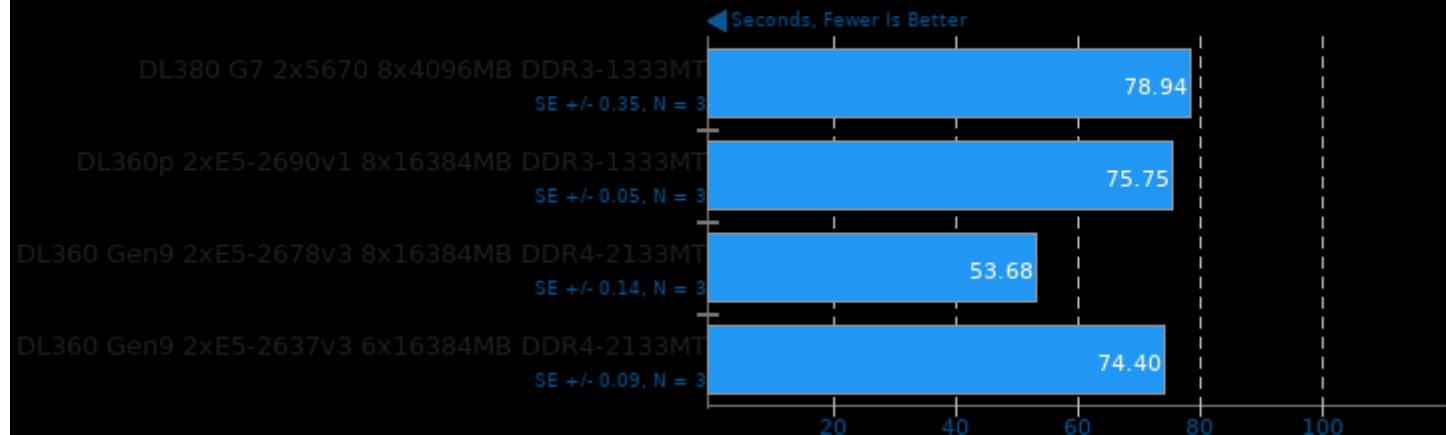
Compress Speed Test



1. (CXX) g++ options: -pipe -lpthread

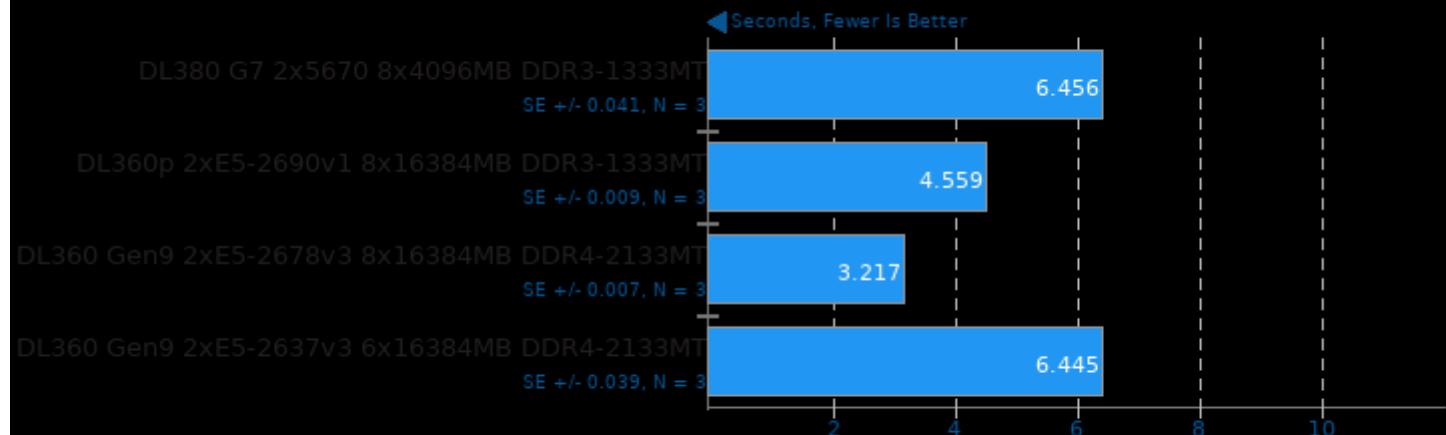
Timed PHP Compilation 7.4.2

Time To Compile



Parallel BZIP2 Compression 1.1.12

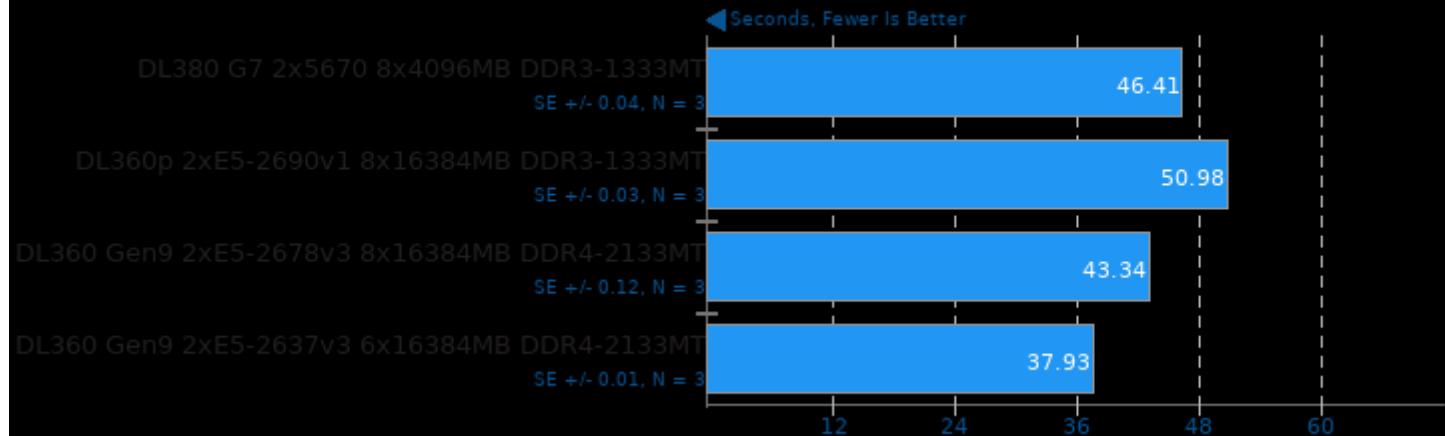
