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2X-E5-2609v2-MC0

UltraSparc T2 testing on Debian unstable via the Phoronix Test Suite.

Automated Executive Summary

Intel Xeon E5-2609 v2 had the most wins, coming in first place for 94% of the tests.

Based on the geometric mean of all complete results, the fastest (Intel Xeon E5-2609 v2) was 6.295x the speed of the slowest (UltraSPARC T2 8C). UltraSPARC T2 8C -Deb9 was 0.182x the speed of Intel Xeon E5-2609 v2 and UltraSPARC T2 8C was 0.871x the speed of UltraSPARC T2 8C -Deb9.

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

Himeno Benchmark (Poisson Pressure Solver) at 21.732x
OpenSSL (RSA 4096-bit Performance) at 11.854x
Timed HMMer Search (Pfam Database Search) at 9.429x
Gcrypt Library (CAMELLIA256-ECB Cipher) at 9.236x
Minion (Benchmark: Solitaire) at 7.597x
Timed PHP Compilation (Time To Compile) at 6.874x
Minion (Benchmark: Quasigroup) at 6.788x
GraphicsMagick (Operation: Local Adaptive Thresholding) at 5.7x
GraphicsMagick (Operation: Resizing) at 5.409x

Smallpt (Global Illumination Renderer; 100 Samples) at 4.66x.

Test Systems:

Intel Xeon E5-2609 v2

Processor: 2 x Intel Xeon E5-2609 v2 @ 2.50GHz (8 Cores), Motherboard: HP 158A, Chipset: Intel Xeon E7 v2/Xeon, Memory: 32768MB, Disk: 500GB Seagate ST500DM002-1BD14, Graphics: LLVMpipe, Audio: Intel C600/X79, Monitor: DELL P2213, Network: Intel 82579LM Gigabit Connection

OS: Debian 8.4, Kernel: 3.16.0-4-amd64 (x86_64), Desktop: GNOME Shell 3.14.4, Display Server: X Server 1.16.4, Display Driver: nouveau 1.0.11, OpenGL: 3.3 Mesa 10.3.2 Gallium 0.4, Compiler: GCC 4.9.2 + Open64 4.5.2.1 +, File-System: nfs, Screen Resolution: 1680x1050

Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --disable-vtable-verify --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-gtk-cairo --enable-java-awt=gtk --enable-java-home --enable-languages=c,c++,java,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i586 --with-arch-directory=amd64 --with-multilib-list=m32,m64,mx32 --with-tune=generic -v
Processor Notes: Scaling Governor: intel_pstate powersave

UltraSPARC T2 8C

Processor: UltraSparc T2 (64 Cores), Chipset: PLX PEX 8533 32-lane 6-port, Memory: 32768MB, Disk: 2 x 147GB Seagate ST914603SSUN146G, Network: Intel 82571EB Gigabit

OS: Debian 7.8, Kernel: 3.2.0-4-sparc64-smp (sparc64), Compiler: GCC 4.6.3, File-System: ext4

Compiler Notes: --build=sparc-linux-gnu --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-targets=all --enable-threads=posix --host=sparc-linux-gnu --target=sparc-linux-gnu --with-long-double-128 -v

UltraSPARC T2 8C -Deb9

Processor: UltraSparc T2 (64 Cores), Chipset: PLX PEX 8533 32-lane 6-port, Memory: 32768MB, Disk: 2 x 147GB Seagate ST914603SSUN146G, Network: Intel 82571EB Gigabit

OS: Debian unstable, Kernel: 4.5.0-2-sparc64-smp (sparc64), Display Server: X Server 1.19.1, OpenGL: 2.1 Mesa 13.0.4, Compiler: GCC 6.3.0 20170124, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=sparc64-linux-gnu --disable-browser-plugin --disable-libquadmath --enable-checking=release --enable-clocale=gnu --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-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-plugin --enable-shared --enable-targets=all --enable-threads=posix --host=sparc64-linux-gnu --program-prefix=sparc64-linux-gnu- --target=sparc64-linux-gnu --with-arch-directory=sparc64 --with-cpu-32=ultrasparc --with-default-libstdcxx-abi=new --with-long-double-128 -v

2X-E5-2609v2-MC0

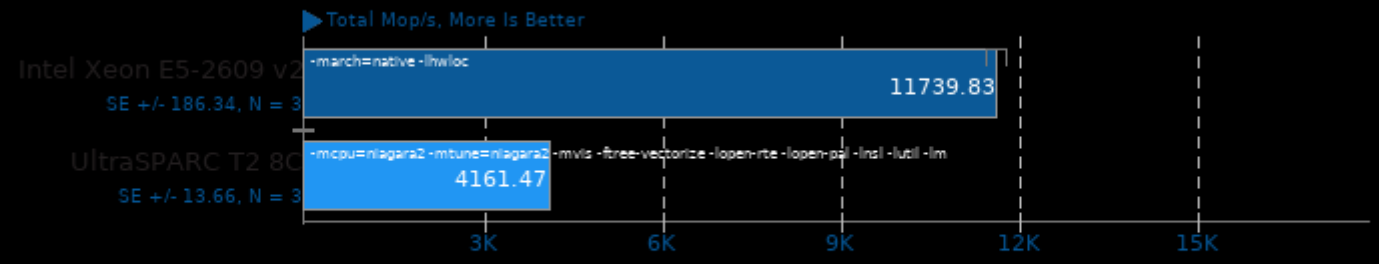
	Intel Xeon E5-2609 v2	UltraSPARC T2 8C	UltraSPARC T2 8C -Deb9
NAS Parallel Benchmarks - LU.A (Mop/s)	**11740**	**4161**	
Normalized	100%	35.45%	
Standard Deviation	2.7%	0.6%	
Timed HMMer Search - P.D.S (sec)	**10.38**	**97.87**	96.13
Normalized	100%	10.61%	10.8%
Standard Deviation	0.6%	1%	0.2%
Timed MAFFT Alignment - M.S.A (sec)	**5.16**	28.20	**33.91**
Normalized	100%	18.3%	15.22%
Standard Deviation	4.3%	8.1%	8.2%
Gcrypt Library - C.E.C (us)	**3220**	**29740**	
Normalized	100%	10.83%	
Standard Deviation	0.5%	0%	
John The Ripper - Blowfish (Real C/S)	**5324**	**1291**	1316
Normalized	100%	24.25%	24.72%
Standard Deviation	0.2%	0.6%	1.4%
x264 - H.2.V.E (FPS)	**150.10**	**6.64**	7.81
Normalized	100%	4.42%	5.2%
Standard Deviation	22.2%	3%	1.4%
GraphicsMagick - Resizing (Iterations/min)	**119**	**22**	23
Normalized	100%	18.49%	19.33%
Standard Deviation	0.5%	0%	0%
GraphicsMagick - L.A.T (Iterations/min)	**57**	**10**	11
Normalized	100%	17.54%	19.3%
Standard Deviation	0%	0%	0%
Himeno Benchmark - P.P.S (MFLOPS)	**1250**	**57.51**	66.96
Normalized	100%	4.6%	5.36%
Standard Deviation	3.1%	0%	0%
7-Zip Compression - C.S.T (MIPS)	**19897**		**9527**
Normalized	100%		47.88%
Standard Deviation	0.8%		1.2%
Timed Apache Compilation - Time To Compile (sec)	**52.62**	**236.40**	
Normalized	100%	22.26%	
Standard Deviation	3.5%	0.1%	
Timed PHP Compilation - Time To Compile (sec)	**34.43**	147.61	**236.66**
Normalized	100%	23.32%	14.55%
Standard Deviation	1%	0.3%	0.2%
C-Ray - Total Time (sec)	**22.04**		**59.57**
Normalized	100%		37%
Standard Deviation	0.2%		0%
Parallel BZIP2 Compression - 2.F.C (sec)	**9.95**	**23.95**	23.69
Normalized	100%	41.54%	42%
Standard Deviation	2.6%	4%	0.7%
Smallpt - G.I.R.1.S (sec)	84	**247**	**53**
Normalized	63.1%	21.46%	100%
Standard Deviation	0%	0.2%	1.1%
Bullet Physics Engine - 1000 Convex (sec)	9.19		
Standard Deviation	0.3%		
Crafty - Elapsed Time (sec)	112.16		
Standard Deviation	0.2%		
Minion - Solitaire (sec)	**127.32**	**967.29**	

