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bulldozer

AMD FX -8150 Eight-Core testing with a ASUS SABERTOOTH 990FX and NVIDIA GeForce 8800 GT 512MB on Gentoo Base release 2.1 via the Phoronix Test Suite.

Automated Executive Summary

bulldozer had the most wins, coming in first place for 96% of the tests.

Based on the geometric mean of all complete results, the fastest (bulldozer) was 1.531x the speed of the slowest (Q9450 8GB DDR2 Radeon 6670 1GB All Stock).

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

PostgreSQL pgbench (TPC-B Transactions Per Second) at 3.999x
NAS Parallel Benchmarks (Test / Class: LU.A) at 2.276x
Stream (Type: Scale) at 2.175x
Stream (Type: Copy) at 2.153x
NAS Parallel Benchmarks (Test / Class: UA.A) at 2.139x
TTSIOD 3D Renderer (Phong Rendering With Soft-Shadow Mapping) at 2.103x
7-Zip Compression (Compress Speed Test) at 2.101x
Stream (Type: Add) at 2.007x
Stream (Type: Triad) at 2.007x

Smallpt (Global Illumination Renderer; 100 Samples) at 1.971x.

Test Systems:

bulldozer

Processor: AMD FX -8150 Eight-Core @ 3.61GHz (8 Cores), Motherboard: ASUS SABERTOOTH 990FX, Memory: 4096MB, Disk: 300GB Western Digital WDC WD3000GLFS-0 + 500GB MAXTOR STM350032, Graphics: NVIDIA GeForce 8800 GT 512MB (660/950MHz), Network: Realtek RTL8111/8168B

OS: Gentoo Base release 2.1, Kernel: 3.0.6-gentoo (x86_64), Desktop: KDE 4.7.2, Display Server: X Server 1.10.4, Display Driver: NVIDIA 285.05.09, OpenGL: 3.3.0 NVIDIA 285.05.09, Compiler: GCC 4.5.3, File-System: ext4, Screen Resolution: 1680x1050

Q9450 8GB DDR2 Radeon 6670 1GB All Stock

Processor: Intel Core 2 Quad Q9450 @ 2.66GHz (4 Cores), Chipset: Intel 82G33/G31/P35/P31 + ICH9, Memory: 8192MB, Disk: 74GB Western Digital WDC WD740GD-00FL + 2 x 1000GB Western Digital WDC WD1002FAEX-0, Graphics: AMD Radeon HD 6670 1024MB (810/1000MHz), Monitor: G220fb

OS: Slamd64 12.2.0, Kernel: 2.6.39.4 (x86_64), Desktop: Xfce 4.8.0, Display Server: X Server 1.9.5, Display Driver: fglrx 8.88.7 Catalyst 11.8, Compiler: GCC 4.4.5 + Clang 4.2.1 + llvm 2.9, File-System: ext2/ext3, Screen Resolution: 2048x1536

System Notes: Antialiasing: 2x Box. Anisotropic Filtering: 2x.

	bulldozer	Q9450 8GB DDR2 Radeon 6670 1GB All Stock
PostgreSQL pgbench - T.B.T.P.S (TPS)	**370.12**	**1480**
Normalized	25.01%	100%
Standard Deviation	0.1%	5%
NAS Parallel Benchmarks - LU.A (Mop/s)	**11771**	**5172**
Normalized	100%	43.94%
Standard Deviation	0.7%	0.4%
Stream - Scale (MB/s)	**11667**	**5363**
Normalized	100%	45.97%
Standard Deviation	0.9%	0.4%
Stream - Copy (MB/s)	**12128**	**5632**
Normalized	100%	46.44%
Standard Deviation	0.5%	0.3%
NAS Parallel Benchmarks - UA.A (Mop/s)	**39.95**	**18.68**

bulldozer

Normalized	100%	46.76%
Standard Deviation	1.2%	0.4%
TTSIOD 3D Renderer - P.R.W.S.S.M (FPS)	**116.06**	**55.20**
Normalized	100%	47.56%
Standard Deviation	0.9%	0.1%
7-Zip Compression - C.S.T (MIPS)	**18209**	**8665**
Normalized	100%	47.59%
Standard Deviation	0.3%	1.7%
Stream - Add (MB/s)	**11774**	**5865**
Normalized	100%	49.81%
Standard Deviation	0.1%	0.3%
Stream - Triad (MB/s)	**12190**	**6075**
Normalized	100%	49.83%
Standard Deviation	0.2%	0.2%
Smallpt - G.I.R.1.S (sec)	**104**	**205**
Normalized	100%	50.73%
Standard Deviation	0.6%	0%
NAS Parallel Benchmarks - MG.B (Mop/s)	**5672**	**2984**
Normalized	100%	52.61%
Standard Deviation	0.5%	0.1%
Tachyon - Total Time (sec)	**21.11**	**39.16**
Normalized	100%	53.91%
Standard Deviation	0.6%	0.7%
C-Ray - Total Time (sec)	**51.07**	**94.16**
Normalized	100%	54.24%
Standard Deviation	0.1%	0.1%
OpenSSL - R.4.b.P (Signs/sec)	**68.68**	**39.23**
Normalized	100%	57.12%
Standard Deviation	0.9%	0.1%
Parallel BZIP2 Compression - 2.F.C (sec)	**8.72**	**13.55**
Normalized	100%	64.35%
Standard Deviation	1.3%	2.4%
NAS Parallel Benchmarks - EP.B (Mop/s)	**151.52**	**98.54**
Normalized	100%	65.03%
Standard Deviation	2%	1.7%
John The Ripper - Traditional DES (Real C/S)	**3918000**	**2836667**
Normalized	100%	72.4%
Standard Deviation	0.8%	1%
John The Ripper - Blowfish (Real C/S)	**954**	**691**
Normalized	100%	72.43%
Standard Deviation	0.2%	0%
FLAC Audio Encoding - WAV To FLAC (sec)	**8.25**	**11.31**
Normalized	100%	72.94%
Standard Deviation	0.2%	0.1%
NAS Parallel Benchmarks - IS.C (Mop/s)	**111.59**	**83.98**
Normalized	100%	75.26%
Standard Deviation	0%	0%
Apache Benchmark - S.W.P.S (Reqs/sec)	**17850**	**13630**
Normalized	100%	76.36%
Standard Deviation	0.5%	5.7%
FFmpeg - AVI To NTSC VCD (sec)	**9.98**	**13.05**
Normalized	100%	76.48%
Standard Deviation	1.2%	1.3%
Himeno Benchmark - P.P.S (MFLOPS)	**237.28**	**184.29**
Normalized	100%	77.67%

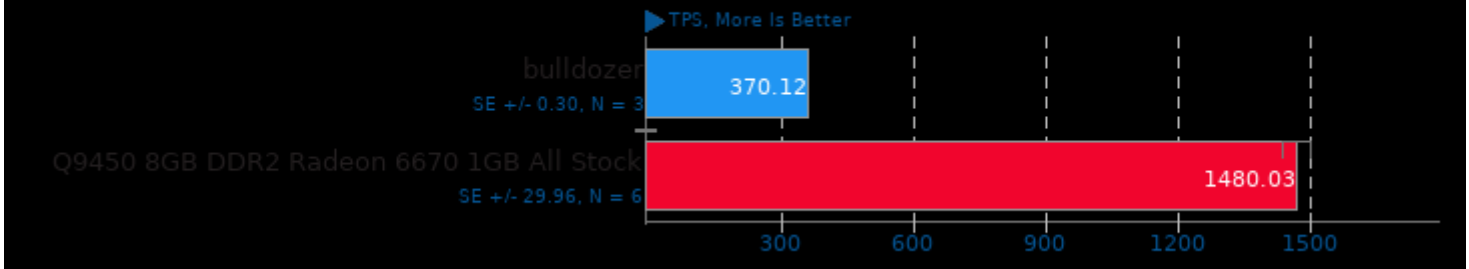
bulldozer

Standard Deviation	0.2%	0.1%
Timed MAFFT Alignment - M.S.A (sec)	**26.37**	**33.40**
Normalized	100%	78.95%
Standard Deviation	0.2%	0.1%
TSCP - A.C.P (Nodes/s)	**322772**	**259238**
Normalized	100%	80.32%
Standard Deviation	0.1%	0.1%
LAME MP3 Encoding - WAV To MP3 (sec)	**26.74**	**32.84**
Normalized	100%	81.43%
Standard Deviation	0.6%	0.2%
Gcrypt Library - C.E.C (us)	**2807**	**3430**
Normalized	100%	81.84%
Standard Deviation	1%	0%
World of Padman - 2x Box - 2x (FPS)		186.30
Standard Deviation		0.9%
Crafty - Elapsed Time (sec)	426.11	
Standard Deviation	0.8%	
GraphicsMagick - Sharpen (Iterations/min)	61	
Standard Deviation	0%	
GraphicsMagick - Resizing (Iterations/min)	120	
Standard Deviation	0%	
GraphicsMagick - L.A.T (Iterations/min)	65	
Standard Deviation	0.9%	
GraphicsMagick - HWB Color Space (Iterations/min)	141	
Standard Deviation	0.8%	
World of Padman - 1680 x 1050 (FPS)	431.10	
Standard Deviation	0.7%	
ET: Quake Wars Demo - 1680 x 1050 (FPS)	71.75	
Standard Deviation	40.8%	