256MB File Compression



1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread

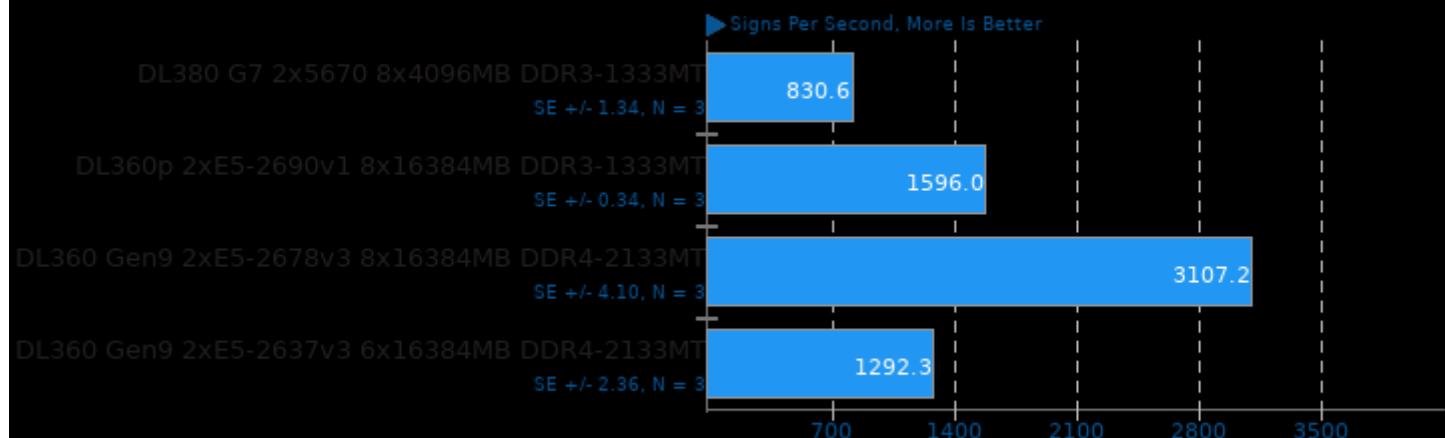
Gzip Compression

Linux Source Tree Archiving To .tar.gz



OpenSSL 1.1.1

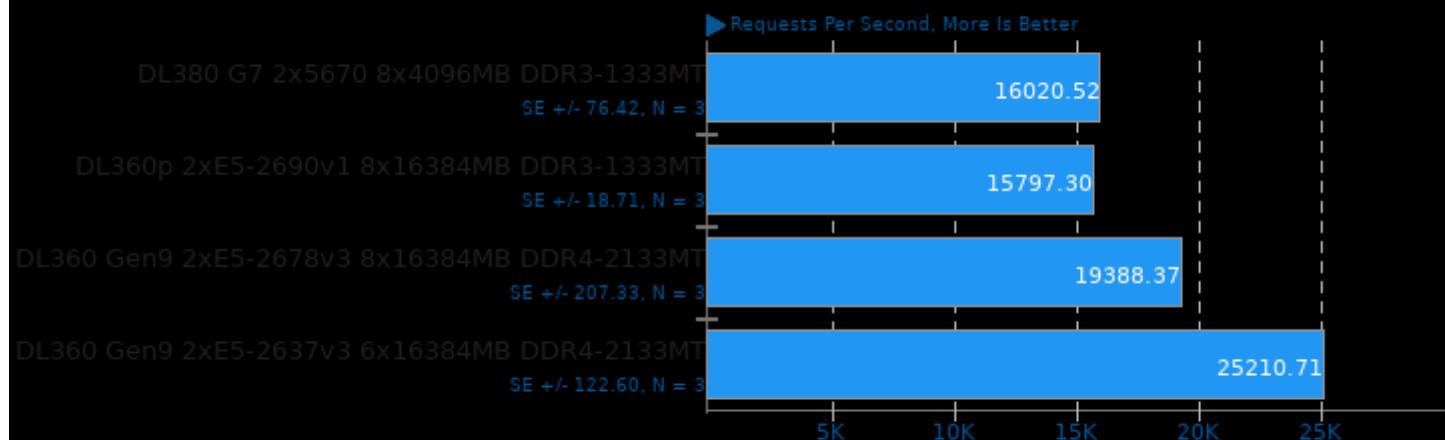
RSA 4096-bit Performance



