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DragonFlyBSD vs. FreeBSD vs. Ubuntu vs. Other Linux Distros

Benchmarking many different BSD and Linux operating systems for a future article on Phoronix.com. Benchmarking by Michael Larabel.

Automated Executive Summary

CentOS 6.4 had the most wins, coming in first place for 22% of the tests.

Based on the geometric mean of all complete results, the fastest (Manjaro 0.8.5) was 1.464x the speed of the slowest (DragonFlyBSD 3.4.1). Ubuntu 13.04 was 0.982x the speed of Manjaro 0.8.5, Linux Mint 15 RC was 0.998x the speed of Ubuntu 13.04, Debian Linux 7.0 was 0.989x the speed of Linux Mint 15 RC, openSUSE 12.3 was 0.999x the speed of Debian Linux 7.0, Fedora 18 was 0.996x the speed of openSUSE 12.3, Debian kFreeBSD 7.0 was 0.981x the speed of Fedora 18, CentOS 6.4 was 0.975x the speed of Debian kFreeBSD 7.0, Mageia 3 was 0.906x the speed of CentOS 6.4, PC-BSD 9.1 was 0.918x the speed of Mageia 3, DragonFlyBSD 3.4.1 was 0.89x the speed of PC-BSD 9.1.

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

Nexuiz (Resolution: 1920 x 1080 - HDR: Yes - Sound: Off) at 30.61x
7-Zip Compression (Compress Speed Test) at 5.833x
Apache Benchmark (Static Web Page Serving) at 2.489x
Xonotic (Resolution: 1920 x 1080 - Effects Quality: Low) at 2.163x
Himeno Benchmark (Poisson Pressure Solver) at 2.016x

C-Ray (Total Time) at 1.68x
PostgreSQL pgbench (TPC-B Transactions Per Second) at 1.618x
FFmpeg (H.264 HD To NTSC DV) at 1.492x
Xonotic (Resolution: 1920 x 1080 - Effects Quality: High) at 1.414x
Smallpt (Global Illumination Renderer; 100 Samples) at 1.375x.

Test Systems:

PC-BSD 9.1

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Memory: 8192MB, Disk: OCZ VERTEX 1.30, Graphics: ATI Radeon HD 4650, Audio: ATI RV730 HDA, Monitor: DELL S2409W, Network: Intel PRO/1000 Connection 7.3.2

OS: FreeBSD, Kernel: 9.1-RELEASE (x86_64), Desktop: KDE 4.9.3, Display Server: X Server 1.10.6, Display Driver: vesa 2.3.0, OpenGL: 2.1 Mesa 7.11.2, Compiler: Clang 3.1 (SVN 156863) + GCC 4.2.1 20070831, File-System: zfs, Screen Resolution: 1280x1024

DragonFlyBSD 3.4.1

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Memory: 8192MB, Disk: SATA OCZ VERTEX 1.30

OS: DragonFly, Kernel: 3.4-RELEASE (x86_64), Compiler: GCC 4.7.2, File-System: hammer

CentOS 6.4

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Motherboard: Intel DX79SI, Chipset: Intel Xeon E5/Core, Memory: 8192MB, Disk: 64GB OCZ VERTEX, Graphics: AMD Radeon HD 4650 512MB, Audio: Intel C600/X79, Monitor: DELL S2409W, Network: Intel 82579LM Gigabit Connection

OS: CentOS 6.4, Kernel: 2.6.32-358.el6.x86_64 (x86_64), Desktop: GNOME 2.28.2, Display Server: X Server 1.13.0, Display Driver: radeon 6.99.99, OpenGL: 2.1 Mesa 9.0-devel Gallium 0.4, 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-ecj-jar=/usr/share/java/eclipse-ecj.jar --with-java-home=/usr/lib/jvm/java-1.5.0-gcj-1.5.0.0/jre --with-ppl --with-tune=generic
Processor Notes: Scaling Governor: ondemand
Graphics Notes: EXA
System Notes: SELinux: Enabled.
Disk Mount Options Notes: barrier=1,data=ordered,relatime,rw,seclabel

Fedora 18

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Motherboard: Intel DX79SI, Chipset: Intel Xeon E5/Core, Memory: 8192MB, Disk: 64GB OCZ VERTEX, Graphics: AMD Radeon HD 4650 512MB, Audio: Realtek ALC892,

Monitor: DELL S2409W, Network: Intel 82579LM Gigabit Connection

OS: Fedora 18 (Spherical Cow), Kernel: 3.9.3-201.fc18.x86_64 (x86_64), Desktop: GNOME Shell 3.6.3.1, Display Server: X Server 1.13.3, Display Driver: radeon 6.99.99, OpenGL: 2.1 Mesa 9.1 Gallium 0.4, Compiler: GCC 4.7.2 20121109, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-redhat-linux --disable-build-poststage1-with-cxx --disable-build-with-cxx --disable-dssi --disable-libjava-multilib --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-unique-object --enable-initfini-array --enable-java-awt=gtk --enable-java-maintainer-mode --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-libgcj-multifile --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-cloog --with-ecj-jar=/usr/share/java/eclipse-ecj.jar --with-java-home=/usr/lib/jvm/java-1.5.0-gcj-1.5.0.0/jre --with-linker-hash-style=gnu --with-ppl --with-tune=generic
Processor Notes: Scaling Governor: acpi- freq ondemand
Graphics Notes: EXA
System Notes: SELinux: Enabled.
Disk Mount Options Notes: data=ordered,relatime,rw,seclabel

Ubuntu 13.04

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Motherboard: Intel DX79SI, Chipset: Intel Xeon E5/Core, Memory: 8192MB, Disk: 64GB OCZ VERTEX, Graphics: AMD Radeon HD 4650 512MB, Audio: Realtek ALC892, Monitor: DELL S2409W, Network: Intel 82579LM Gigabit Connection

OS: Ubuntu 13.04, Kernel: 3.8.0-19-generic (x86_64), Desktop: Unity 7.0.0, Display Server: X Server 1.13.3, Display Driver: radeon 7.1.0, OpenGL: 3.0 Mesa 9.1.1 Gallium 0.4, Compiler: GCC 4.7, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-cloog-version-check --disable-ppl-version-check --disable-werror --enable-checking=release --enable-clocale=gnu --enable-cloog-backend=ppl --enable-gnu-unique-object --enable-languages=c,c++,go,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --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=i686 --with-cloog --with-multilib-list=m32,m64,mx32 --with-tune=generic -v
Disk Notes: DEADLINE / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: ondemand
System Notes: Disk Scheduler: DEADLINE.

Linux Mint 15 RC

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Motherboard: Intel DX79SI, Chipset: Intel Xeon E5/Core, Memory: 8192MB, Disk: 64GB OCZ VERTEX, Graphics: AMD Radeon HD 4650 512MB, Audio: Realtek ALC892, Monitor: DELL S2409W, Network: Intel 82579LM Gigabit Connection

OS: LinuxMint 15, Kernel: 3.8.0-19-generic (x86_64), Desktop: Cinnamon 1.8.2, Display Server: X Server 1.13.3, Display Driver: radeon 7.1.0, OpenGL: 3.0 Mesa 9.1.1 Gallium 0.4, Compiler: GCC 4.7, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-cloog-version-check --disable-ppl-version-check --disable-werror --enable-checking=release --enable-clocale=gnu --enable-cloog-backend=ppl --enable-gnu-unique-object --enable-languages=c,c++,go,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --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=i686 --with-cloog --with-multilib-list=m32,m64,mx32 --with-tune=generic -v
Disk Notes: DEADLINE / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: ondemand
Graphics Notes: EXA
System Notes: Disk Scheduler: DEADLINE.