bulldozer

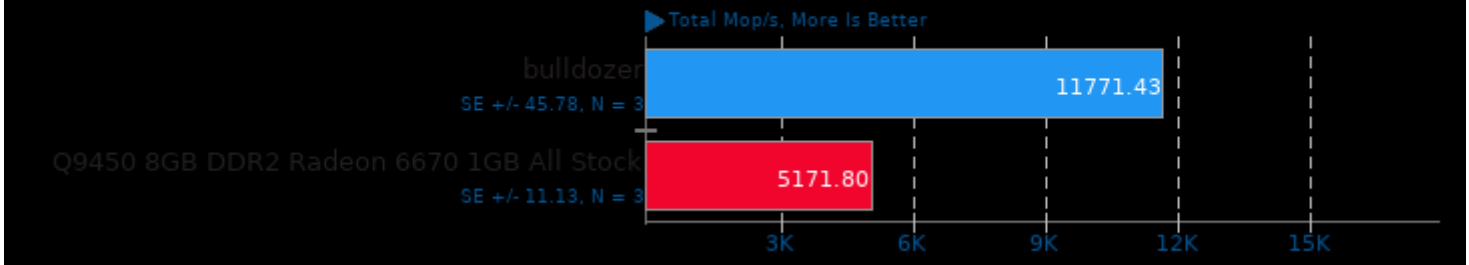
PostgreSQL pgbench 9.0.4

TPC-B Transactions Per Second



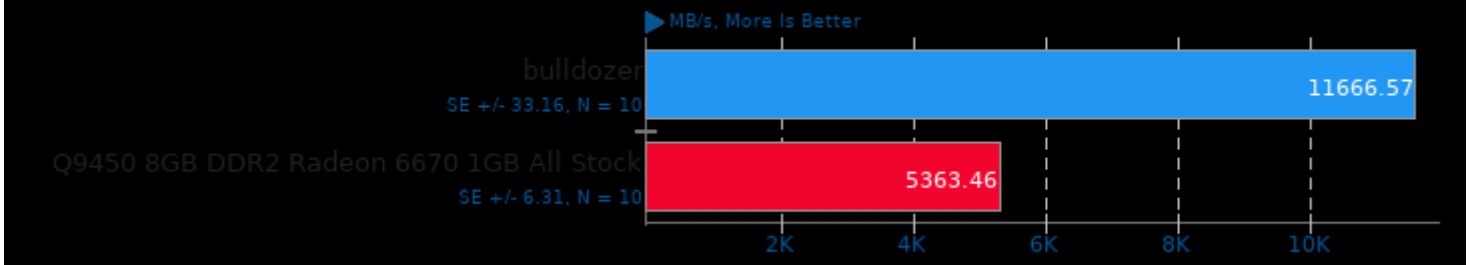
NAS Parallel Benchmarks 3.3

Test / Class: LU.A



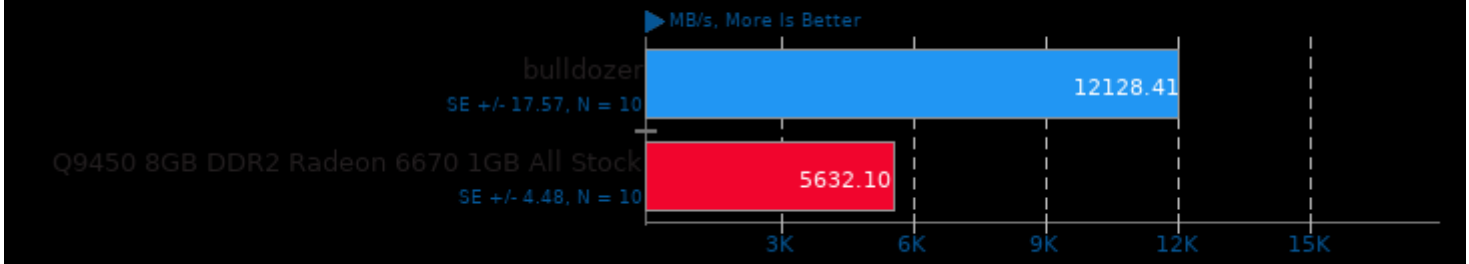
Stream 2009-04-11

Type: Scale

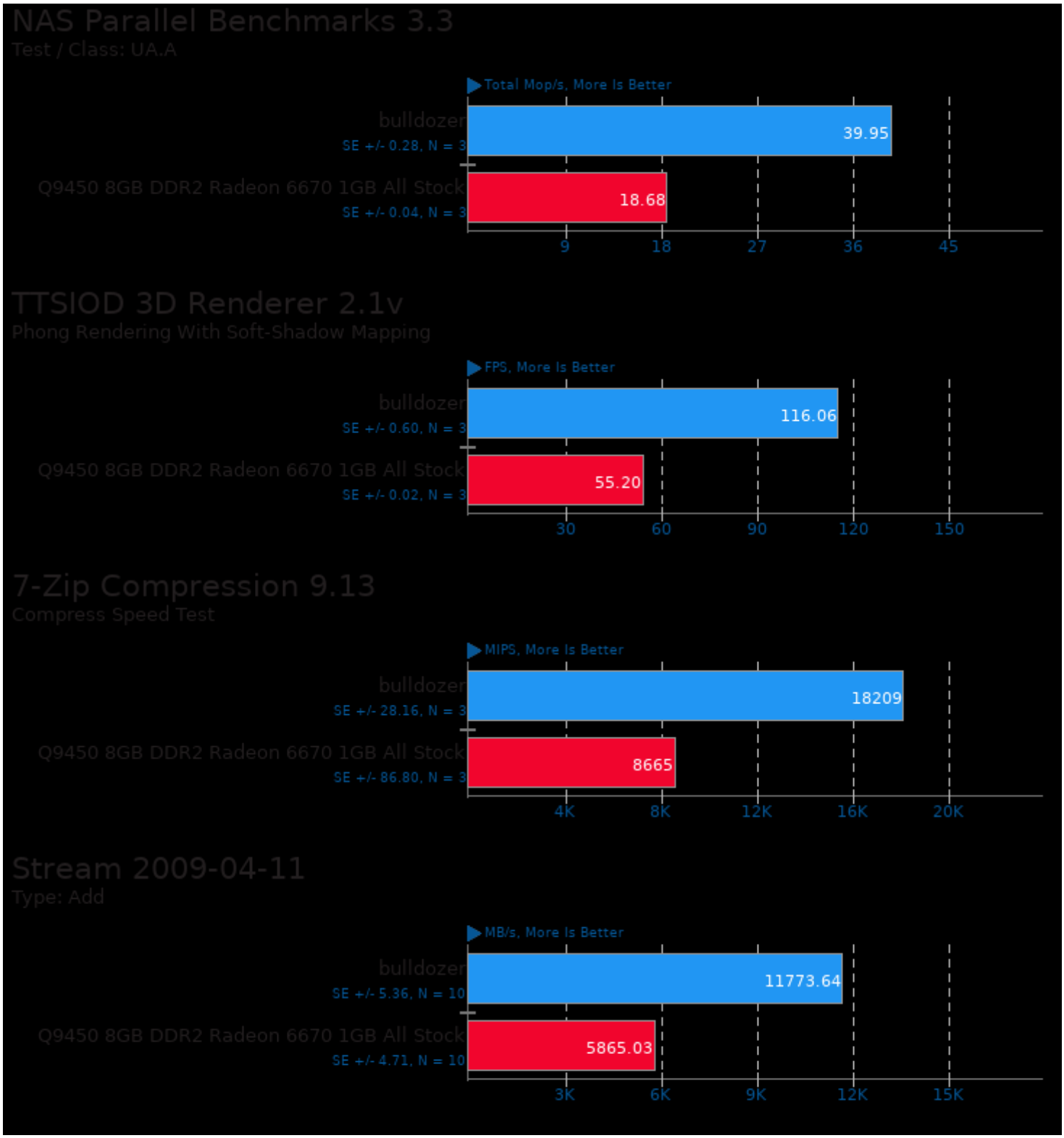


Stream 2009-04-11

Type: Copy



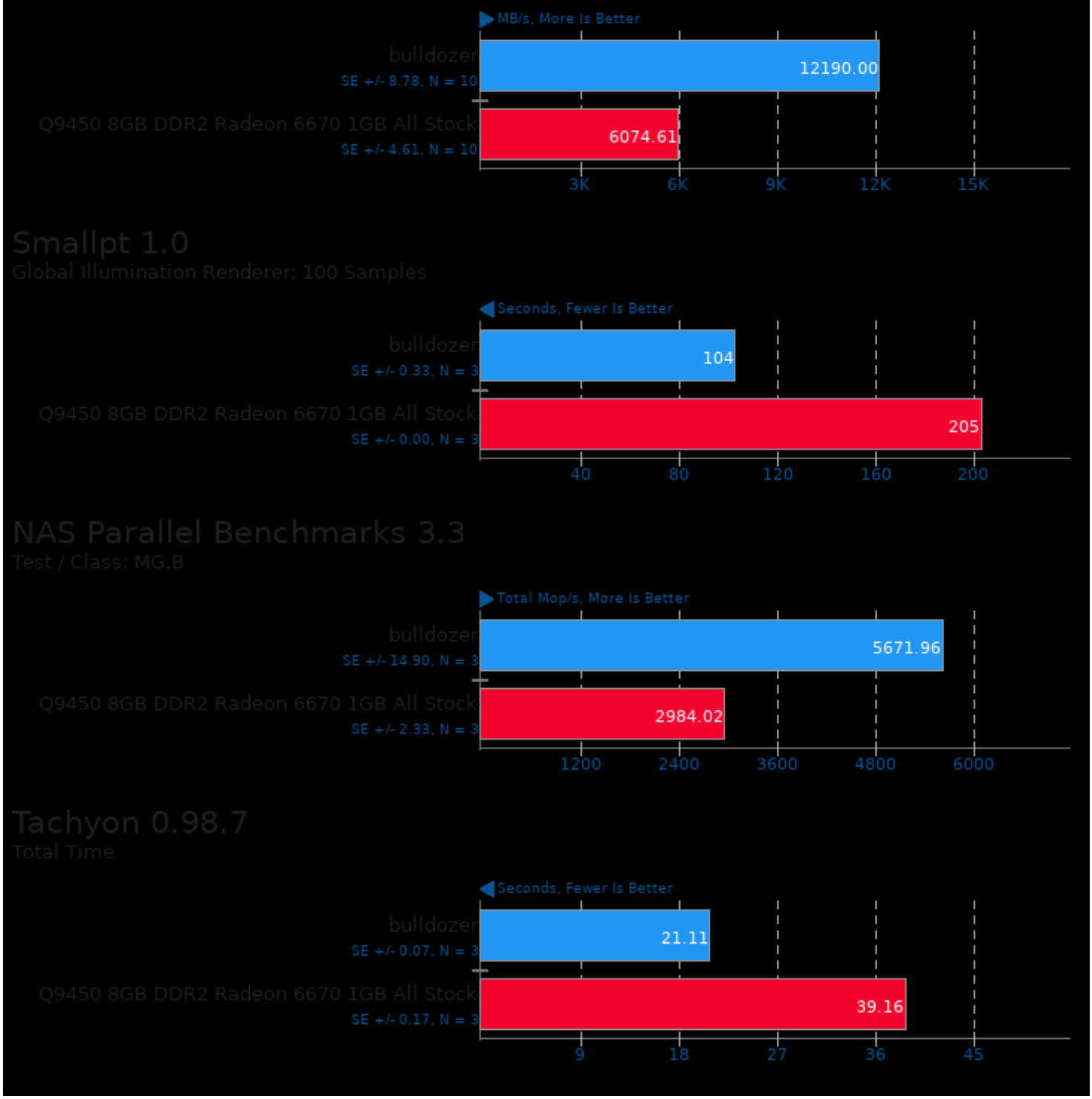
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NAS Parallel Benchmarks 3.3
Test / Class: UA.A
Total Mop/s, More Is Better
bulldozer
SE +/- 0.28, N = 3
39.95
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.04, N = 3
18.68
9
18
27
36
45
TTSIOD 3D Renderer 2.1v
Phong Rendering With Soft-Shadow Mapping
FPS, More Is Better
bulldozer
SE +/- 0.60, N = 3
116.06
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.02, N = 3
55.20
30
60
90
120
150
7-Zip Compression 9.13
Compress Speed Test
MIPS, More Is Better
bulldozer
SE +/- 28.16, N = 3
18209
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 86.80, N = 3
8665
4K
8K
12K
16K
20K
Stream 2009-04-11
Type: Add
MB/s, More Is Better
bulldozer
SE +/- 5.36, N = 10
11773.64
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 4.71, N = 10
5865.03
3K
6K
9K
12K
15K