1. (CC) gcc options: -fPIC -O2 -pthread

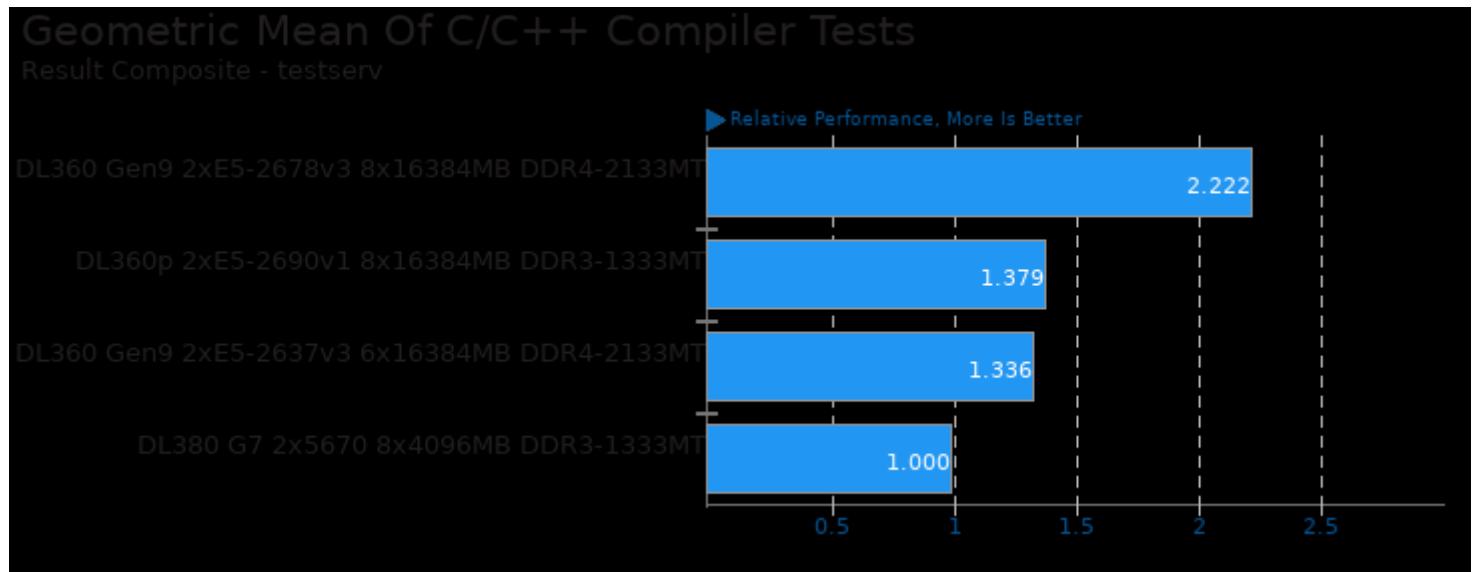
Apache Benchmark 2.4.29

Static Web Page Serving

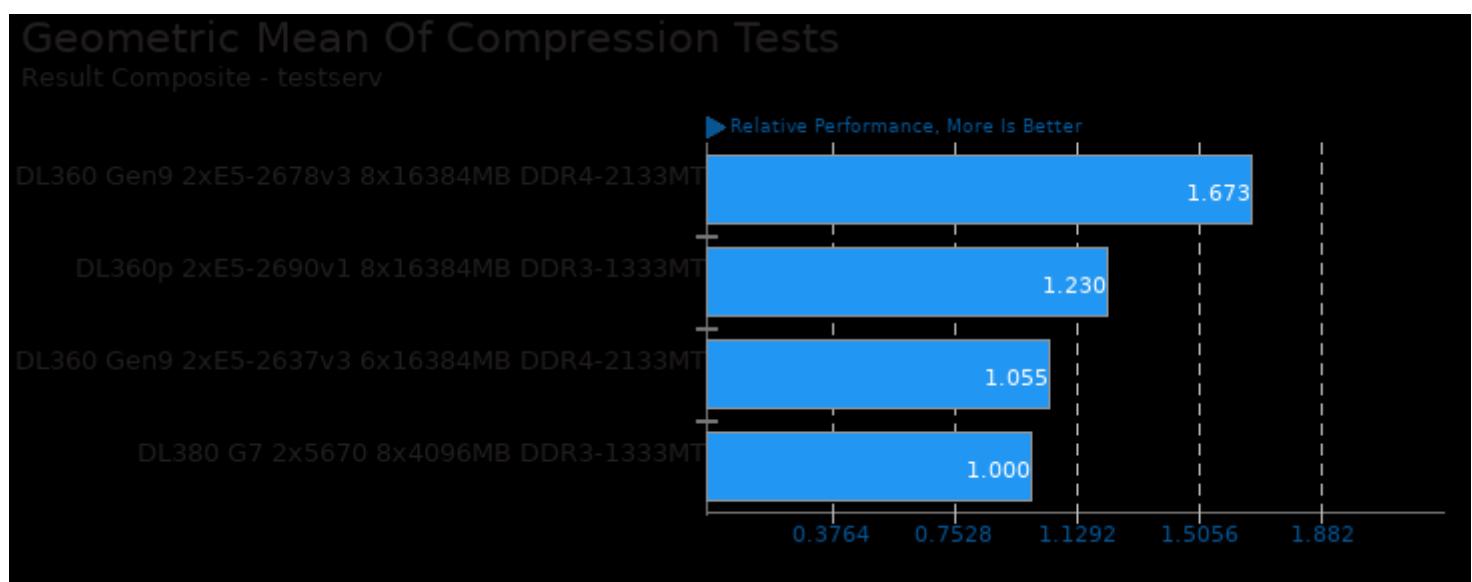


1. (CC) gcc options: -shared -fPIC -O2 -pthread

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