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Normalized	100%	13.16%
Standard Deviation	0.1%	0%
Minion - Quasigroup (sec)	**200.20**	**1359**
Normalized	100%	14.73%
Standard Deviation	0.1%	1.6%
OpenSSL - R.4.b.P (Signs/sec)	**666.20**	**56.20**
Normalized	100%	8.44%
Standard Deviation	0.2%	0.2%

NAS Parallel Benchmarks 3.3

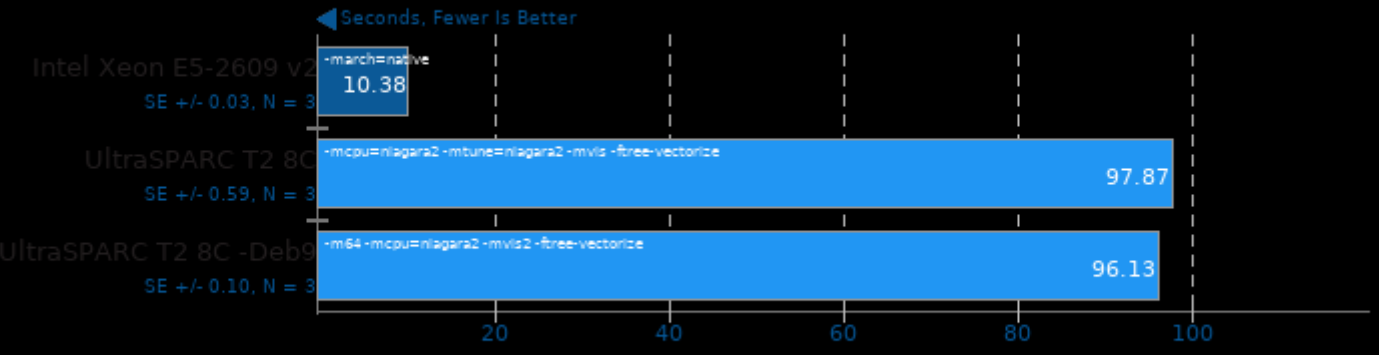
Test / Class: LU.A



1. (F9X) gfortran options: -O3 -pthread -lmpi_f77 -lmpi -ldl
2. Intel Xeon E5-2609 v2: Open MPI 1.6.5
3. UltraSPARC T2 8C: Open MPI 1.4.5