bulldozer

Stream 2009-04-11

Type: Triad



Smallpt 1.0

Global Illumination Renderer; 100 Samples

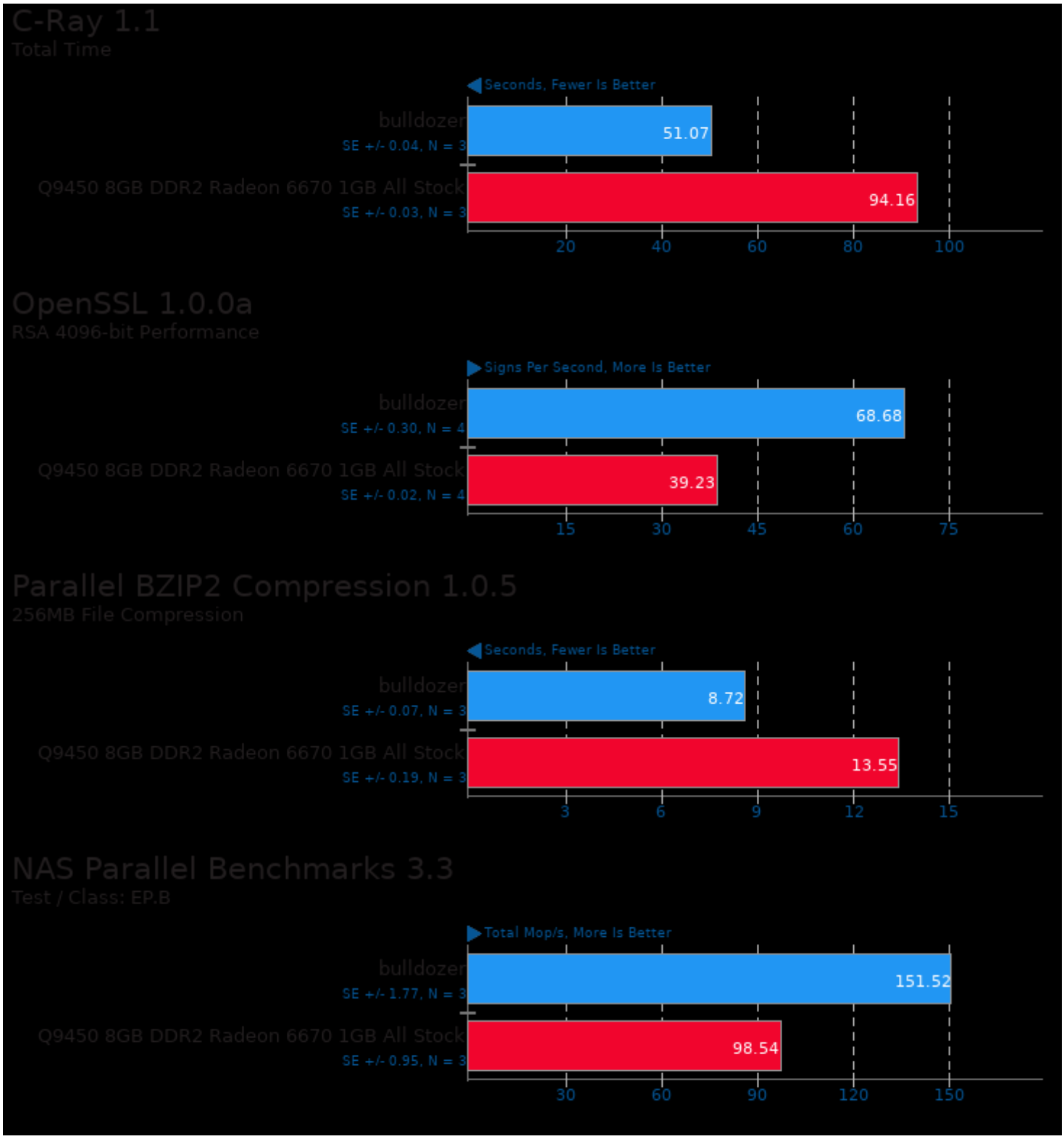
NAS Parallel Benchmarks 3.3

Test / Class: MG.B

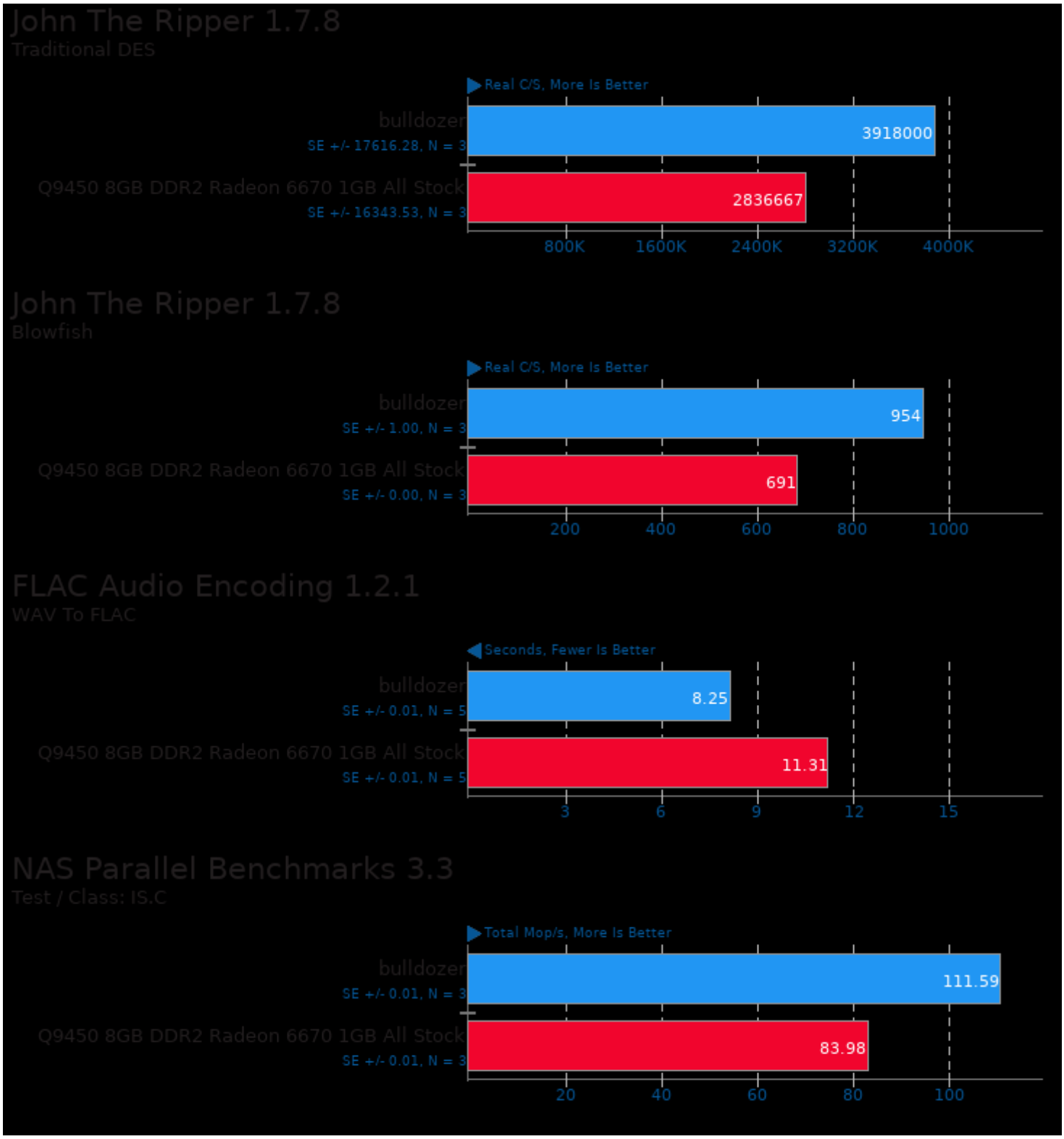
Tachyon 0.98.7

Total Time

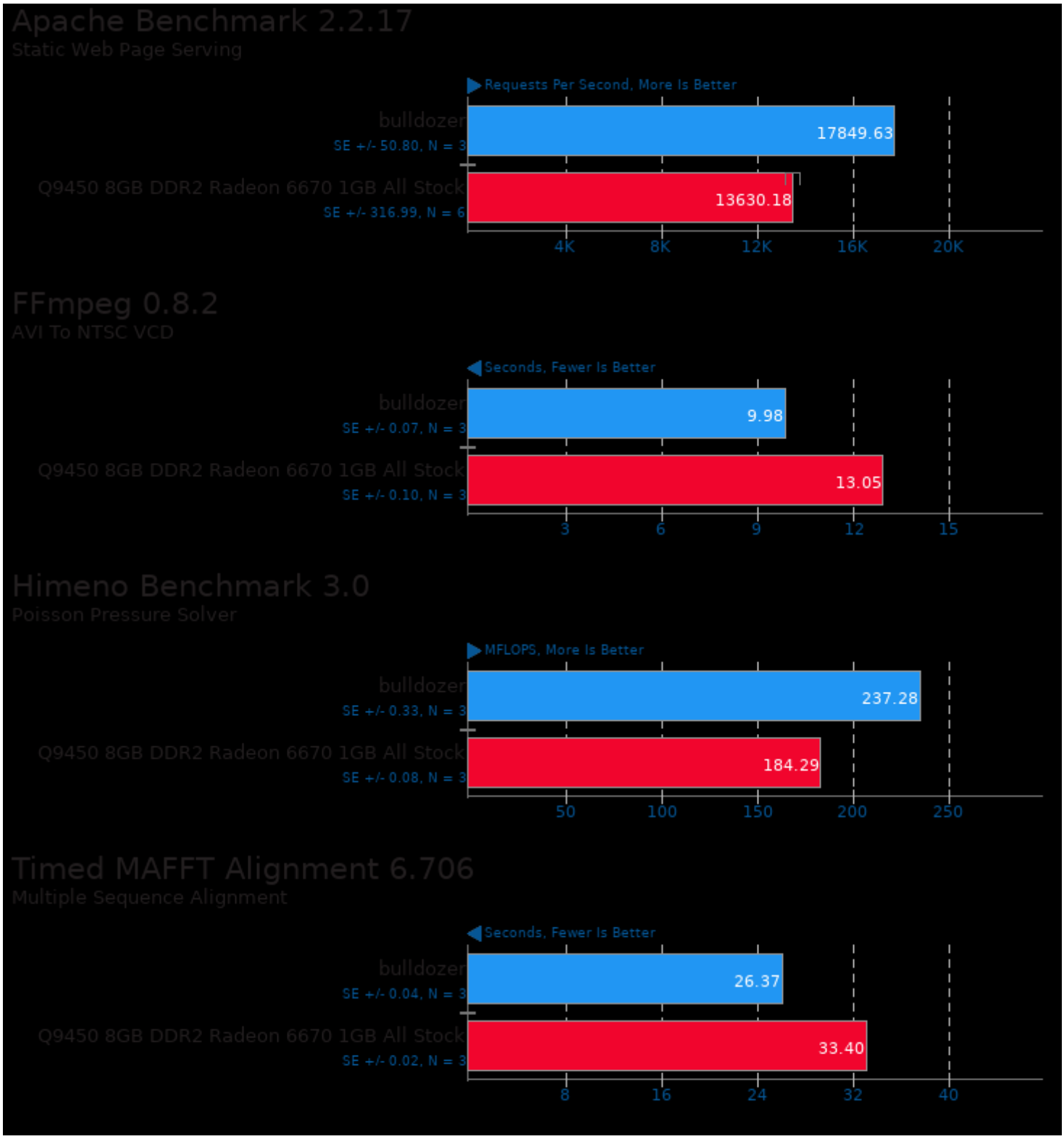
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C-Ray 1.1
Total Time
Seconds, Fewer Is Better
bulldozer
SE +/- 0.04, N = 3
51.07
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.03, N = 3
94.16
20
40
60
80
100
OpenSSL 1.0.0a
RSA 4096-bit Performance
Signs Per Second, More Is Better
bulldozer
SE +/- 0.30, N = 4
68.68
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.02, N = 4
39.23
15
30
45
60
75
Parallel BZIP2 Compression 1.0.5
256MB File Compression
Seconds, Fewer Is Better
bulldozer
SE +/- 0.07, N = 3
8.72
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.19, N = 3
13.55
3
6
9
12
15
NAS Parallel Benchmarks 3.3
Test / Class: EP.B
Total Mop/s, More Is Better
bulldozer
SE +/- 1.77, N = 3
151.52
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.95, N = 3
98.54
30
60
90
120
150

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John The Ripper 1.7.8
Traditional DES
Real C/S, More Is Better
bulldozer
SE +/- 17616.28, N = 3
3918000
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 16343.53, N = 3
2836667
800K
1600K
2400K
3200K
4000K