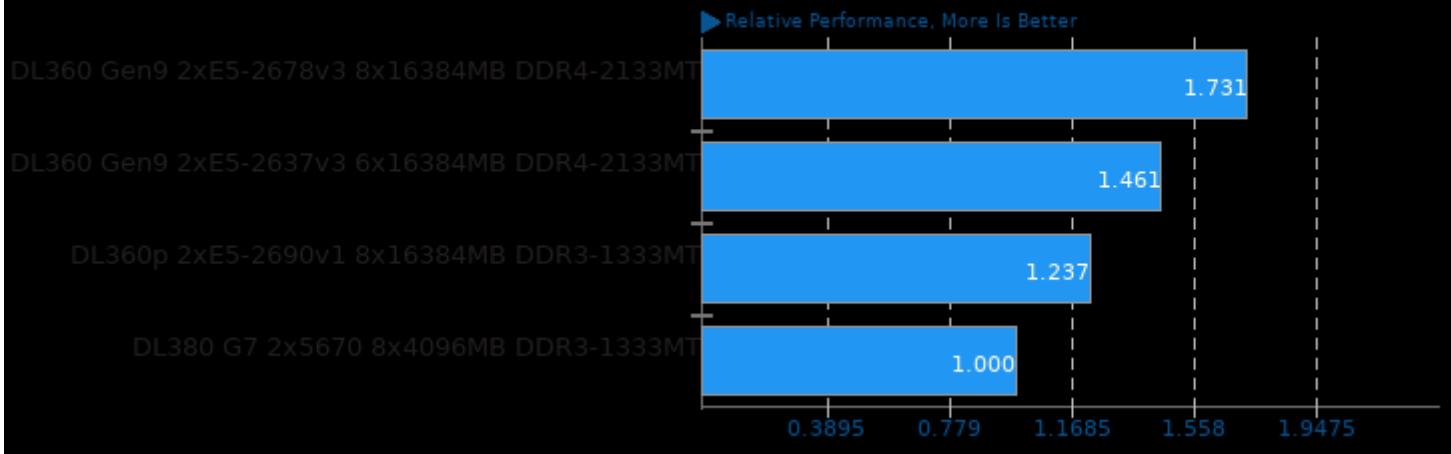
Geometric mean based upon tests: pts/build-php, pts/compress-7zip, pts/apache, pts/john-the-ripper and pts/openssl



Geometric mean based upon tests: pts/compress-7zip, pts/compress-gzip and pts/compress-pbzip2

Geometric Mean Of CPU Massive Tests