Timed HMMer Search 2.3.2

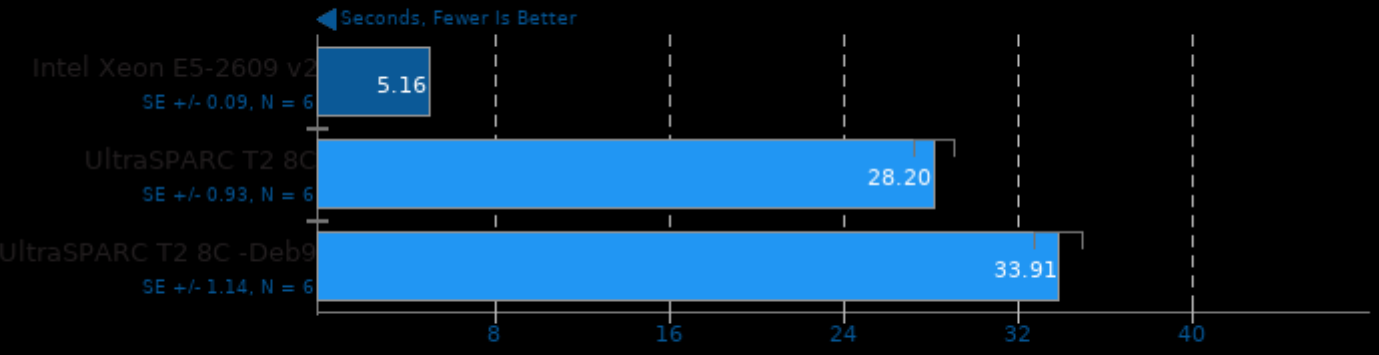
Pfam Database Search



1. (CC) gcc options: -O3 -pthread -lhmmer -lsquid -lm

Timed MAFFT Alignment 6.864

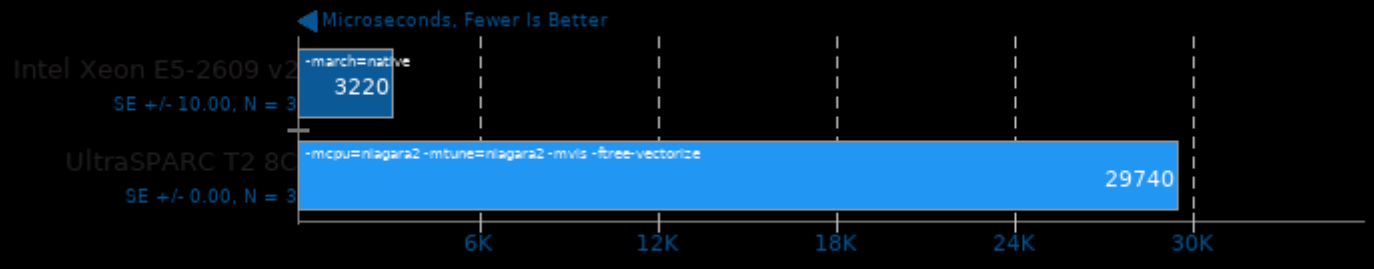
Multiple Sequence Alignment



1. (CC) gcc options: -O3 -lm -lpthread

Gcrypt Library 1.4.4

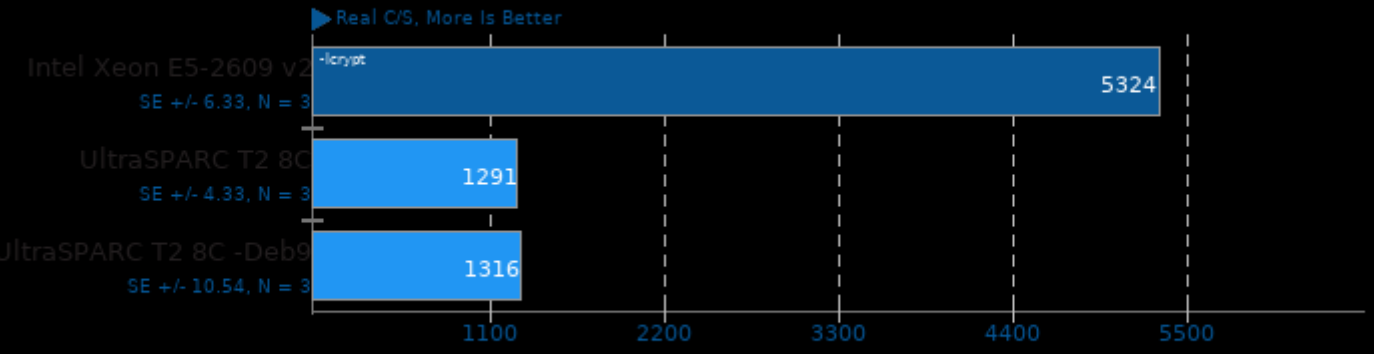
CAMELLIA256-ECB Cipher



1. (CC) gcc options: -O3 -fvisibility=hidden

John The Ripper 1.8.0

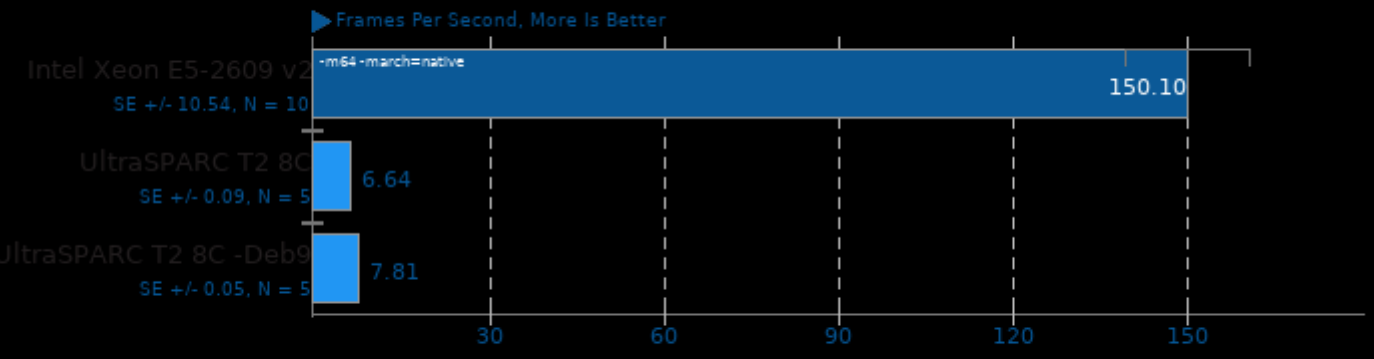
Test: Blowfish



1. (CC) gcc options: -fopenmp

x264 2015-11-02

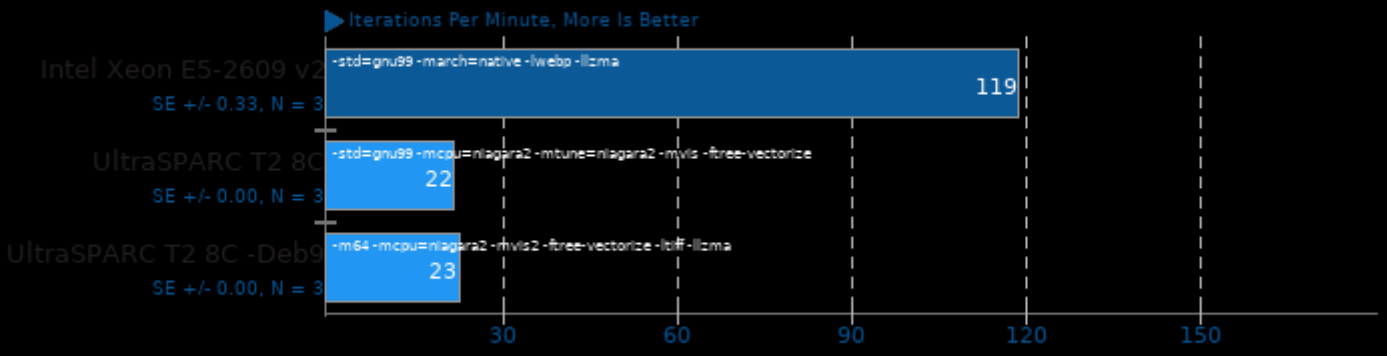
H.264 Video Encoding



1. (CC) gcc options: -ldl -lm -lpthread -O3 -ffast-math -std=gnu99 -fomit-frame-pointer -fno-tree-vectorize

GraphicsMagick 1.3.19

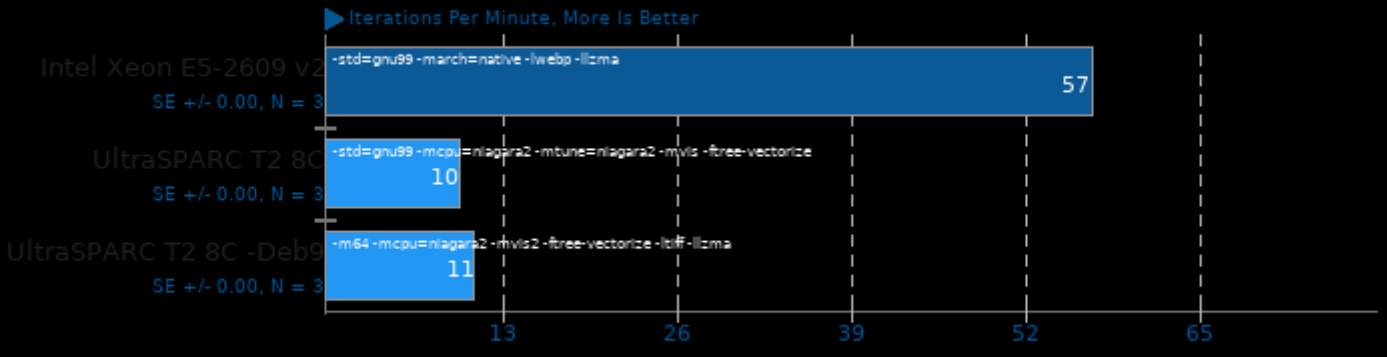
Operation: Resizing



1. (CC) gcc options: -fopenmp -O3 -pthread -ljbig -ljpeg -lXext -lSM -lICE -lX11 -lbz2 -lz -lm -lgomp -lpthread

GraphicsMagick 1.3.19

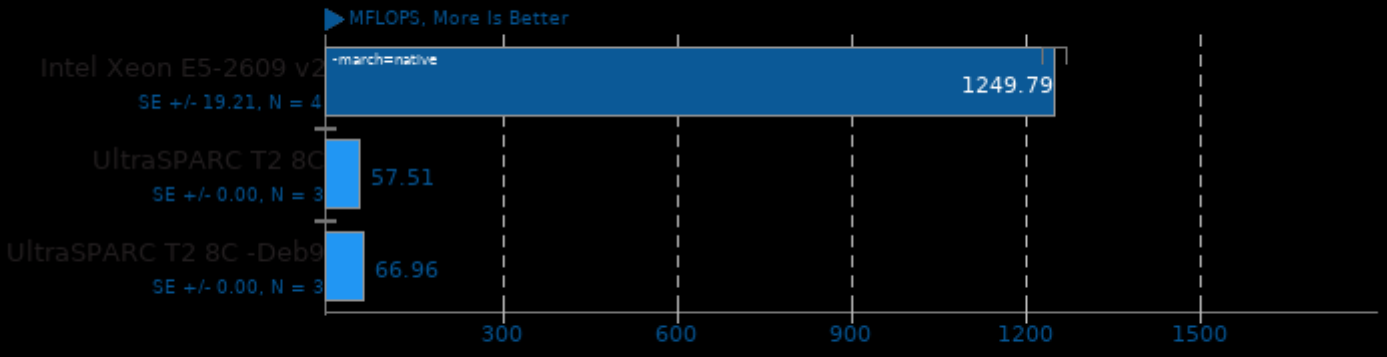
Operation: Local Adaptive Thresholding



1. (CC) gcc options: -fopenmp -O3 -pthread -ljbig -ljpeg -lXext -lSM -lICE -lX11 -lbz2 -lz -lm -lgomp -lpthread