John The Ripper 1.7.8
Blowfish
Real C/S, More Is Better
bulldozer
SE +/- 1.00, N = 3
954
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.00, N = 3
691
200
400
600
800
1000
FLAC Audio Encoding 1.2.1
WAV To FLAC
Seconds, Fewer Is Better
bulldozer
SE +/- 0.01, N = 5
8.25
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.01, N = 5
11.31
3
6
9
12
15
NAS Parallel Benchmarks 3.3
Test / Class: IS.C
Total Mop/s, More Is Better
bulldozer
SE +/- 0.01, N = 3
111.59
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.01, N = 3
83.98
20
40
60
80
100

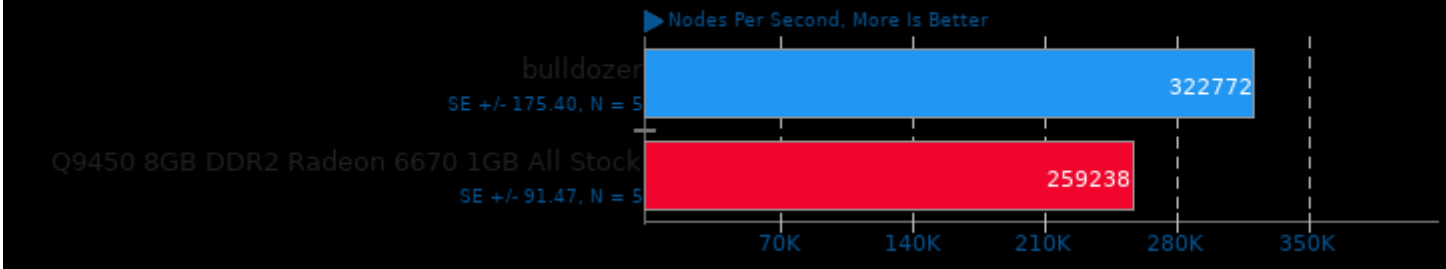
bulldozer


Apache Benchmark 2.2.17
Static Web Page Serving
Requests Per Second, More Is Better
bulldozer
SE +/- 50.80, N = 3
17849.63
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 316.99, N = 6
13630.18
4K
8K
12K
16K
20K
FFmpeg 0.8.2
AVI To NTSC VCD
Seconds, Fewer Is Better
bulldozer
SE +/- 0.07, N = 3
9.98
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.10, N = 3
13.05
3
6
9
12
15
Himeno Benchmark 3.0
Poisson Pressure Solver
MFLOPS, More Is Better
bulldozer
SE +/- 0.33, N = 3
237.28
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.08, N = 3
184.29
50
100
150
200
250
Timed MAFFT Alignment 6.706
Multiple Sequence Alignment
Seconds, Fewer Is Better
bulldozer
SE +/- 0.04, N = 3
26.37
Q9450 8GB DDR2 Radeon 6670 1GB All Stock
SE +/- 0.02, N = 3
33.40
8
16
24
32
40