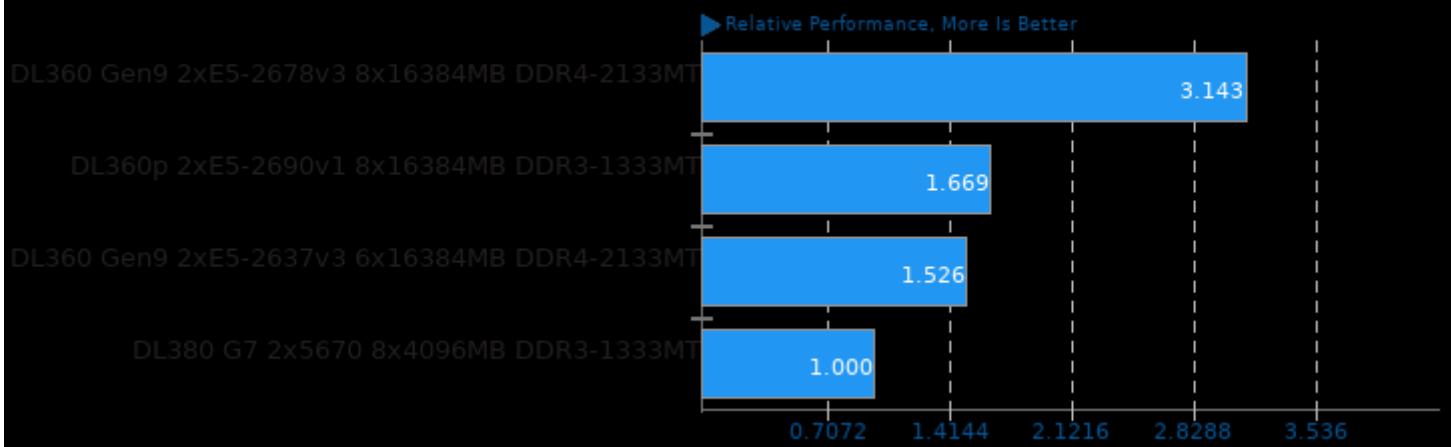
Result Composite - testserv



Geometric mean based upon tests: pts/apache, pts/build-php, pts/cachebench, pts/compress-7zip, pts/compress-pbzip2, pts/crafty, pts/john-the-ripper, pts/openssl, pts/ramspeed and pts/stream