Himeno Benchmark 3.0

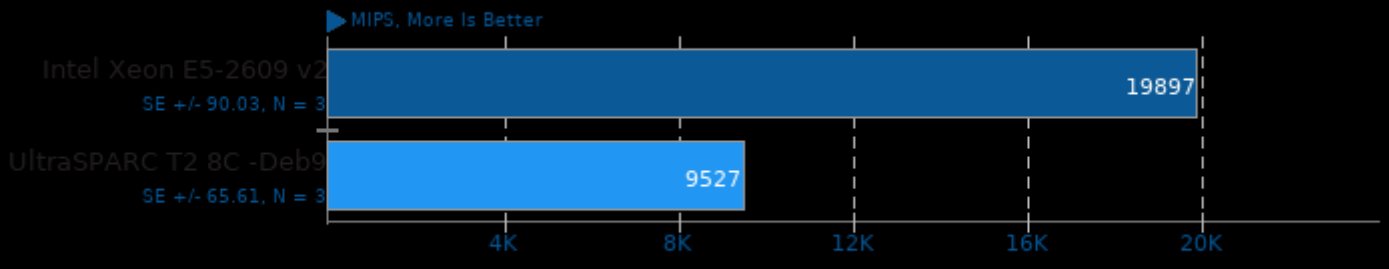
Poisson Pressure Solver



1. (CC) gcc options: -O3

7-Zip Compression 9.20.1

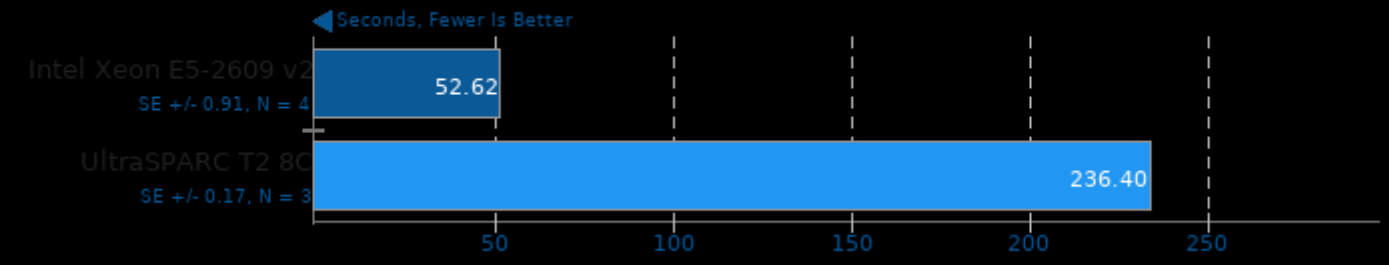
Compress Speed Test



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

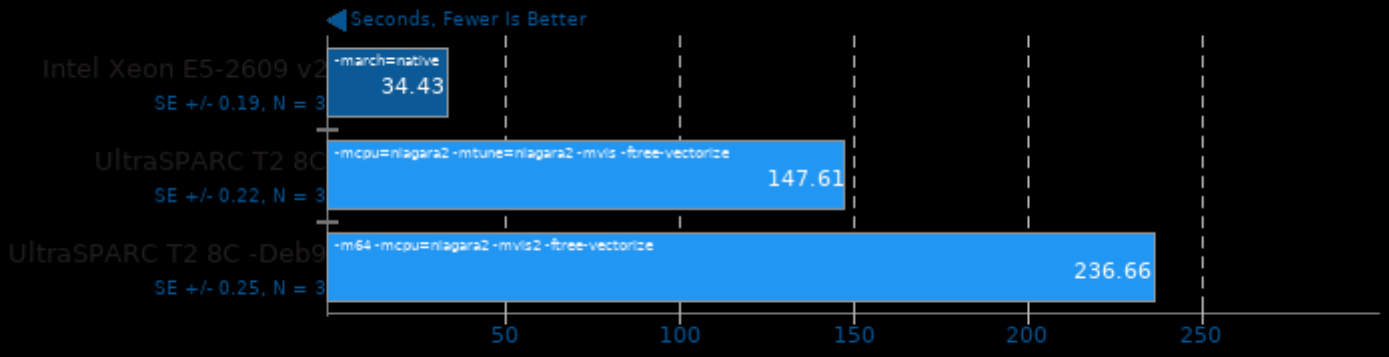
Timed Apache Compilation 2.4.7

Time To Compile



Timed PHP Compilation 5.2.9

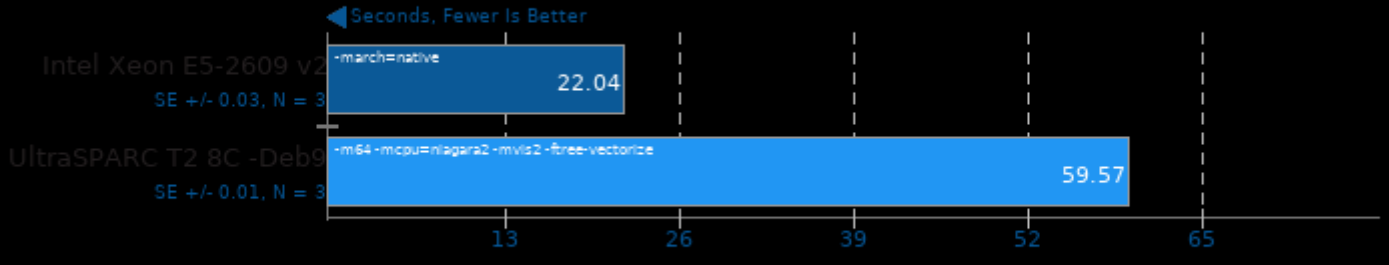
Time To Compile



1. (CC) gcc options: -O3 -pedantic -ldl -lz -lm

C-Ray 1.1

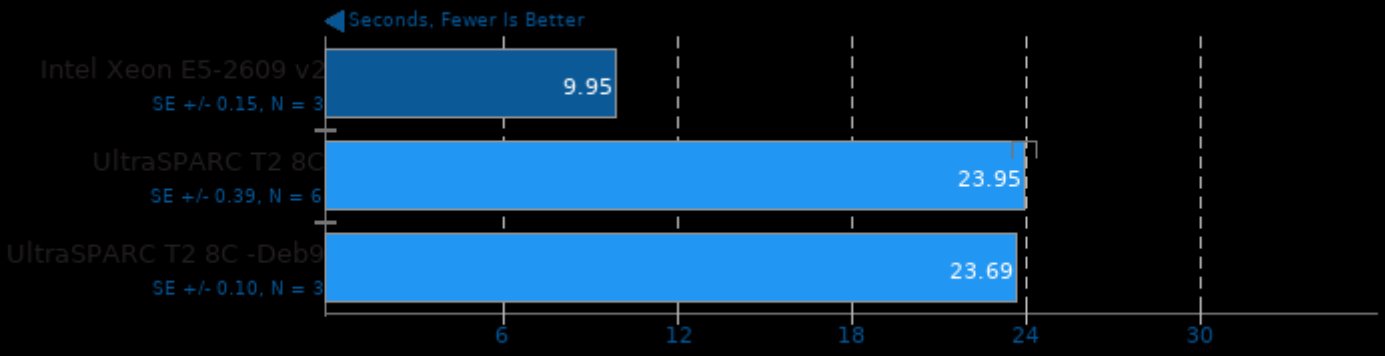