bulldozer

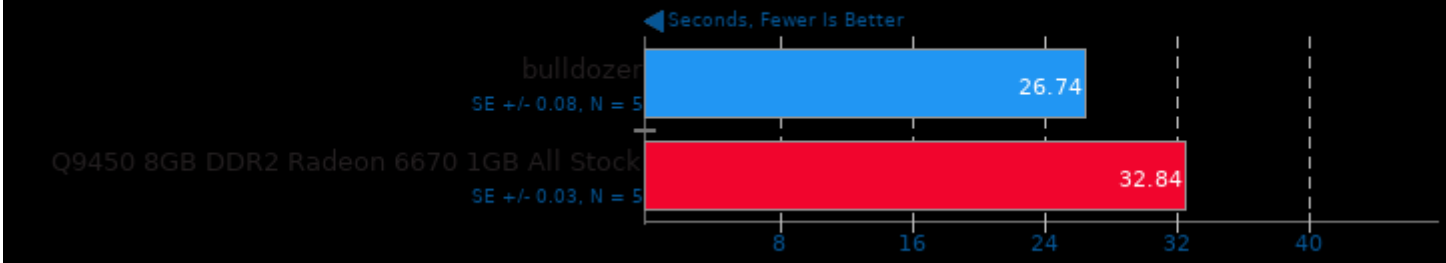
TSCP 1.81

AI Chess Performance



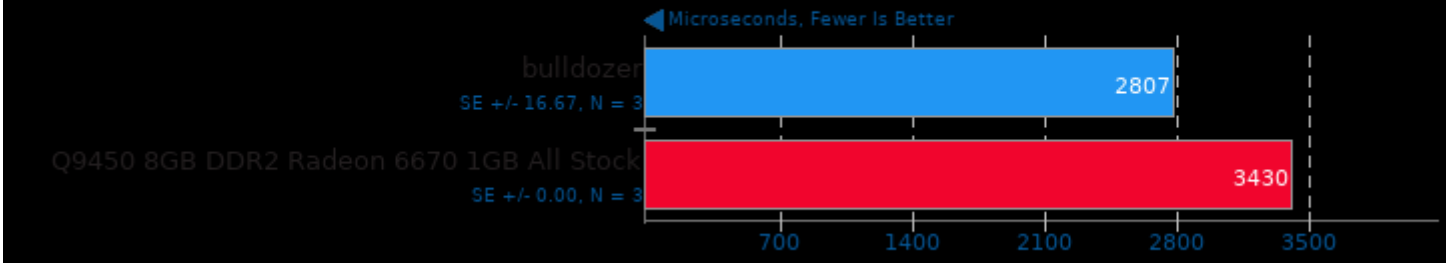
LAME MP3 Encoding 3.98.2

WAV To MP3



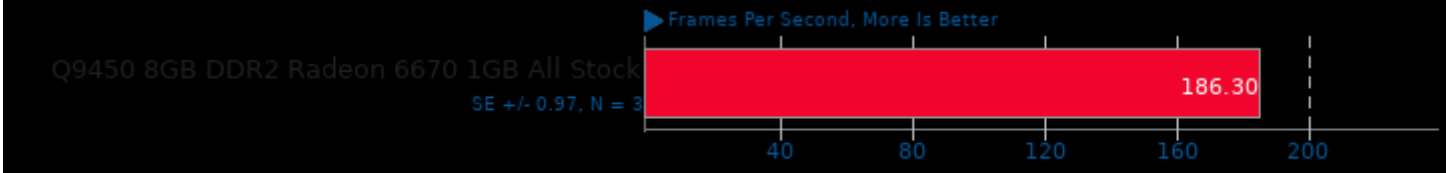
Gcrypt Library 1.4.4

CAMELLIA256-ECB Cipher



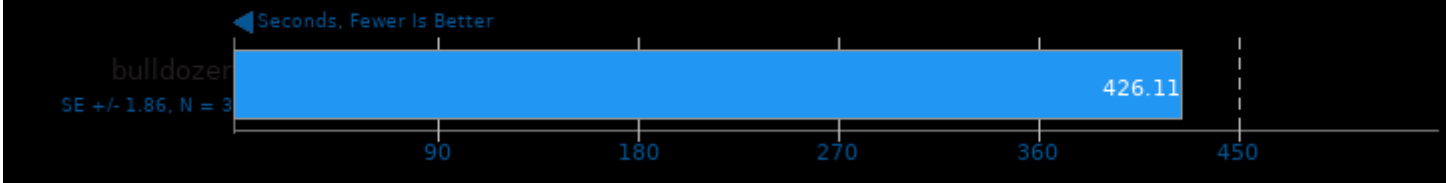
World of Padman 1.2

1680 x 1050
AA: 2x Box - AF: 2x

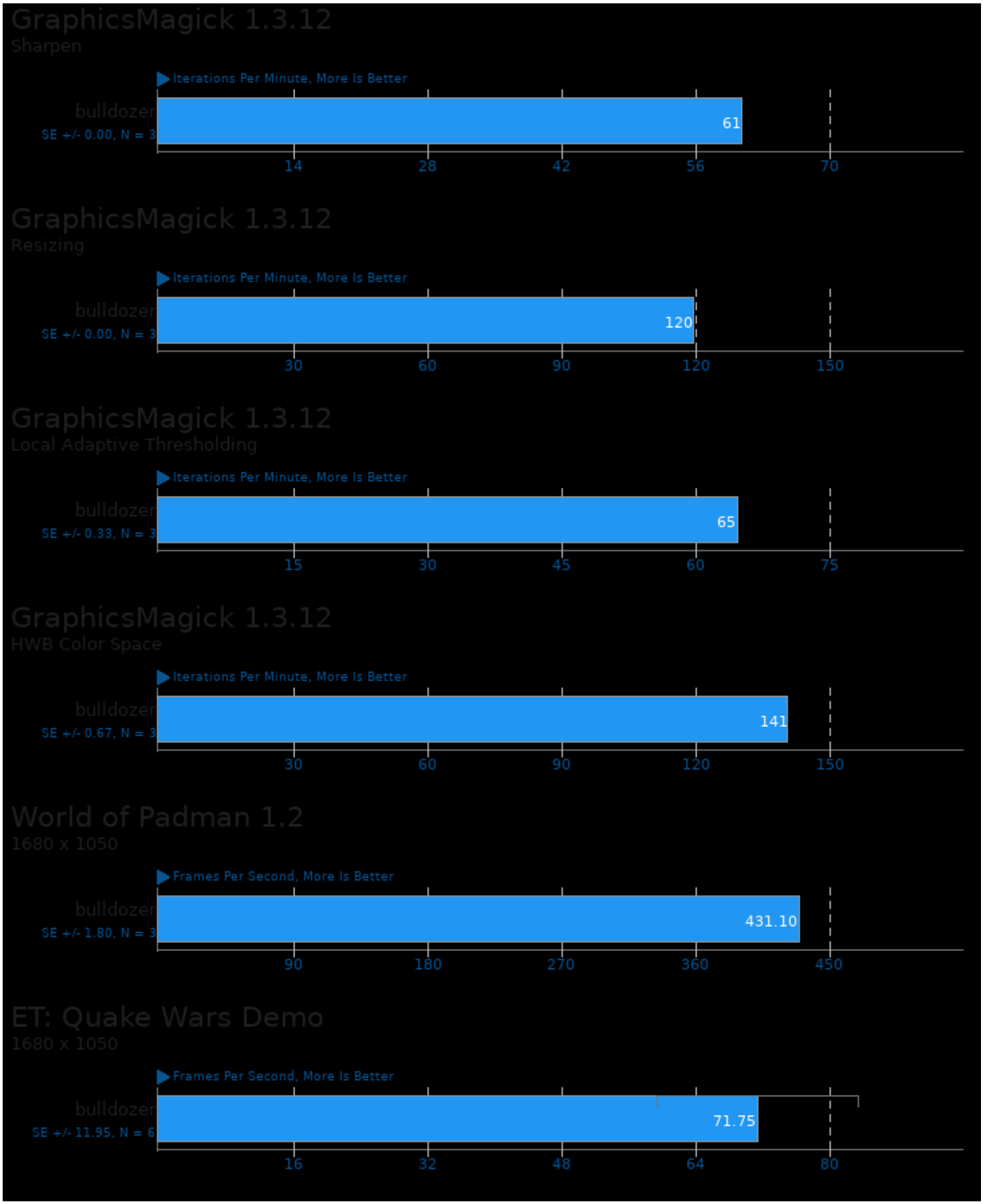


Crafty 23.3

Elapsed Time

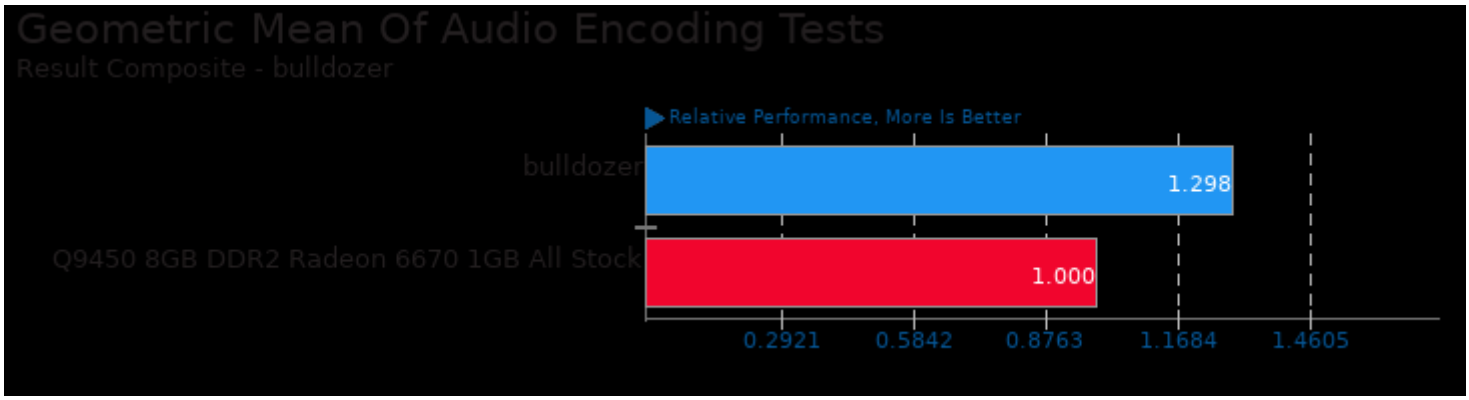


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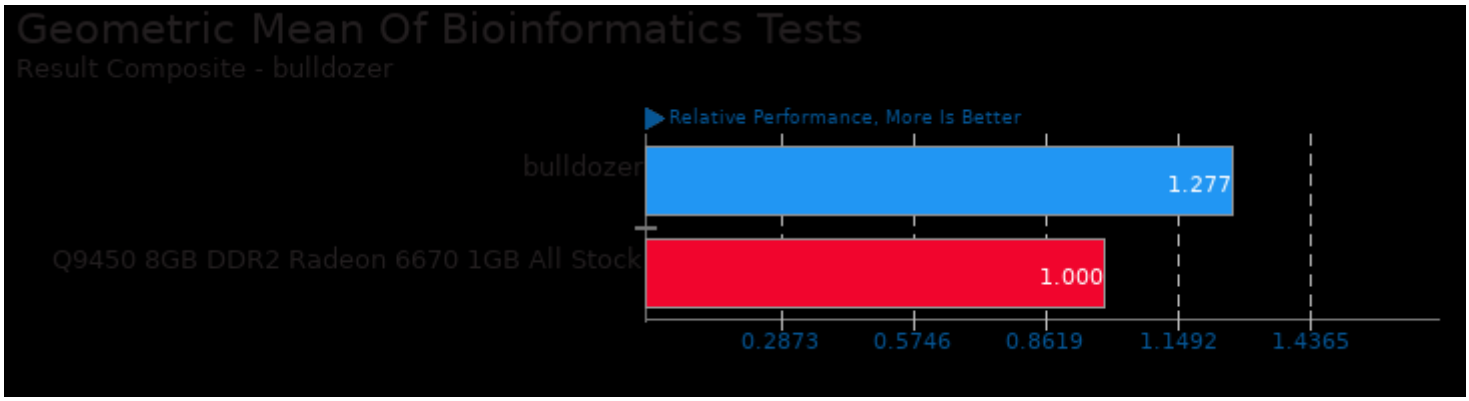

GraphicsMagick 1.3.12
Sharpen
Iterations Per Minute, More Is Better
bulldozer
SE +/- 0.00, N = 3
61
14
28
42
56
70
GraphicsMagick 1.3.12
Resizing
Iterations Per Minute, More Is Better
bulldozer
SE +/- 0.00, N = 3
120
30
60
90
120
150
GraphicsMagick 1.3.12
Local Adaptive Thresholding
Iterations Per Minute, More Is Better