Mageia 3

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Motherboard: Intel DX79SI, Chipset: Intel Xeon E5/Core, Memory: 8192MB, Disk: 64GB OCZ VERTEX, Graphics: AMD Radeon HD 4650 512MB (650/900MHz), Audio: Realtek ALC892, Monitor: DELL S2409W, Network: Intel 82579LM Gigabit Connection

OS: Mageia 3, Kernel: 3.8.13-desktop-1.mga3 (x86_64), Desktop: LXDE 0.5.10, Display Server: X Server 1.13.4, Display Driver: radeon 7.1.0, OpenGL: 2.1 Mesa 9.1.2 Gallium 0.4, Compiler: GCC 4.7.2, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-mageia-linux-gnu --disable-libjava-multilib --disable-libssp --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-gtk-cairo --enable-java-awt=gtk --enable-languages=c,c++,ada,fortran,objc,obj-c++,java --enable-long-long --enable-lto --enable-objc-gc --enable-shared --enable-ssp --enable-threads=posix --host=x86_64-mageia-linux-gnu --mandir=/usr/share/man --with-cloog --with-cpu=generic --with-ecj-jar=/usr/share/java/eclipse-ecj.jar --with-java-home=/usr/lib/jvm/java-1.5.0-gcj-1.5.0.0/jre --with-ppl --with-python-dir=/lib/python2.7/site-packages --with-slibdir=/lib64
Disk Notes: CFQ / data=ordered,relatime,rw
Processor Notes: Scaling Governor: acpi- freq performance
Graphics Notes: EXA
System Notes: Disk Scheduler: CFQ.

openSUSE 12.3

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Motherboard: Intel DX79SI, Chipset: Intel Xeon E5/Core, Memory: 8192MB, Disk: 64GB OCZ VERTEX + 128GB RVS02 SuperSpeed, Graphics: AMD Radeon HD 4650 512MB, Audio: Realtek ALC892, Monitor: DELL S2409W, Network: Intel 82579LM Gigabit Connection

OS: openSUSE 12.3, Kernel: 3.7.10-1.1-desktop (x86_64), Desktop: KDE 4.10.00, Display Server: X Server 1.13.2, Display Driver: radeon 7.0.0, Compiler: GCC 4.7, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-suse-linux --disable-libgcj --disable-libitm --disable-libmudflap --disable-libssp --disable-libstdcxx-pch --disable-plugin --enable-__cxa_atexit --enable-checking=release --enable-languages=c,c++,objc,fortran,obj-c++,java,ada --enable-libstdcxx-allocator=new --enable-linux-futex --enable-ssp --enable-version-specific-runtime-libs --mandir=/usr/share/man --with-arch-32=i586 --with-slibdir=/lib64 --with-tune=generic --without-system-libunwind
Disk Notes: CFQ / data=ordered,relatime,rw
Processor Notes: Scaling Governor: acpi- freq ondemand
Graphics Notes: EXA
System Notes: Disk Scheduler: CFQ.

Manjaro 0.8.5

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Motherboard: Intel DX79SI, Chipset: Intel Xeon E5/Core, Memory: 8192MB, Disk: 64GB OCZ VERTEX, Graphics: AMD Radeon HD 4650 512MB, Audio: Realtek ALC892, Monitor: DELL S2409W, Network: Intel 82579LM Gigabit Connection

OS: ManjaroLinux 0.8.5, Kernel: 3.8.11-1-MANJARO (x86_64), Desktop: Xfce 4.10, Display Server: X Server 1.14.1, Display Driver: radeon 7.1.0, OpenGL: 3.1 Mesa 9.1.1 Gallium 0.4, Compiler: GCC 4.8.0 20130502, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --disable-cloog-version-check --disable-install-libiberty --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-multilib --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-cloog-backend=isl --enable-gnu-unique-object --enable-gold --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++ --enable-ld=default --enable-lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-linker-hash-style=gnu --with-plugin-ld=ld.gold
Disk Notes: CFQ / data=ordered,errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: acpi- freq ondemand
Graphics Notes: EXA
System Notes: Disk Scheduler: CFQ.

Debian Linux 7.0

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Motherboard: Intel DX79SI, Chipset: Intel Xeon E5/Core, Memory: 8192MB, Disk: 64GB OCZ VERTEX, Graphics: LLVMpipe, Audio: Realtek ALC892, Monitor: DELL S2409W, Network: Intel 82579LM Gigabit Connection

OS: Debian 7.0, Kernel: 3.2.0-4-amd64 (x86_64), Desktop: GNOME 3.4.2.1, Display Server: X Server 1.12.4, Display Driver: radeon 6.14.99, OpenGL: 2.1 Mesa 8.0.5 Gallium 0.4, Compiler: GCC 4.7, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,go,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-arch-32=i586 --with-tune=generic -v
Disk Notes: CFQ / barrier=1,data=ordered,errors=remount-ro,relatime,rw,user_xattr
Processor Notes: Scaling Governor: acpi- freq ondemand
System Notes: Disk Scheduler: CFQ.

Debian kFreeBSD 7.0

Processor: Intel Core i7-3960X @ 3.30GHz (12 Cores), Motherboard: INTEL DX79SI, Memory: 8192MB, Disk: OCZ VERTEX 1.30, Graphics: LLVMpipe, Audio: Intel Patsburg HD Audio, Monitor: DELL S2409W, Network: Intel PRO/1000 Connection 7.2.3

OS: Debian GNU/kFreeBSD 7.0, Kernel: 9.0-2-amd64 (x86_64), Desktop: Xfce 4.8, Display Server: X Server 1.12.4, Display Driver: radeon 6.14.99, OpenGL: 2.1 Mesa 8.0.5 Gallium 0.4, Compiler: GCC 4.7, File-System: ufs, Screen Resolution: 1920x1080

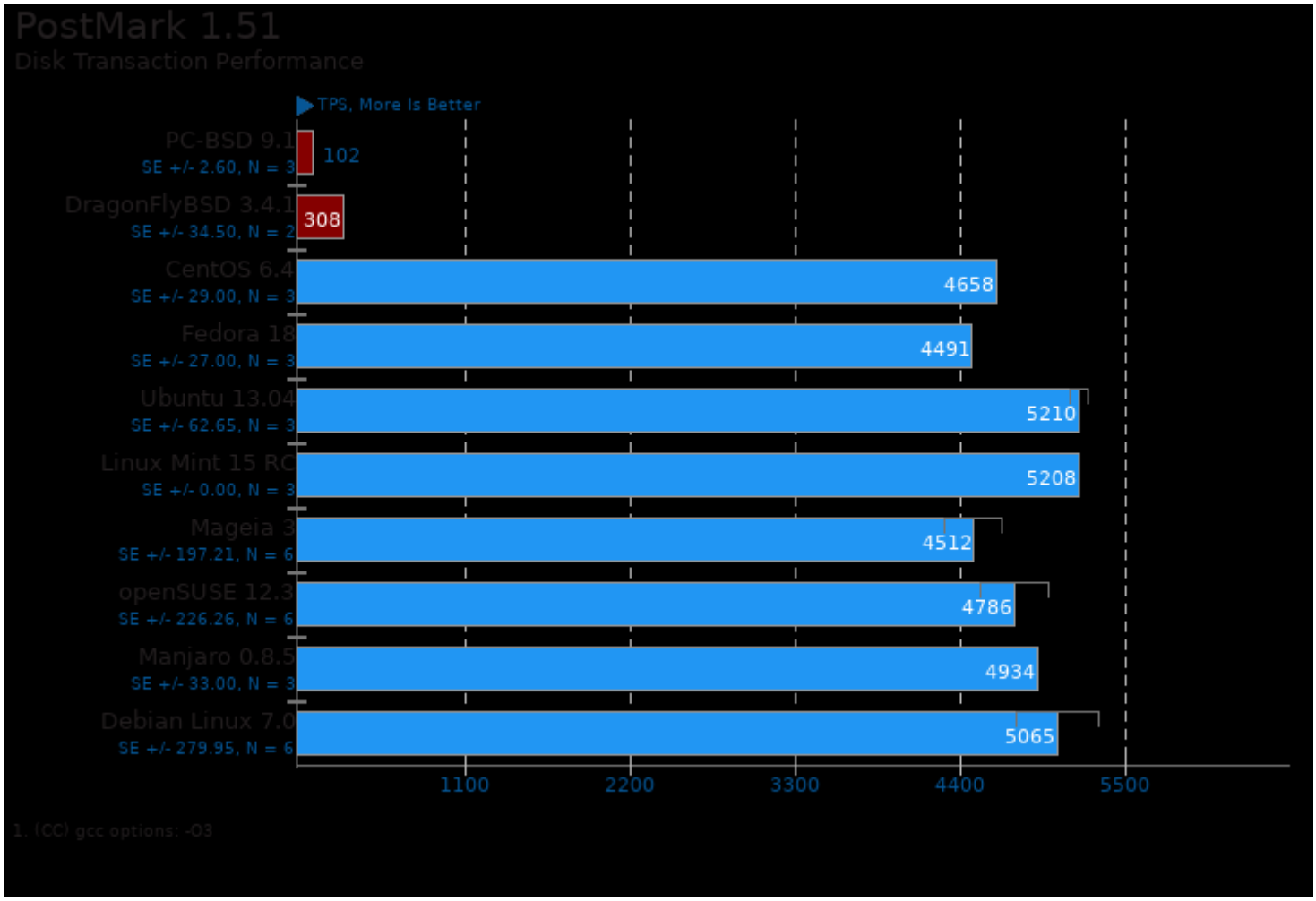
Compiler Notes: --build=x86_64-kfreebsd-gnu --disable-libitm --enable-checking=release --enable-clocale=gnu --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-kfreebsd-gnu --target=x86_64-kfreebsd-gnu --with-arch-32=i586 --with-tune=generic -v
Disk Mount Options Notes: rw