Geometric Mean Of Cryptography Tests

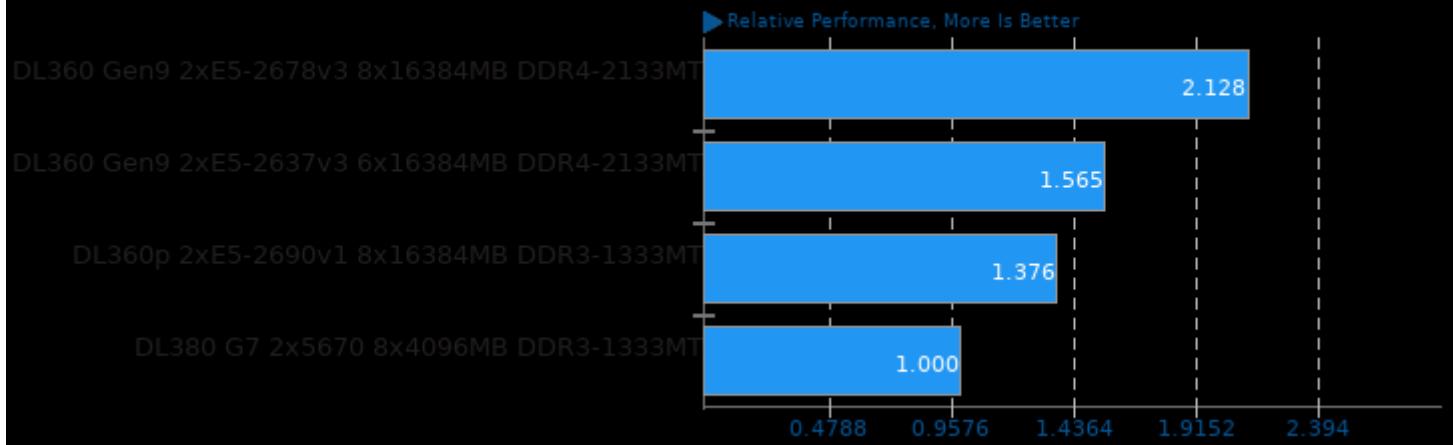
Result Composite - testserv



Geometric mean based upon tests: pts/openssl and pts/john-the-ripper

Geometric Mean Of Common Kernel Benchmarks Tests

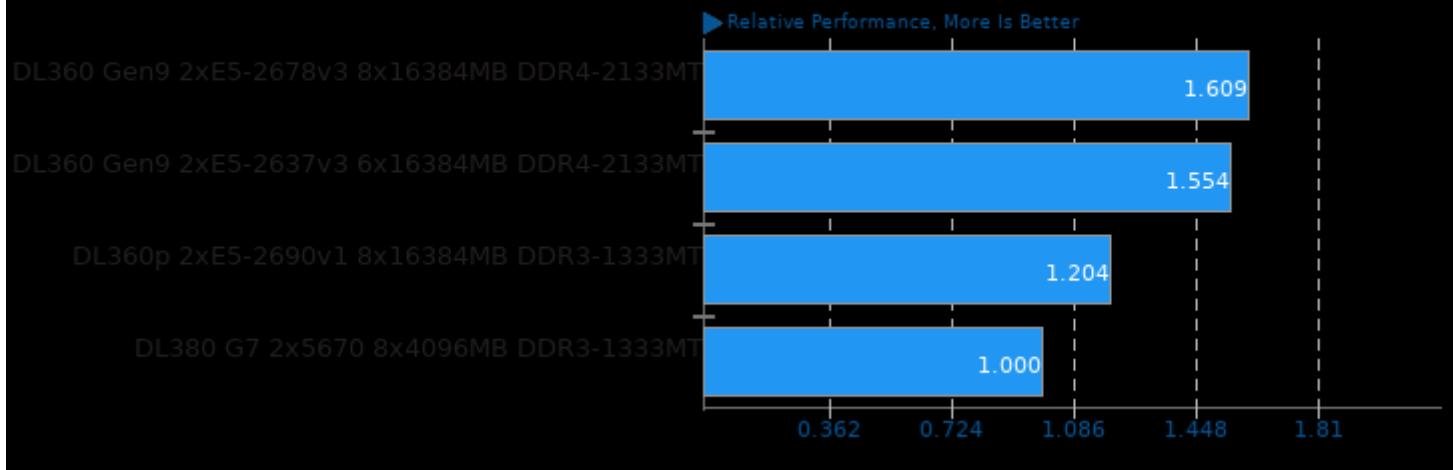
Result Composite - testserv



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