Total Time



1. (CC) gcc options: -lm -lpthread -O3

Parallel BZIP2 Compression 1.1.12

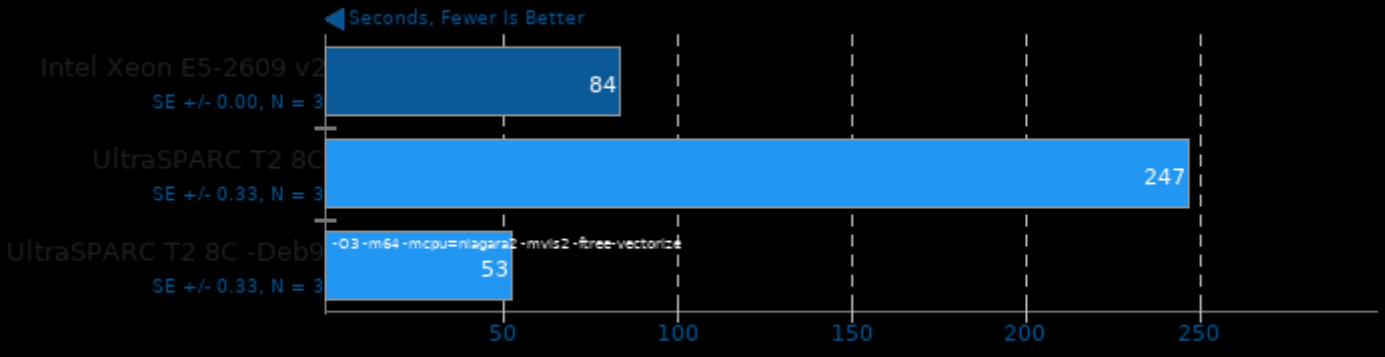
256MB File Compression



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

Smallpt 1.0

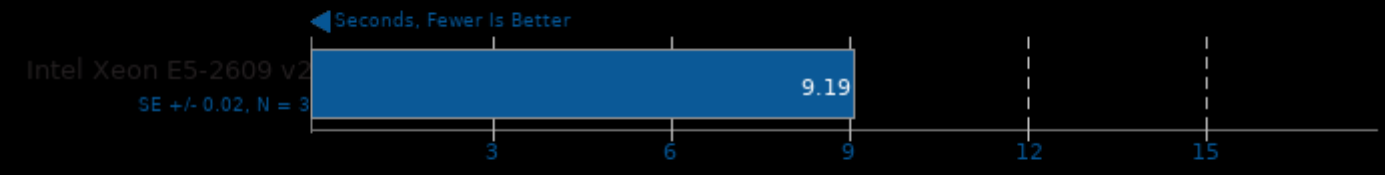
Global Illumination Renderer; 100 Samples



1. (CXX) g++ options: -fopenmp

Bullet Physics Engine 2.81

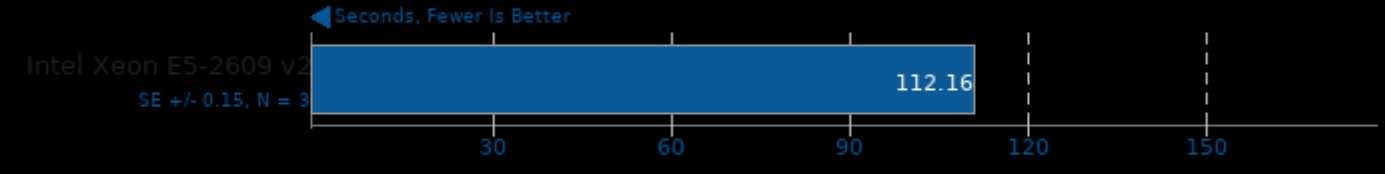
Test: 1000 Convex



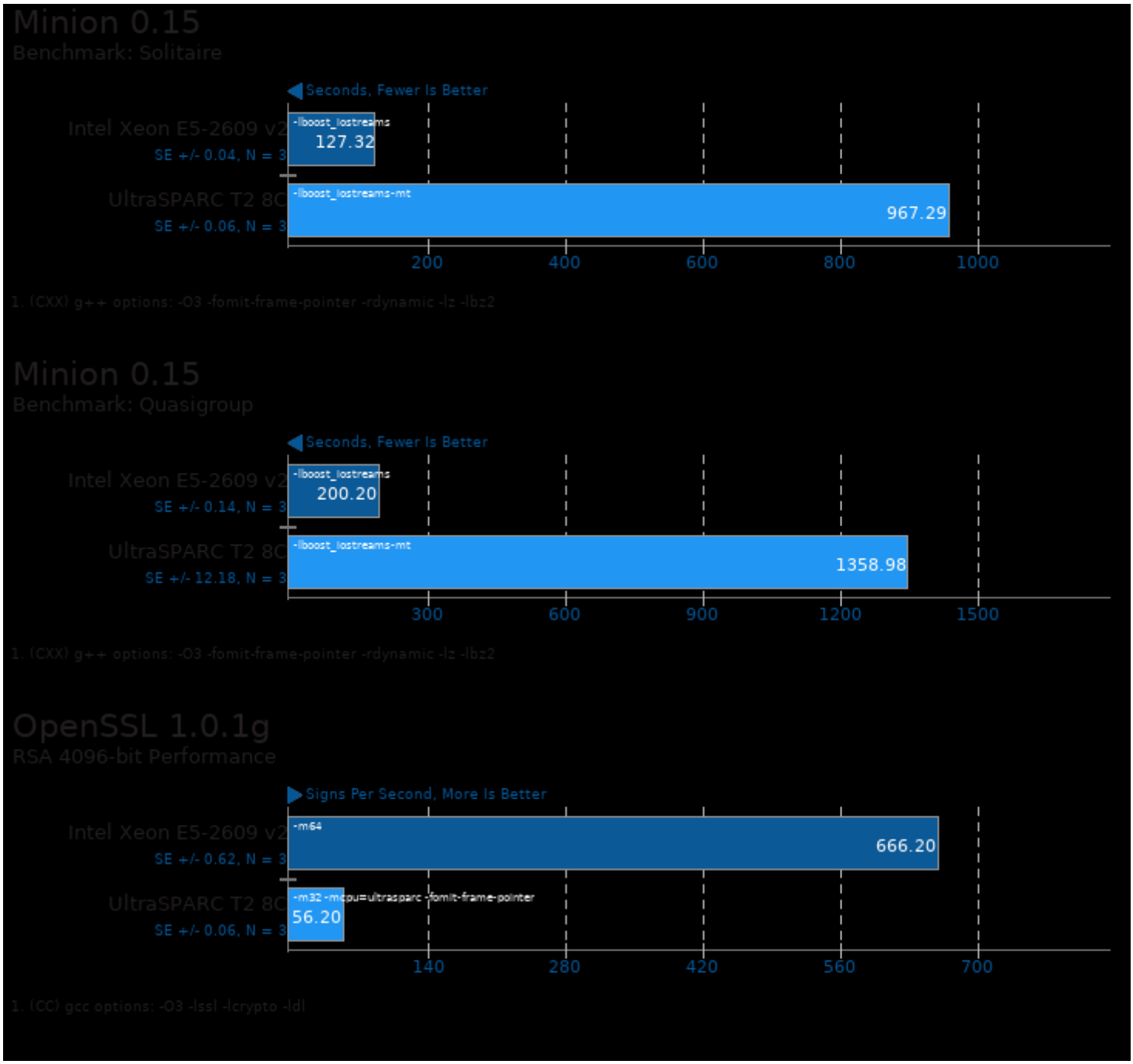
1. (CXX) g++ options: -O3 -rdynamic -lglut -lGL -lGLU