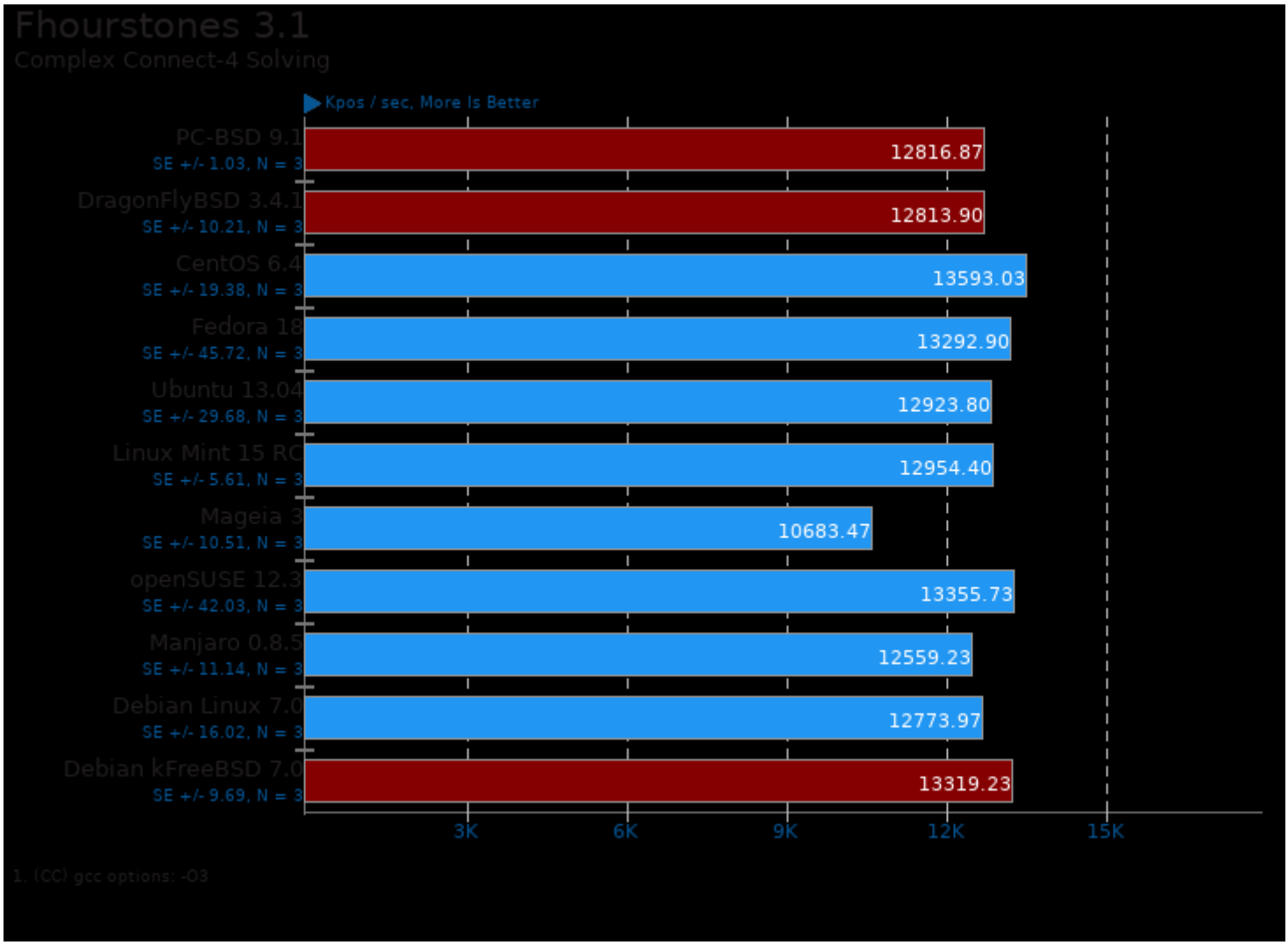
	PC-BSD 9.1	Dragon FlyBSD 3.4.1	CentOS 6.4	Fedora 18	Ubuntu 13.04	Linux Mint 15 RC	Mageia 3	openSUSE 12.3	Manjaro 0.8.5	Debian Linux 7.0	Debian kFreeBSD 7.0
PostMark - D.T.P (TPS)	102	308	4658	4491	5210	5208	4512	4786	4934	5065	
Normalized	1.96%	5.91%	89.4%	86.2%	100%	99.96%	86.6%	91.86%	94.7%	97.22%	
Standard Deviation	4.4%	15.9%	1.1%	1%	2.1%	0%	10.7%	11.6%	1.2%	13.5%	
Fhourstones - C.C.4.S (Kpos / sec)	12817	12814	13593	13293	12924	12954	10683	13356	12559	12774	13319
Normalized	94.29%	94.27%	100%	97.79%	95.08%	95.3%	78.6%	98.25%	92.39%	93.97%	97.99%
Standard Deviation	0%	0.1%	0.2%	0.6%	0.4%	0.1%	0.2%	0.5%	0.2%	0.2%	0.1%
Himeno Benchmark -	827.76	1667	1669	1582	1644	1636	1397	1602	1617	1614	1614
Normalized	49.61%	99.9%	100%	94.82%	98.54%	98.04%	83.75%	96%	96.88%	96.75%	96.71%
Standard Deviation	0%	0%	0%	1.5%	0%	1.1%	0%	0.1%	0.1%	0.2%	0%
7-Zip Compression -	22180	4326	25051	24403	25150	25234	23393	24731	24648	24820	23482
Normalized	87.9%	17.14%	99.27%	96.71%	99.67%	100%	92.7%	98.01%	97.68%	98.36%	93.06%
Standard Deviation	1%	1.3%	0.6%	1%	0.6%	0.4%	0.6%	0.3%	1%	3.4%	2.3%
C-Ray - Total Time (sec)	30.75	23.34	32.59	23.49	22.85	23.05	27.58	23.59	19.40	23.13	23.90
Normalized	63.09%	83.12%	59.53%	82.59%	84.9%	84.16%	70.34%	82.24%	100%	83.87%	81.17%
Standard Deviation	0.8%	0.3%	0.1%	0.2%	0.2%	0.3%	0.4%	0.5%	0.2%	0.4%	1%
Primesieve - 1.P.N.G (sec)	61.13	56.58	55.61	55.84	54.37	54.54	66.10	56.11	54.73	55.02	59.32
Normalized	88.94%	96.09%	97.77%	97.37%	100%	99.69%	82.25%	96.9%	99.34%	98.82%	91.66%
Standard Deviation	0%	0.1%	0%	0.1%	0.2%	0.1%	0.3%	0.1%	0.1%	0.7%	0.8%