Geometric Mean Of Memory Test Suite

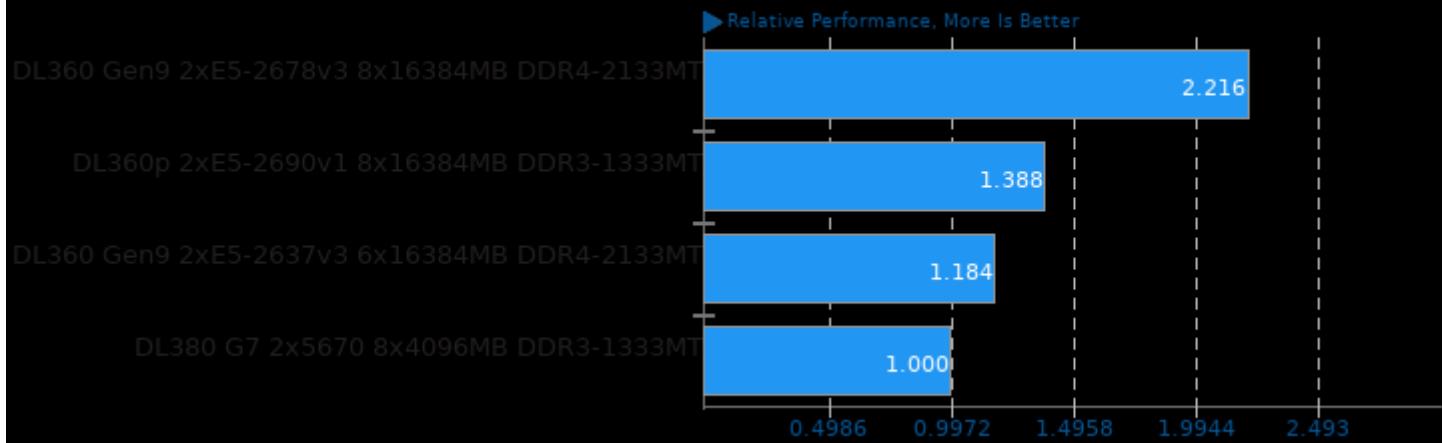
Result Composite - testserv



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

Geometric Mean Of Multi-Core Tests

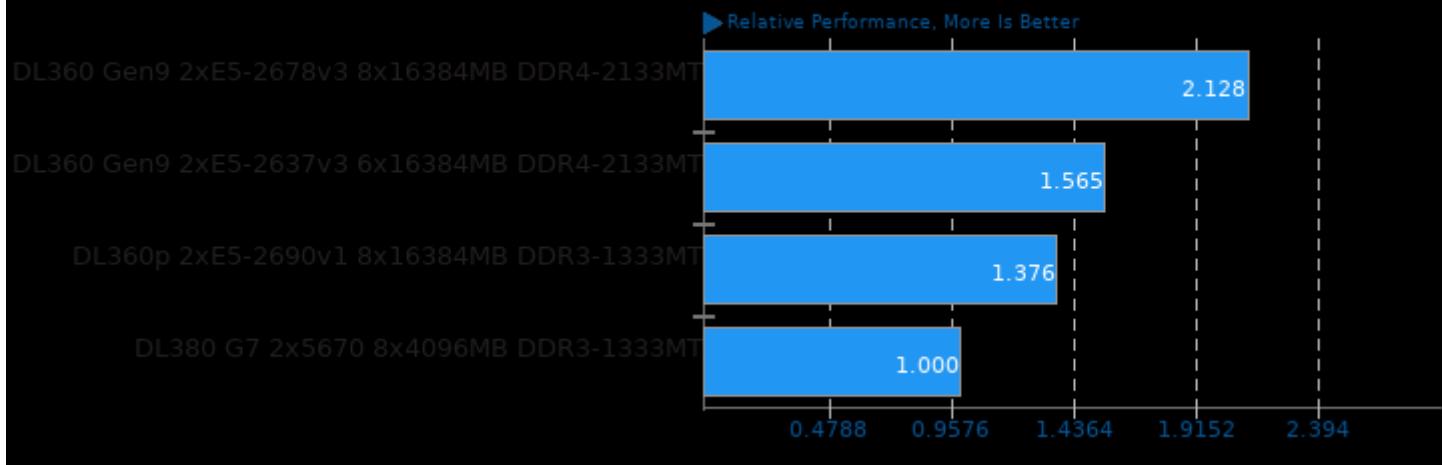
Result Composite - testserv



Geometric mean based upon tests: pts/john-the-ripper, pts/compress-7zip, pts/compress-pbzip2 and pts/build-php