bulldozer
SE +/- 0.33, N = 3
65
15
30
45
60
75
GraphicsMagick 1.3.12
HWB Color Space
Iterations Per Minute, More Is Better
bulldozer
SE +/- 0.67, N = 3
141
30
60
90
120
150
World of Padman 1.2
1680 x 1050
Frames Per Second, More Is Better
bulldozer
SE +/- 1.80, N = 3
431.10
90
180
270
360
450
ET: Quake Wars Demo
1680 x 1050
Frames Per Second, More Is Better
bulldozer
SE +/- 11.95, N = 6
71.75
16
32
48
64
80

bulldozer

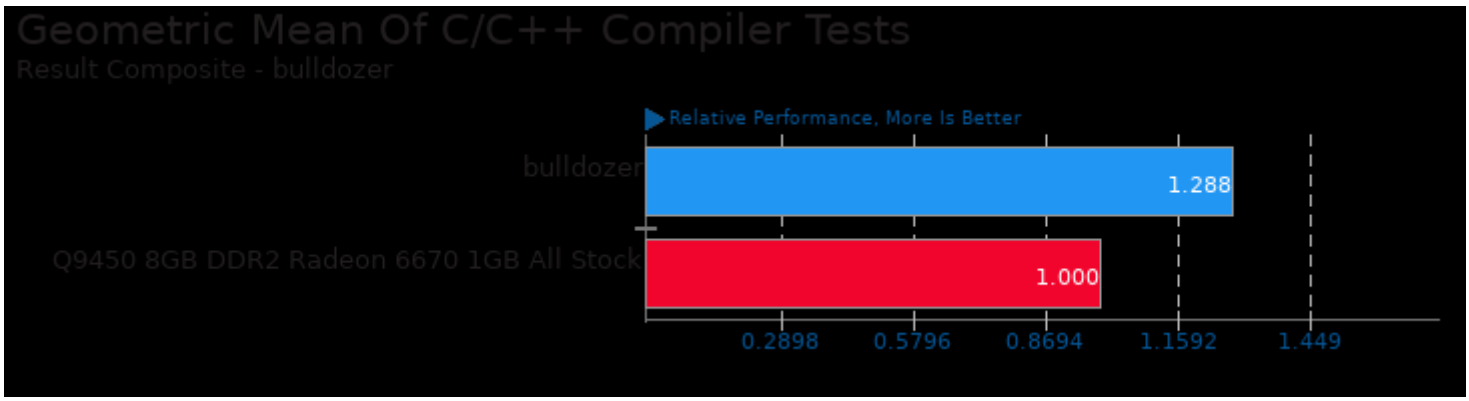
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/encode-mp3 and pts/encode-flac

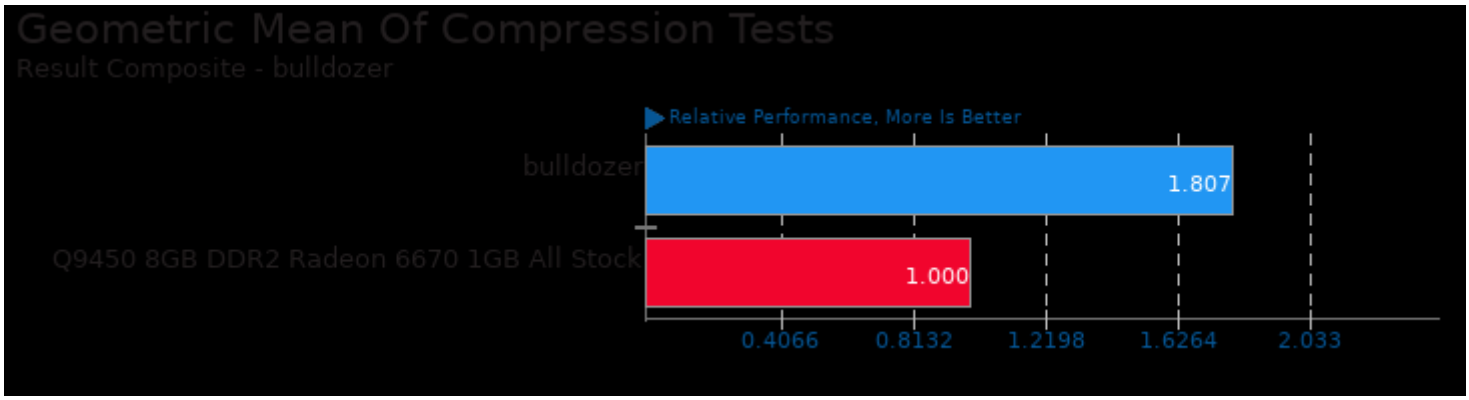


Geometric mean based upon tests: pts/himeno and pts/mafft



Geometric mean based upon tests: pts/mafft, pts/tscp, pts/graphics-magick, pts/himeno, pts/c-ray, pts/compress-7zip, pts/encode-mp3, pts/encode-flac, pts/pgbench, pts/apache, pts/john-the-ripper, pts/openssl and pts/tachyon