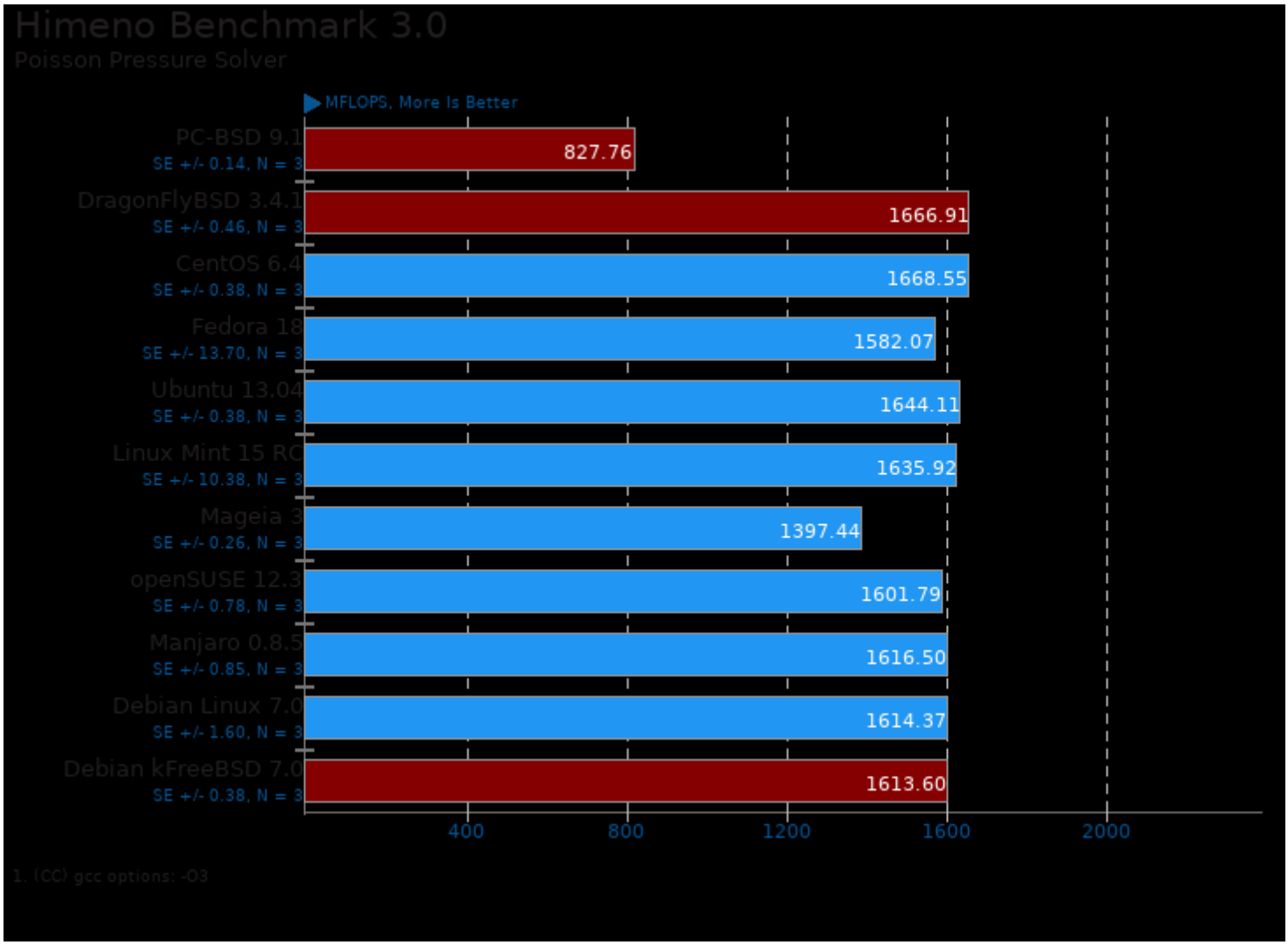
DragonFlyBSD vs. FreeBSD vs. Ubuntu vs. Other Linux Distros