Geometric Mean Of Server Tests

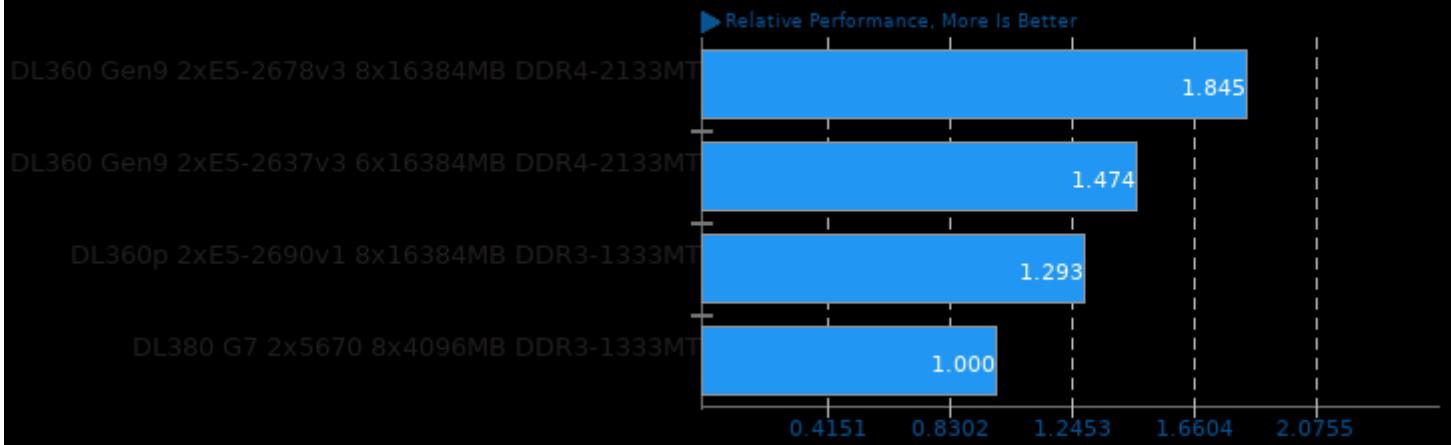
Result Composite - testserv



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

Geometric Mean Of Server CPU Tests

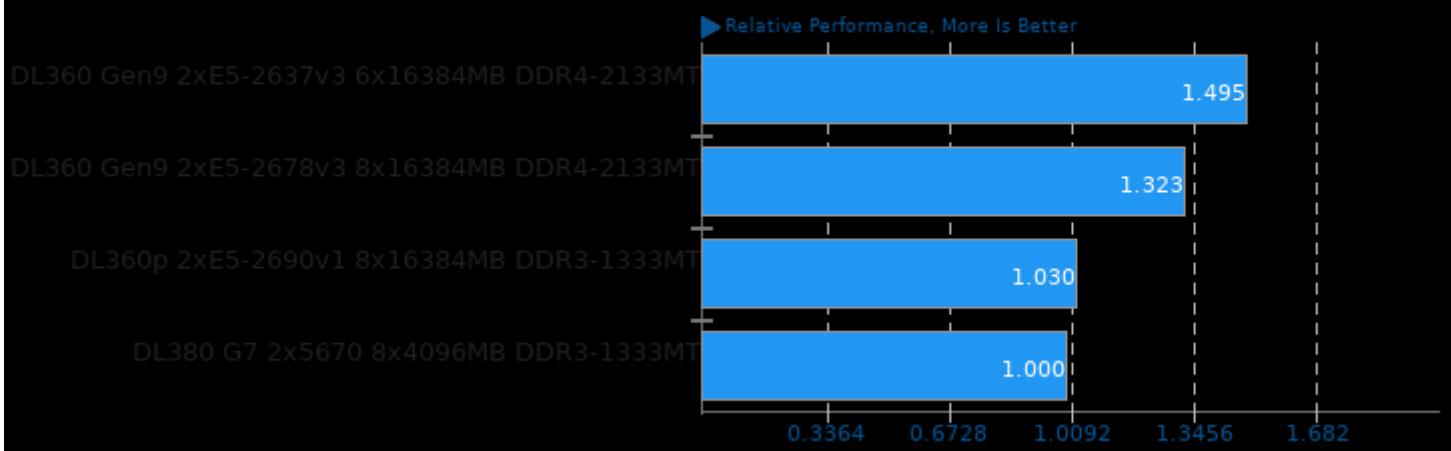
Result Composite - testserv



Geometric mean based upon tests: pts/john-the-ripper, pts/compress-7zip, pts/build-php, pts/openssl, pts/ramspeed and pts/stream

Geometric Mean Of Single-Threaded Tests

Result Composite - testserv



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

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 15:24.