Crafty 23.4

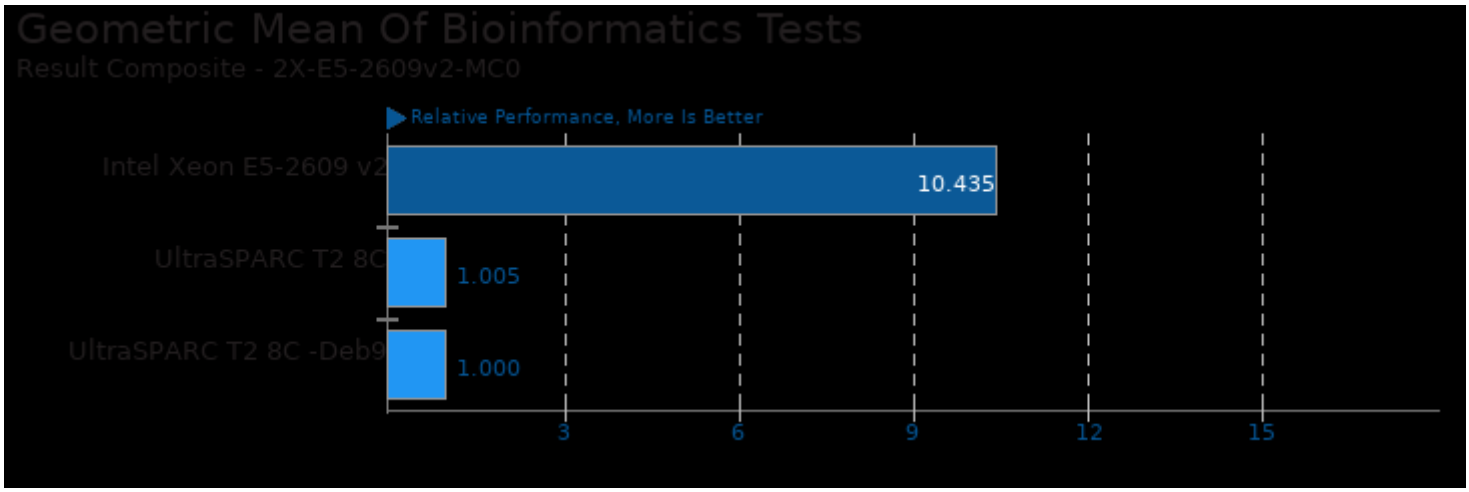
Elapsed Time



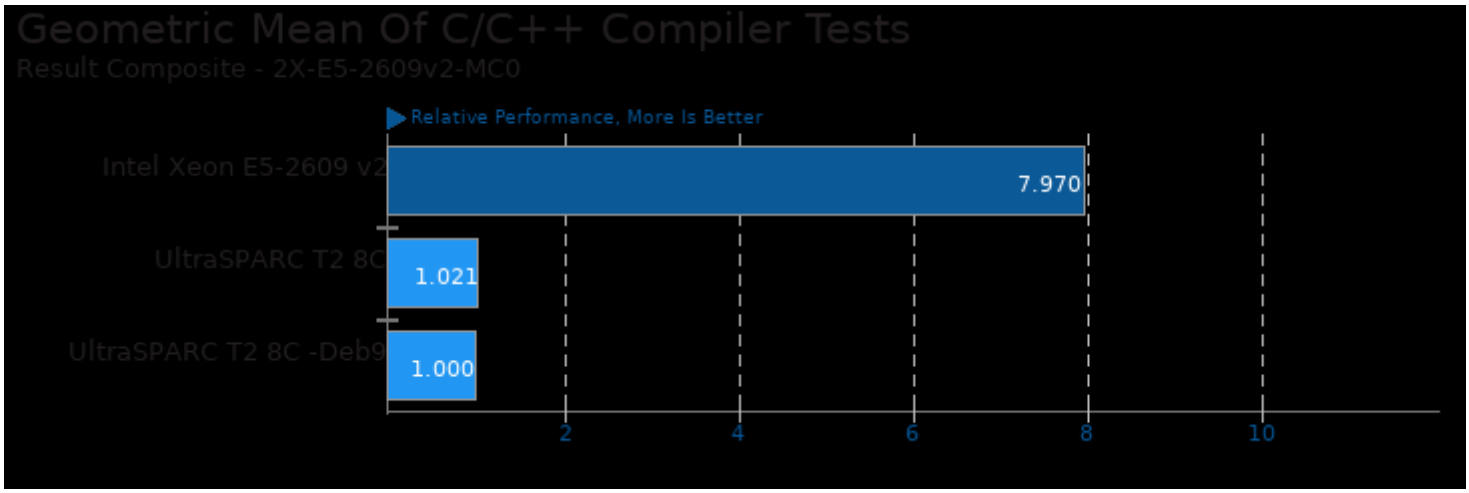
1. (CC) gcc options: -lstdc++ -lm


Minion 0.15
Benchmark: Solitaire
Seconds, Fewer Is Better
Intel Xeon E5-2609 v2
SE +/- 0.04, N = 3
-lboost_iostreams
127.32
UltraSPARC T2 8C
SE +/- 0.06, N = 3
-lboost_iostreams-mt
967.29
200
400
600
800
1000
1. (CXX) g++ options: -O3 -fomit-frame-pointer -rdynamic -lz -lbz2
Minion 0.15
Benchmark: Quasigroup
Seconds, Fewer Is Better
Intel Xeon E5-2609 v2
SE +/- 0.14, N = 3
-lboost_iostreams
200.20
UltraSPARC T2 8C
SE +/- 12.18, N = 3
-lboost_iostreams-mt
1358.98
300
600
900
1200
1500
1. (CXX) g++ options: -O3 -fomit-frame-pointer -rdynamic -lz -lbz2
OpenSSL 1.0.1g
RSA 4096-bit Performance
Signs Per Second, More Is Better
Intel Xeon E5-2609 v2
SE +/- 0.62, N = 3
-m64
666.20
UltraSPARC T2 8C
SE +/- 0.06, N = 3
-m32 -mcpu=ultrasparc -fomit-frame-pointer
56.20
140
280
420
560
700
1. (CC) gcc options: -O3 -lssl -lcrypto -ldl