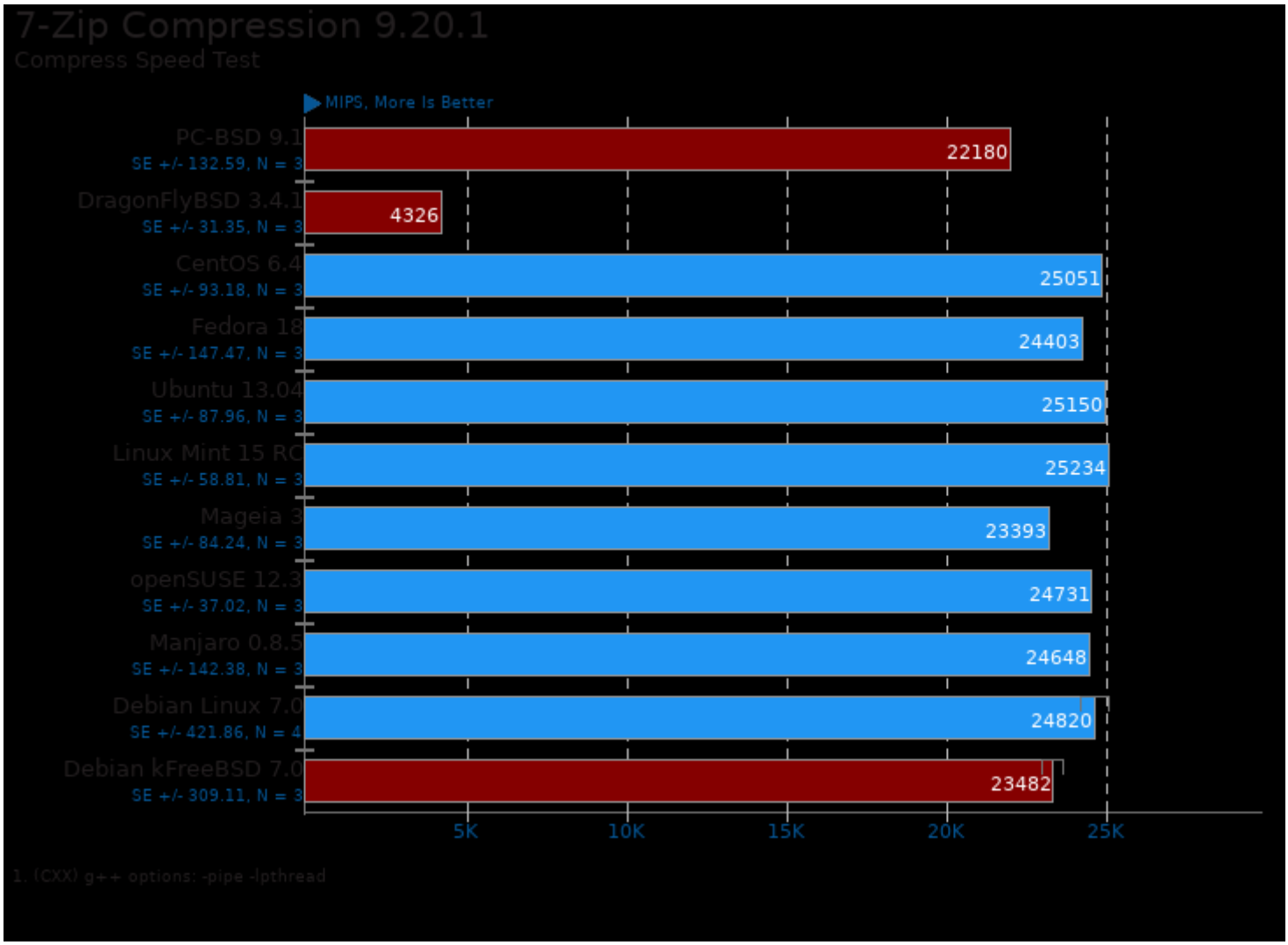
N-Queens - Elapsed Time	25.29	24.82	**24.63**	26.98	25.83	25.90			26.08	25.68	**27.38**
Normalized	97.39%	99.23%	100%	91.29%	95.35%	95.1%			94.44%	95.91%	89.96%
Standard Deviation	0.1%	0.1%	0.2%	5.2%	0.9%	0.8%			0.8%	0%	0.1%
Rodinia - OpenMP CFD Solver (sec)	88.90		**83.80**	87.67	85.56	85.92	**96.59**	86.94	86.93	90.33	
Normalized	94.26%		100%	95.59%	97.94%	97.53%	86.76%	96.39%	96.4%	92.77%	
Standard Deviation	0.7%		0.3%	0%	0.3%	0.4%	0.1%	0.4%	1.2%	0.1%	
Timed PHP Compilation - Time To Compile	**21.03**		21.45	23.10	22.65	22.73	**25.99**	23.35	24.49	21.83	25.80
Normalized	100%		98.04%	91.04%	92.85%	92.52%	80.92%	90.06%	85.87%	96.34%	81.51%
Standard Deviation	0.3%		0.3%	0.3%	2.7%	2.3%	0.3%	3.1%	0.5%	0.2%	1.2%
LAME MP3 Encoding - WAV To MP3 (sec)	14.14		13.62	13.80	**13.48**	13.50	**16.36**	14.00	14.02	14.10	
Normalized	95.33%		98.97%	97.68%	100%	99.85%	82.4%	96.29%	96.15%	95.6%	
Standard Deviation	3.4%		0.1%	0.2%	0.2%	0.3%	0.3%	2.8%	0.2%	0.2%	
Tachyon - Total Time (sec)	**8.75**				9.13	9.03	**11.13**			9.14	
Normalized	100%				95.84%	96.9%	78.62%			95.73%	
Standard Deviation	0.3%				3%	1.4%	7.6%			0.1%	
OpenSSL - R.4.b.P (Signs/sec)	120.77		121.33	121.00	121.43	121.40	**102.20**	121.40	121.47	**121.80**	
Normalized	99.15%		99.61%	99.34%	99.7%	99.67%	83.91%	99.67%	99.73%	100%	
Standard Deviation	0.3%		0.1%	0.1%	0.2%	0.4%	0.4%	0.2%	0%	0%	
Apache Benchmark - S.W.P.S	**21985**			**8834**	14366	14471	12108		11566	15988	19560
Normalized	100%			40.18%	65.34%	65.82%	55.07%		52.61%	72.72%	88.97%
Standard Deviation	0.7%			0.7%	1.7%	1.6%	0.7%		1.8%	2.2%	3.4%
Nexuiz - 1920 x 1080 - Yes - Off (FPS)			**30.61**	21.39	24.93	22.53	24.02	28.23	25.03	**1**	
Normalized			100%	69.88%	81.44%	73.6%	78.47%	92.22%	81.77%	3.27%	
Standard Deviation			0.3%	0.3%	0.1%	11.7%	0.1%	11.3%	0.4%		
OpenArena - 1920 x 1080 (FPS)			**59.30**	59.93	59.77		59.63	**62.13**	59.87		
Normalized			95.45%	96.46%	96.2%		95.98%	100%	96.36%		
Standard Deviation			0%	0.1%	0.1%		0.1%	0.2%	0.1%		
OpenArena - 1920 x 1080 (FPS)			**14.17**	14.67	14.60		**15.47**	14.60	14.67		
Normalized			91.6%	94.83%	94.38%		100%	94.38%	94.83%		
Standard Deviation			0.8%	0.4%	0%		1%	0.7%	0.4%		
Xonotic - 1920 x 1080 - Low (FPS)			59.84	**121.06**	59.93	**55.98**	59.88	72.91	59.93		
Normalized			49.43%	100%	49.5%	46.24%	49.46%	60.23%	49.5%		
Standard Deviation			0%	0.1%	0%	7.7%	0%	0.3%	0%		
Xonotic - 1920 x 1080 - High (FPS)			**34.22**	**48.37**	39.52	34.44	40.11	34.57	39.97		
Normalized			70.75%	100%	81.7%	71.2%	82.92%	71.47%	82.63%		
Standard Deviation			0.8%	0.1%	0.2%	16.6%	0%	0.3%	0.1%		

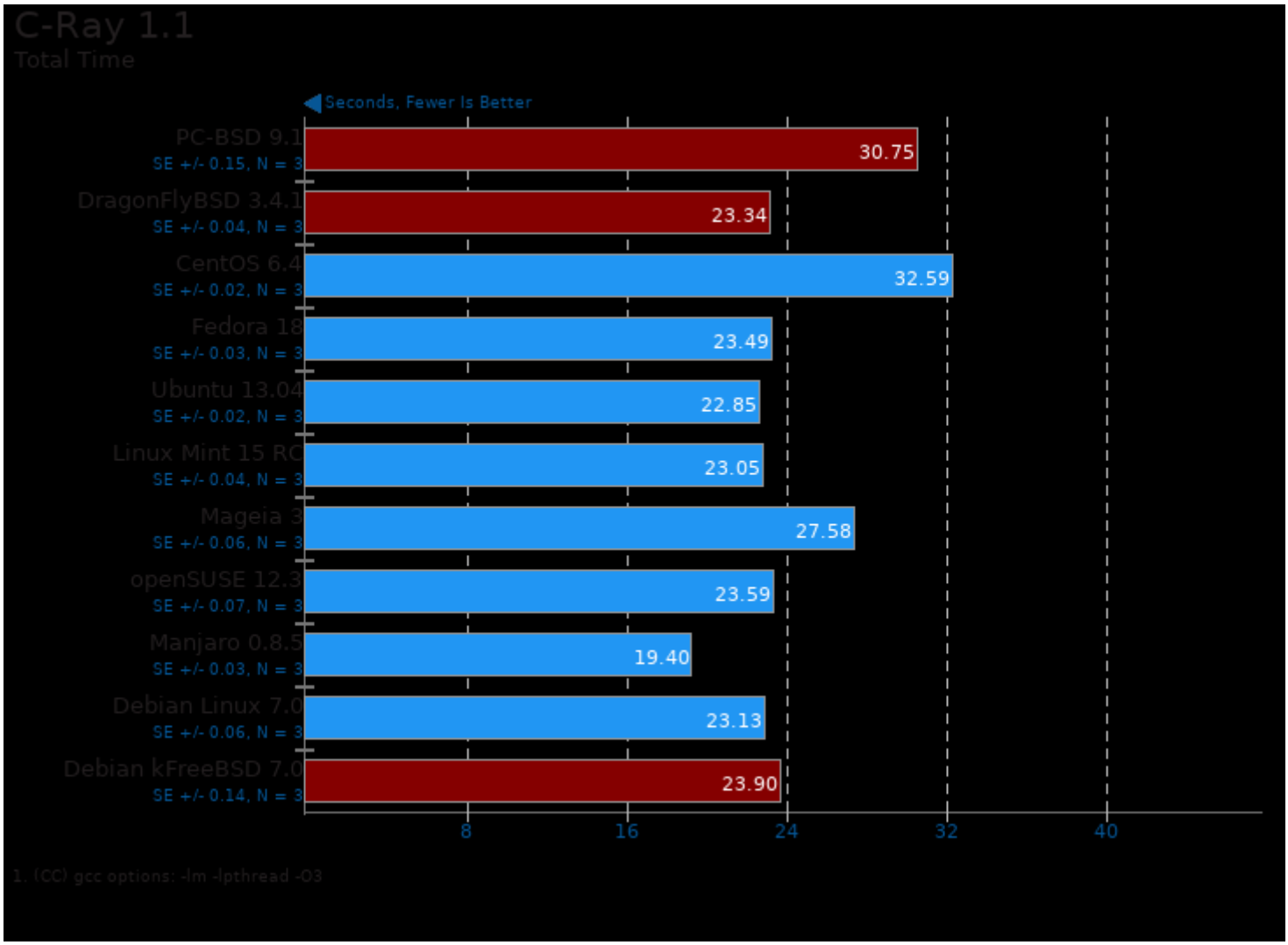
x264 - H.2.V.E (FPS)		215.60	213.81	212.89	**186.19**	**217.92**	217.11	
Normalized		98.94%	98.11%	97.69%	85.44%	100%	99.63%	
Standard Deviation		4.9%	4.7%	5.7%	3.4%	3.5%	3.3%	
Smallpt - G.I.R.1.S (sec)	66	75	**64**	**64**	**88**	72	72	67
Normalized	96.97%	85.33%	100%	100%	72.73%	88.89%	88.89%	95.52%
Standard Deviation	0%	5.2%	0.9%	0.9%	4.7%	0%	0.8%	0.9%
FFmpeg - H.2.H.T.N.D (sec)		17.32	18.42	18.29	12.92	**12.57**	17.67	**18.75**
Normalized		72.58%	68.24%	68.73%	97.29%	100%	71.14%	67.04%
Standard Deviation		1%	1.5%	1.3%	1.9%	2.7%	1.8%	0.9%
PostgreSQL pgbench - T.B.T.P.S (TPS)	**232.28**	357.82	368.91	367.89	356.19	**375.73**		344.67
Normalized	61.82%	95.23%	98.18%	97.91%	94.8%	100%		91.73%
Standard Deviation	1.1%	2.1%	2%	2.7%	1.2%	2.4%		3.2%