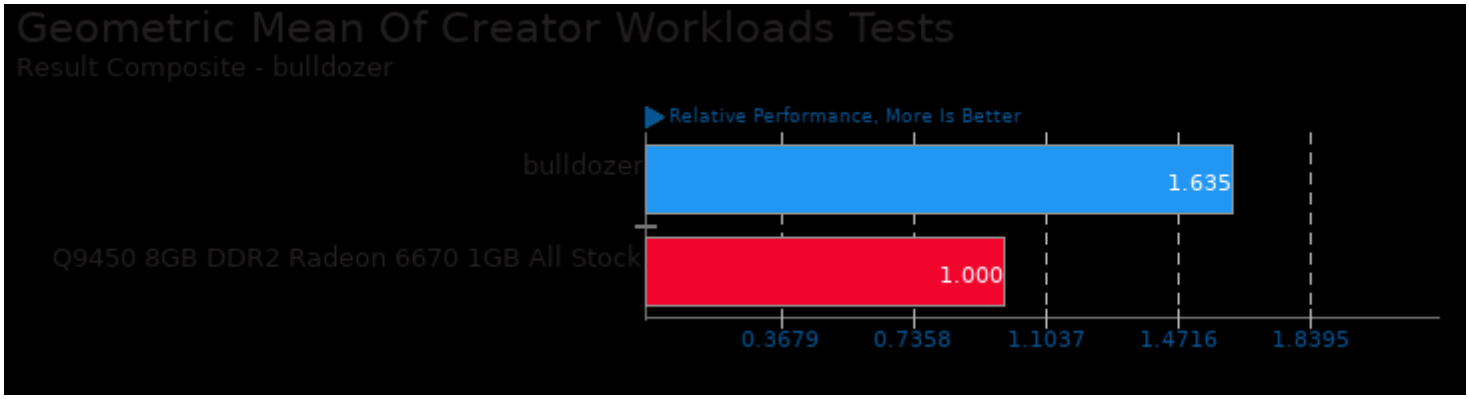
bulldozer



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



Geometric mean based upon tests: pts/apache, pts/c-ray, pts/compress-7zip, pts/compress-pbzip2, pts/crafty, pts/encode-flac, pts/encode-mp3, pts/graphics-magick, pts/himeno, pts/john-the-ripper, pts/openssl, pts/mafft, pts/npb, pts/pgbench, pts/stream, pts/tachyon and pts/ttsiod-renderer



Geometric mean based upon tests: pts/c-ray, pts/tachyon, pts/smallpt, pts/ttsiod-renderer, pts/ffmpeg, pts/encode-mp3, pts/encode-flac and pts/graphics-magick

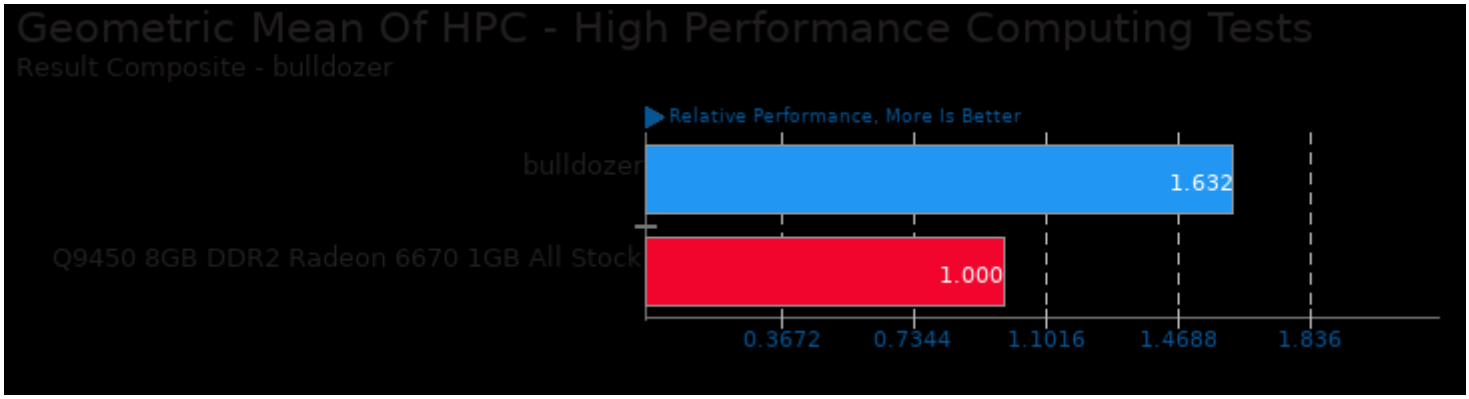
bulldozer



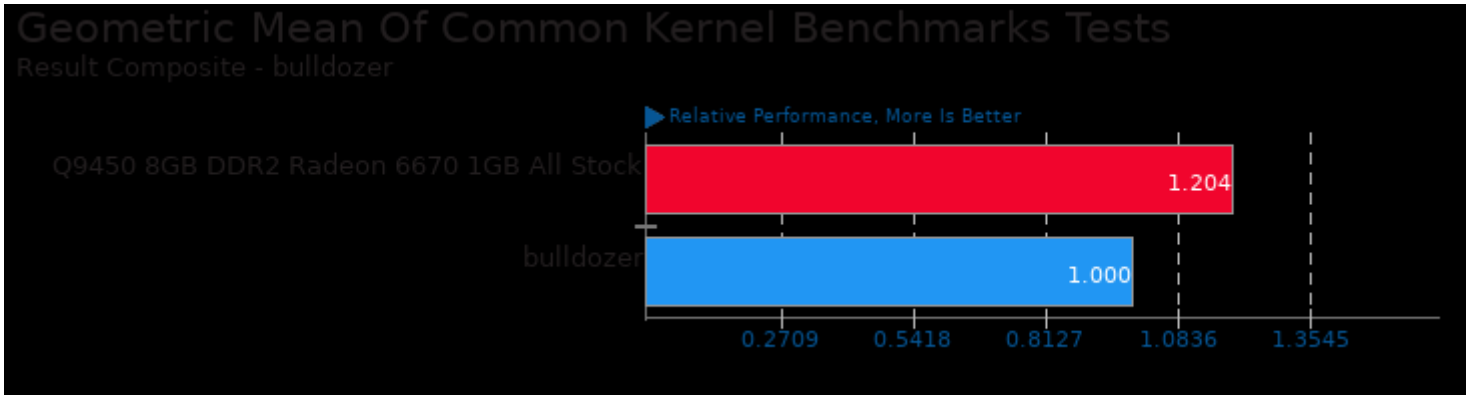
Geometric mean based upon tests: pts/openssl, pts/gcrypt and pts/john-the-ripper