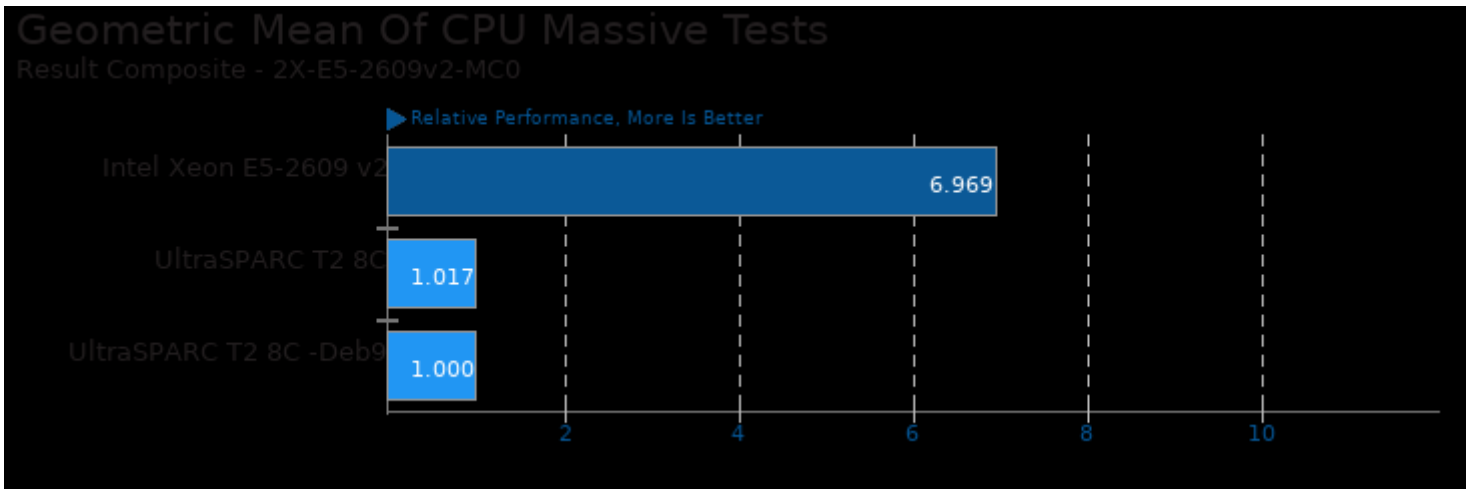
These geometric means are based upon test groupings / test suites for this result file.



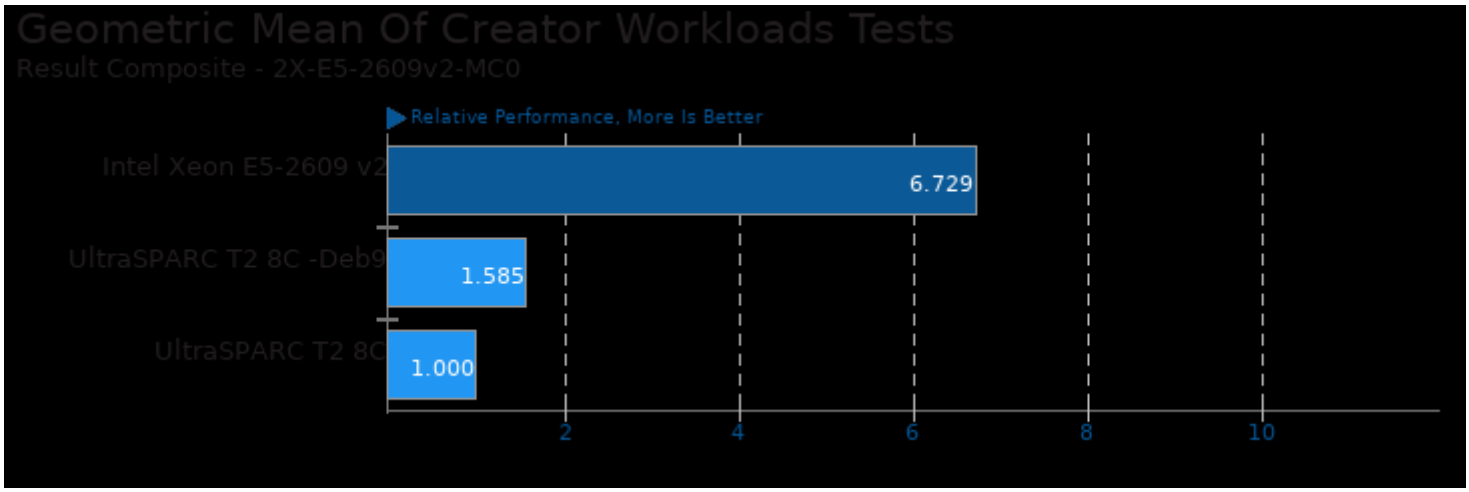
Geometric mean based upon tests: pts/himeno, pts/hmmer and pts/mafft



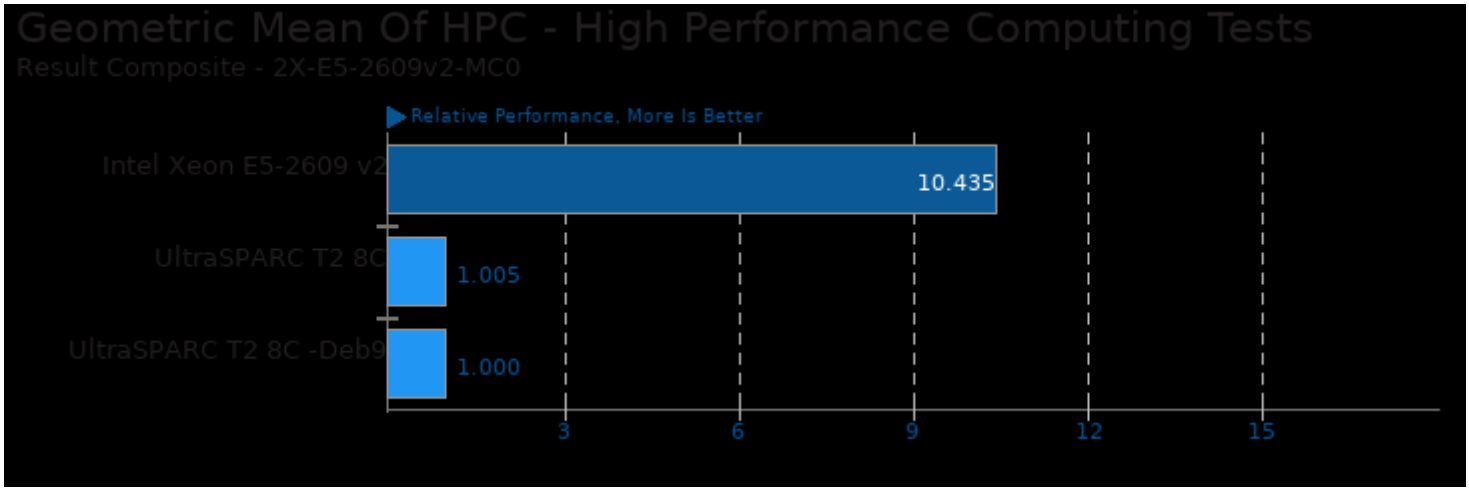
Geometric mean based upon tests: pts/mafft, pts/graphics-magick, pts/himeno, pts/hmmer, pts/build-php, pts/c-ray, pts/bullet, pts/compress-7zip, pts/john-the-ripper, pts/x264, pts/openssl and pts/build-apache