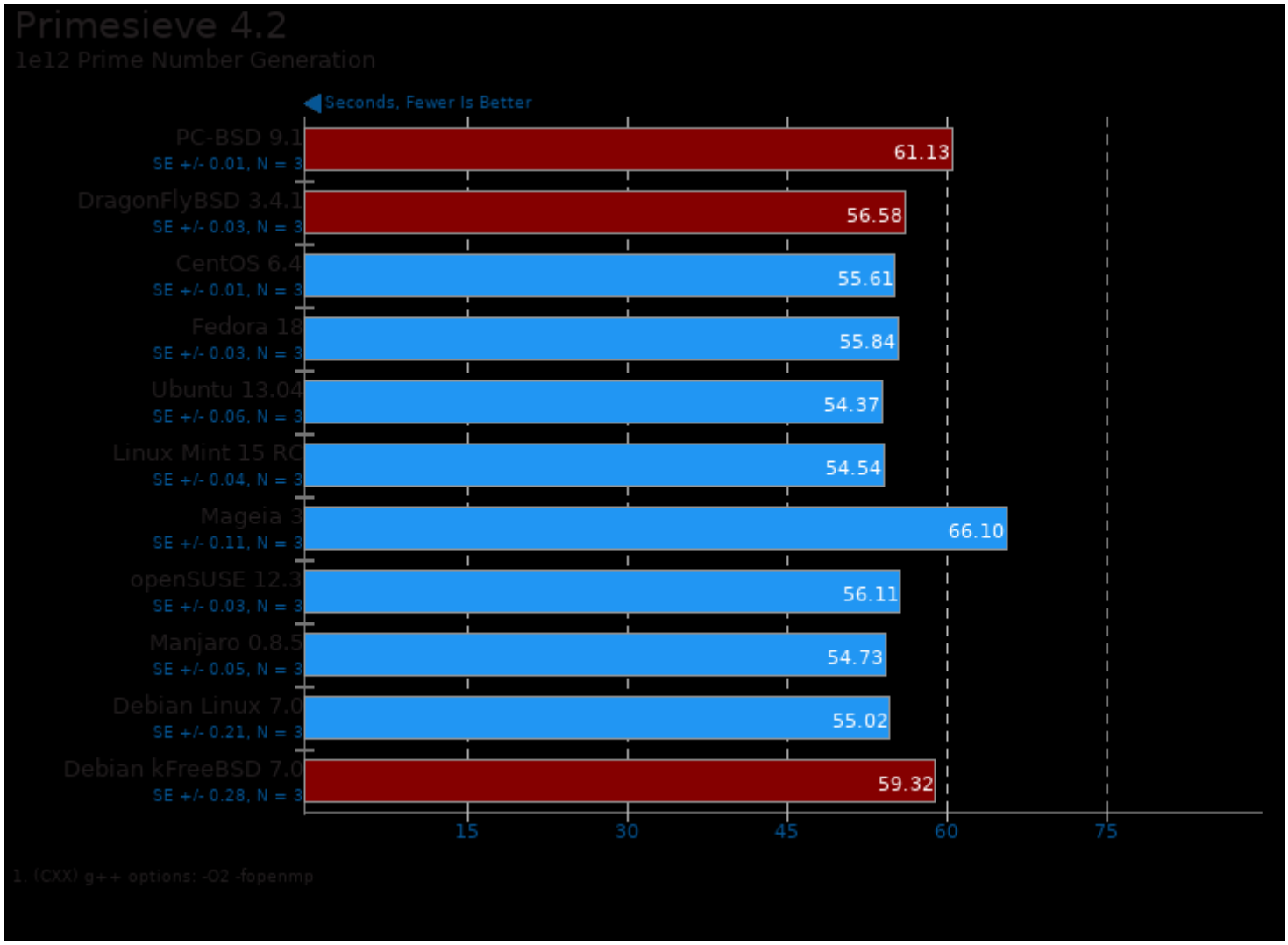

PostMark 1.51
Disk Transaction Performance
TPS, More Is Better
PC-BSD 9.1
SE +/- 2.60, N = 3
102
DragonFlyBSD 3.4.1
SE +/- 34.50, N = 2
308
CentOS 6.4
SE +/- 29.00, N = 3
4658
Fedora 18
SE +/- 27.00, N = 3
4491
Ubuntu 13.04
SE +/- 62.65, N = 3
5210
Linux Mint 15 RC
SE +/- 0.00, N = 3
5208
Mageia 3
SE +/- 197.21, N = 6
4512
openSUSE 12.3
SE +/- 226.26, N = 6
4786
Manjaro 0.8.5
SE +/- 33.00, N = 3
4934
Debian Linux 7.0
SE +/- 279.95, N = 6
5065
1100
2200
3300
4400
5500
1. (CC) gcc options: -O3