Geometric mean based upon tests: pts/encode-mp3, pts/encode-flac and pts/ffmpeg

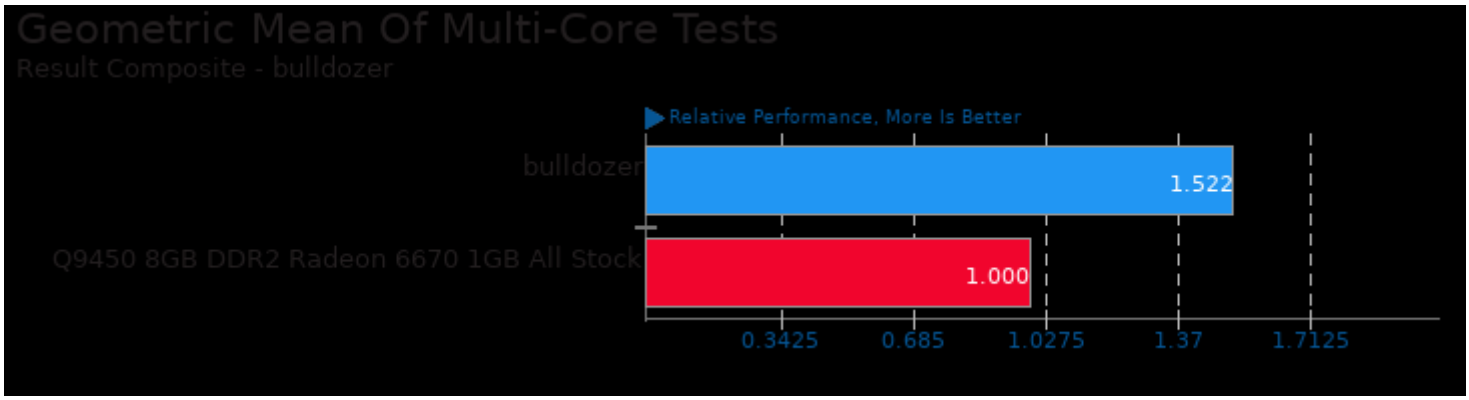


Geometric mean based upon tests: pts/npb, pts/himeno and pts/mafft

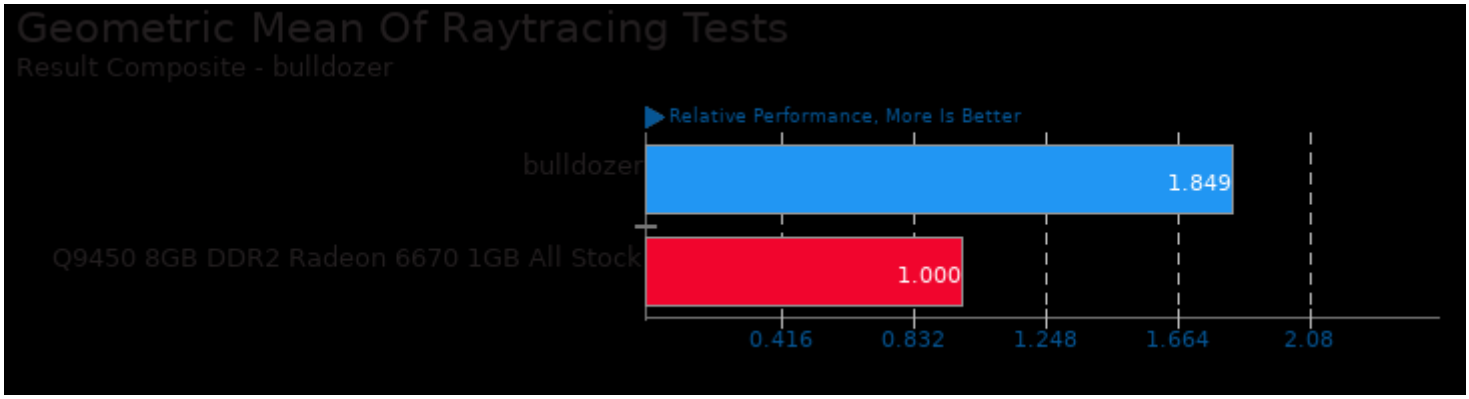


Geometric mean based upon tests: pts/apache, pts/pgbench and pts/openssl

bulldozer



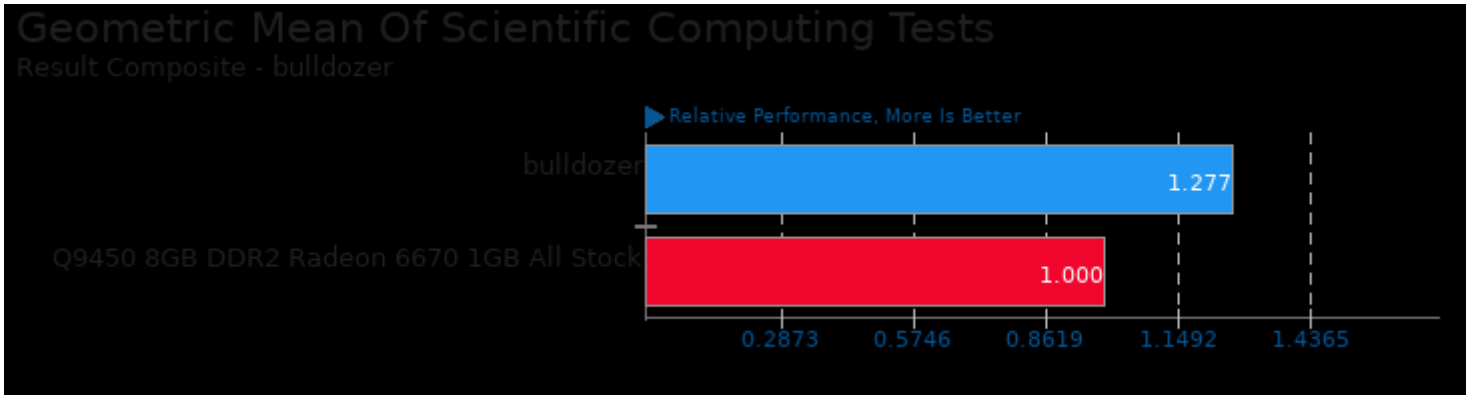
Geometric mean based upon tests: pts/c-ray, pts/tachyon, pts/ffmpeg, pts/npb, pts/john-the-ripper, pts/smallpt, pts/graphics-magick, pts/compress-7zip, pts/compress-pbzip2, pts/ttsiod-renderer and pts/pgbench



Geometric mean based upon tests: pts/c-ray and pts/tachyon

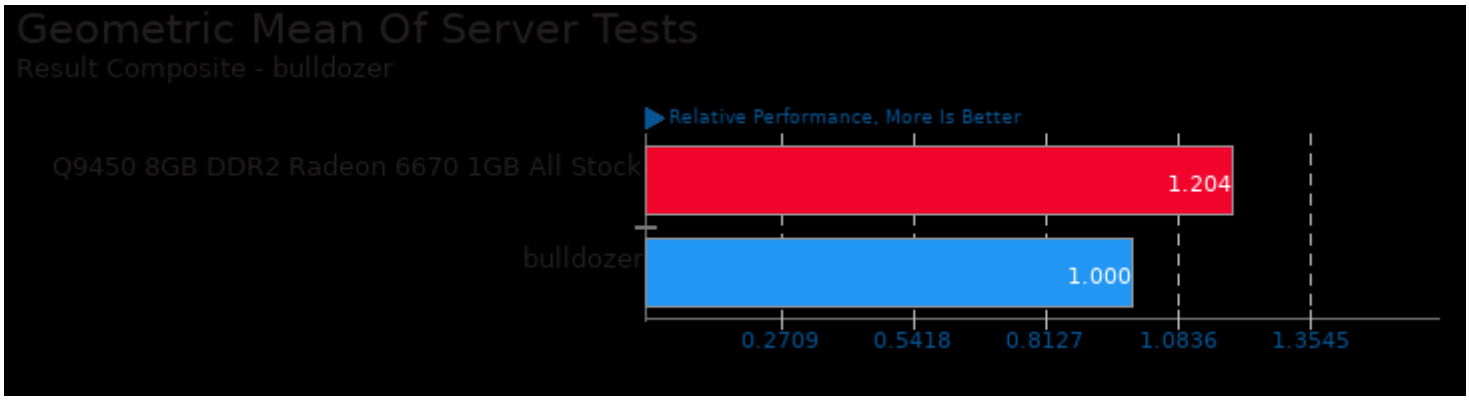


Geometric mean based upon tests: pts/c-ray, pts/tachyon, pts/smallpt and pts/ttsiod-renderer

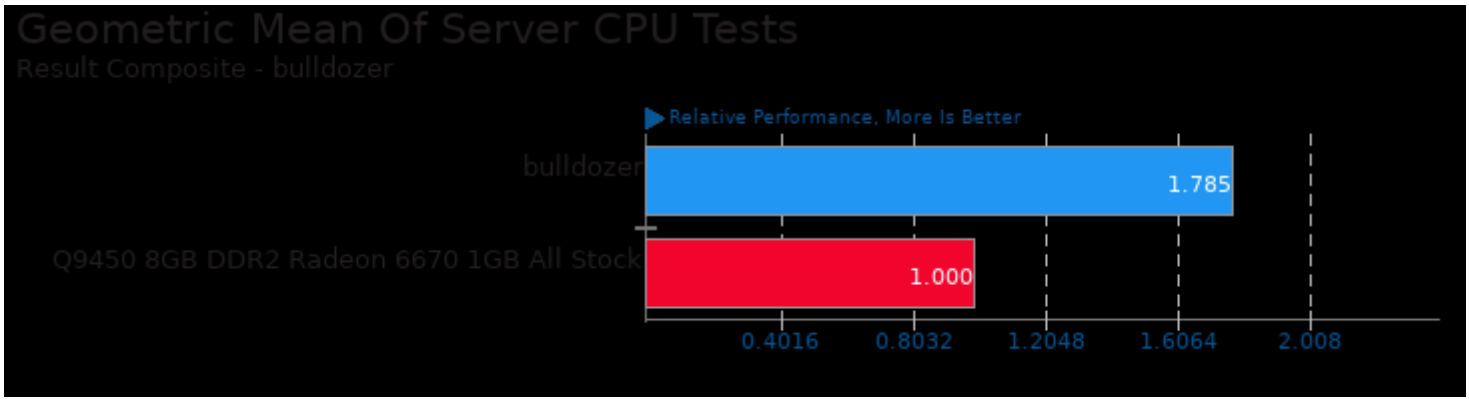


bulldozer

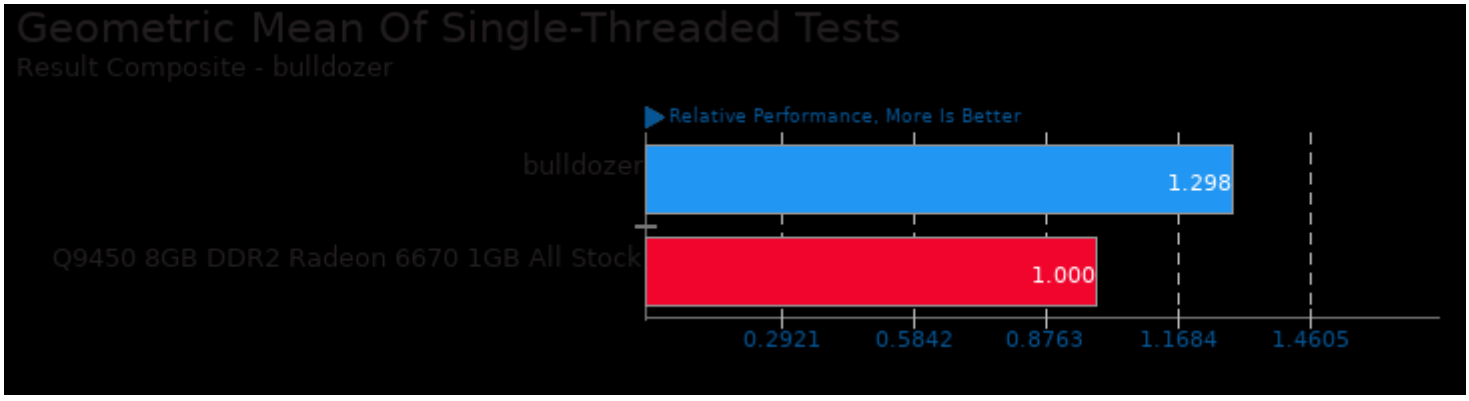
Geometric mean based upon tests: pts/himeno and pts/mafft



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



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



Geometric mean based upon tests: pts/encode-flac and pts/encode-mp3

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 13:54.