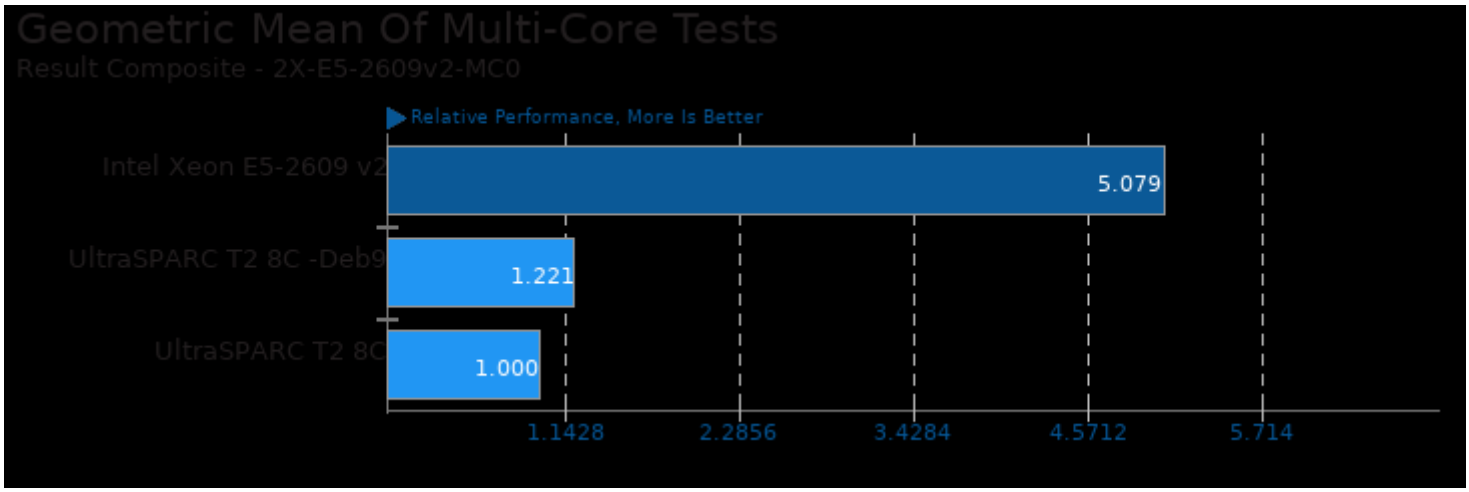
Geometric mean based upon tests: pts/build-apache, pts/build-php, pts/c-ray, pts/compress-7zip, pts/compress-pbzip2, pts/crafty, pts/x264, pts/graphics-magick, pts/himeno, pts/hmmer, pts/john-the-ripper, pts/openssl, pts/mafft, pts/minion and pts/npb



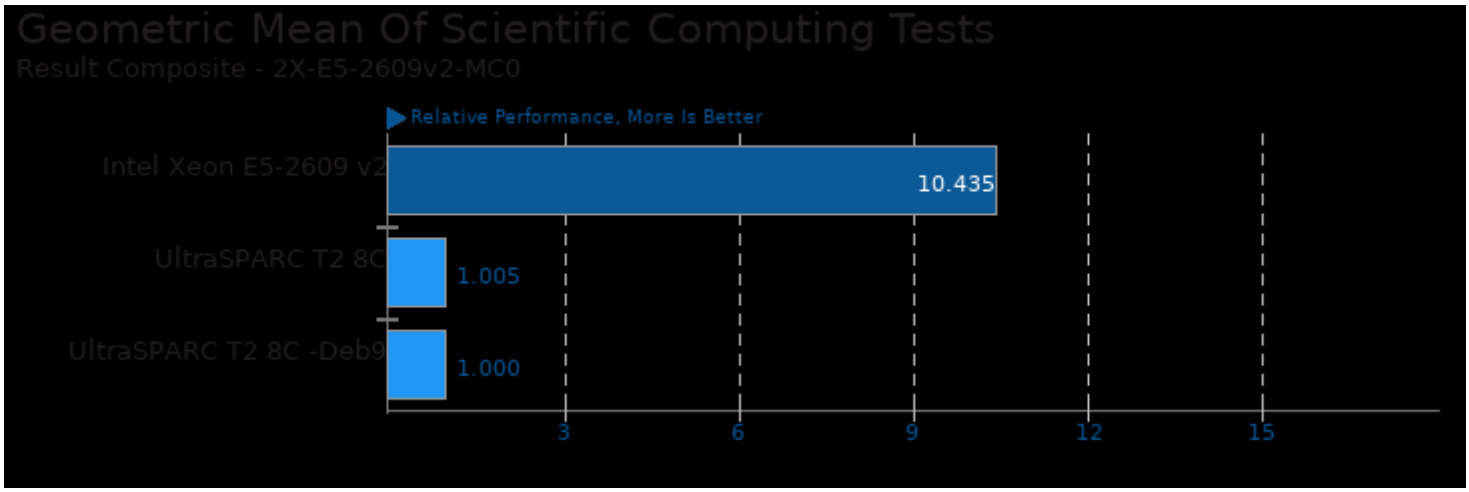
Geometric mean based upon tests: pts/c-ray, pts/smallpt, pts/x264 and pts/graphics-magick



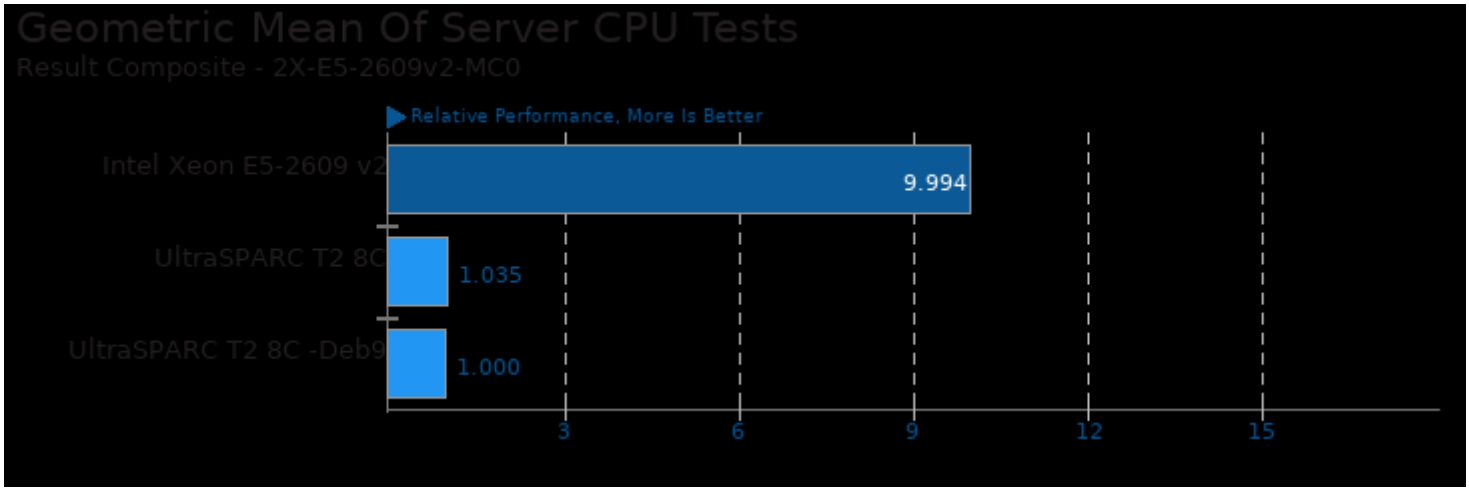
Geometric mean based upon tests: pts/npb, pts/himeno, pts/hmmer and pts/mafft



Geometric mean based upon tests: pts/c-ray, pts/x264, pts/npb, pts/john-the-ripper, pts/smallpt, pts/graphics-magick, pts/compress-7zip, pts/compress-pbzip2, pts/build-apache and pts/build-php



Geometric mean based upon tests: pts/himeno, pts/hmmer and pts/mafft



Geometric mean based upon tests: pts/npb, pts/john-the-ripper, pts/x264, pts/himeno, pts/compress-7zip, pts/build-php, pts/c-ray and pts/openssl

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 07:04.