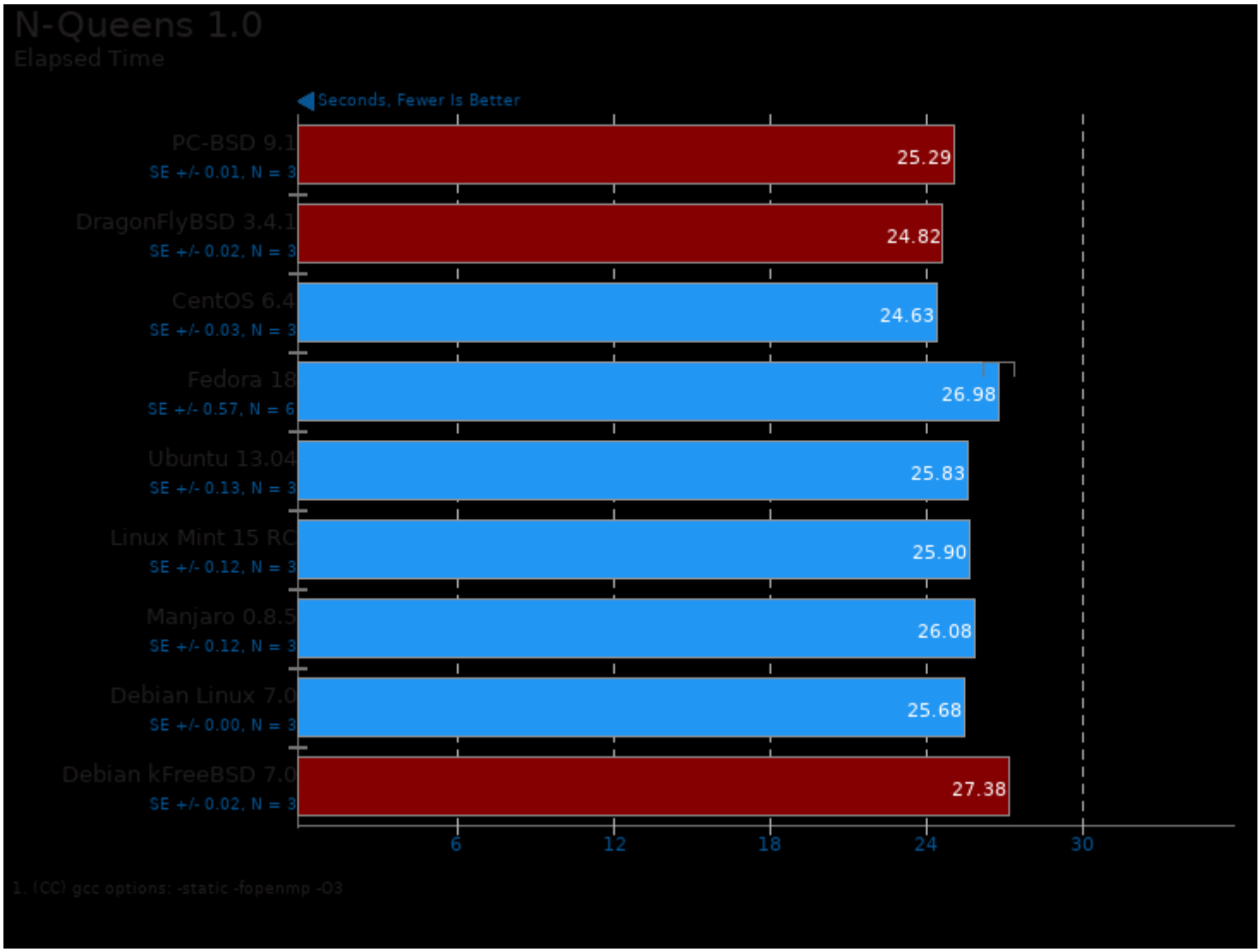

Fhourstones 3.1
Complex Connect-4 Solving
Kpos / sec, More Is Better
PC-BSD 9.1
SE +/- 1.03, N = 3
12816.87
DragonFlyBSD 3.4.1
SE +/- 10.21, N = 3
12813.90
CentOS 6.4
SE +/- 19.38, N = 3
13593.03
Fedora 18
SE +/- 45.72, N = 3
13292.90
Ubuntu 13.04
SE +/- 29.68, N = 3
12923.80
Linux Mint 15 RC
SE +/- 5.61, N = 3
12954.40
Mageia 3
SE +/- 10.51, N = 3
10683.47
openSUSE 12.3
SE +/- 42.03, N = 3
13355.73
Manjaro 0.8.5
SE +/- 11.14, N = 3
12559.23
Debian Linux 7.0
SE +/- 16.02, N = 3
12773.97
Debian kFreeBSD 7.0
SE +/- 9.69, N = 3
13319.23
3K
6K
9K
12K
15K
1. (CC) gcc options: -O3

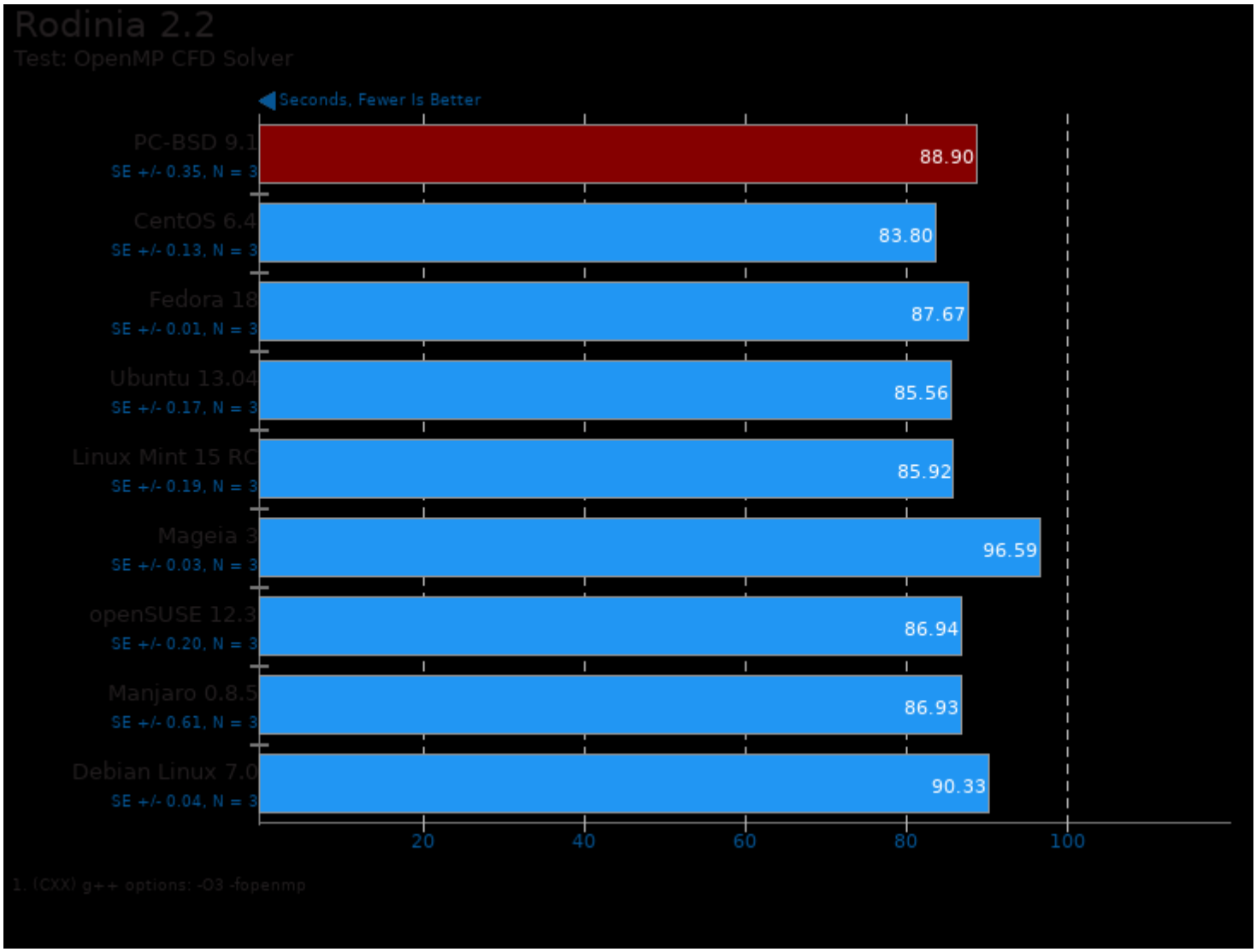

Himeno Benchmark 3.0
Poisson Pressure Solver
MFLOPS, More Is Better
PC-BSD 9.1
SE +/- 0.14, N = 3
827.76
DragonFlyBSD 3.4.1
SE +/- 0.46, N = 3
1666.91
CentOS 6.4
SE +/- 0.38, N = 3
1668.55
Fedora 18
SE +/- 13.70, N = 3
1582.07
Ubuntu 13.04
SE +/- 0.38, N = 3
1644.11
Linux Mint 15 RC
SE +/- 10.38, N = 3
1635.92
Mageia 3
SE +/- 0.26, N = 3
1397.44
openSUSE 12.3
SE +/- 0.78, N = 3
1601.79
Manjaro 0.8.5
SE +/- 0.85, N = 3
1616.50
Debian Linux 7.0
SE +/- 1.60, N = 3
1614.37
Debian kFreeBSD 7.0
SE +/- 0.38, N = 3
1613.60
400
800
1200
1600
2000
1. (CC) gcc options: -O3

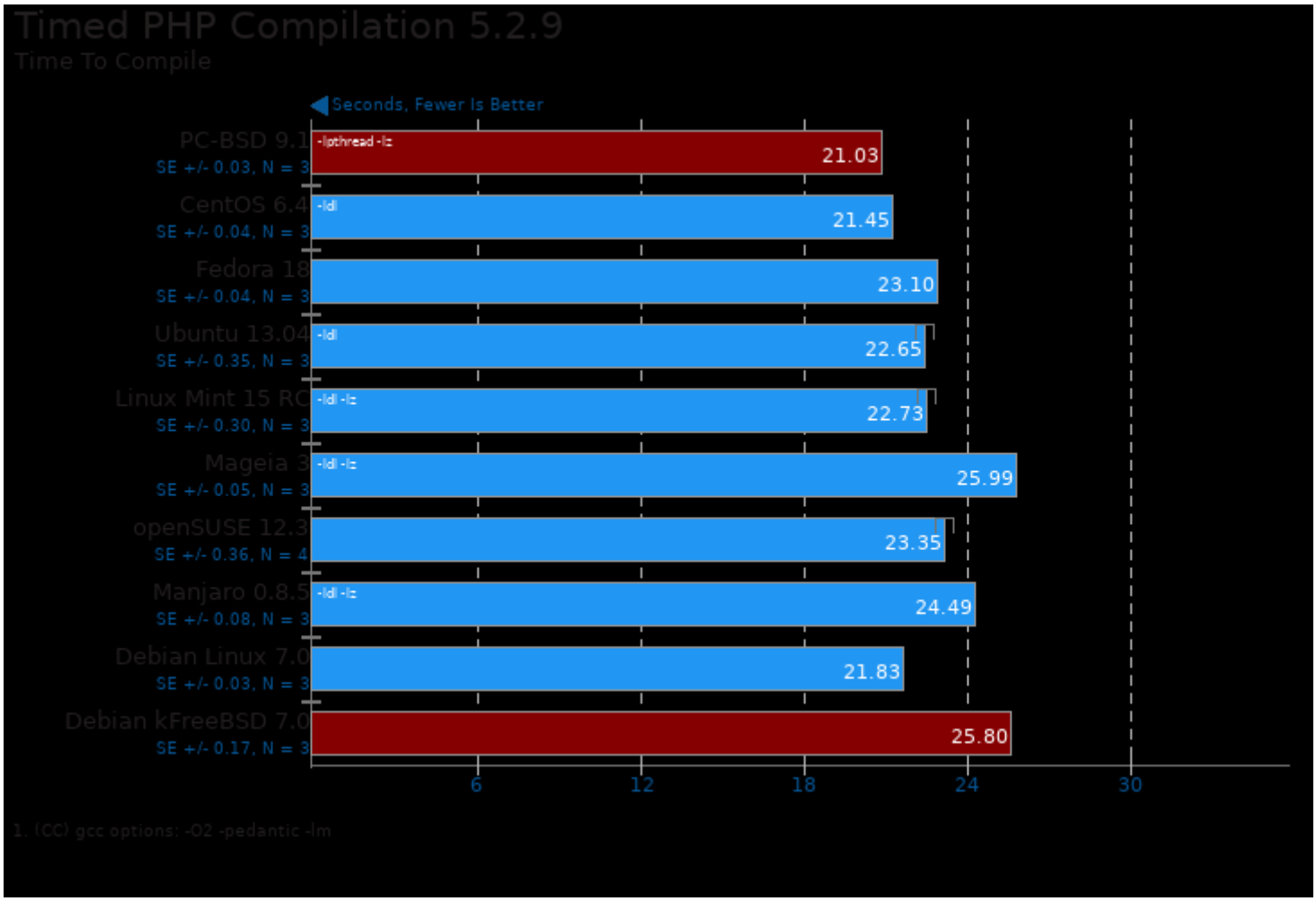

7-Zip Compression 9.20.1
Compress Speed Test
MIPS, More Is Better
PC-BSD 9.1
SE +/- 132.59, N = 3
22180
DragonFlyBSD 3.4.1
SE +/- 31.35, N = 3
4326
CentOS 6.4
SE +/- 93.18, N = 3
25051
Fedora 18
SE +/- 147.47, N = 3
24403
Ubuntu 13.04
SE +/- 87.96, N = 3
25150
Linux Mint 15 RC
SE +/- 58.81, N = 3
25234
Mageia 3
SE +/- 84.24, N = 3
23393
openSUSE 12.3
SE +/- 37.02, N = 3
24731
Manjaro 0.8.5
SE +/- 142.38, N = 3
24648
Debian Linux 7.0
SE +/- 421.86, N = 4
24820
Debian kFreeBSD 7.0
SE +/- 309.11, N = 3
23482
5K
10K
15K
20K
25K
1. (CXX) g++ options: -pipe -lpthread


C-Ray 1.1
Total Time
Seconds, Fewer Is Better
PC-BSD 9.1
SE +/- 0.15, N = 3
30.75
DragonFlyBSD 3.4.1
SE +/- 0.04, N = 3
23.34
CentOS 6.4
SE +/- 0.02, N = 3
32.59
Fedora 18
SE +/- 0.03, N = 3
23.49
Ubuntu 13.04
SE +/- 0.02, N = 3
22.85
Linux Mint 15 RC
SE +/- 0.04, N = 3
23.05
Mageia 3
SE +/- 0.06, N = 3
27.58
openSUSE 12.3
SE +/- 0.07, N = 3
23.59
Manjaro 0.8.5
SE +/- 0.03, N = 3
19.40
Debian Linux 7.0
SE +/- 0.06, N = 3
23.13
Debian kFreeBSD 7.0
SE +/- 0.14, N = 3
23.90
8
16
24
32
40
1. (CC) gcc options: -lm -lpthread -O3


Primesieve 4.2
1e12 Prime Number Generation
Seconds, Fewer Is Better
PC-BSD 9.1
SE +/- 0.01, N = 3
61.13
DragonFlyBSD 3.4.1
SE +/- 0.03, N = 3
56.58
CentOS 6.4
SE +/- 0.01, N = 3
55.61
Fedora 18
SE +/- 0.03, N = 3
55.84
Ubuntu 13.04
SE +/- 0.06, N = 3
54.37
Linux Mint 15 RC
SE +/- 0.04, N = 3
54.54
Mageia 3
SE +/- 0.11, N = 3
66.10
openSUSE 12.3
SE +/- 0.03, N = 3
56.11
Manjaro 0.8.5
SE +/- 0.05, N = 3
54.73
Debian Linux 7.0
SE +/- 0.21, N = 3
55.02
Debian kFreeBSD 7.0
SE +/- 0.28, N = 3
59.32
15
30
45
60
75
1. (CXX) g++ options: -O2 -fopenmp

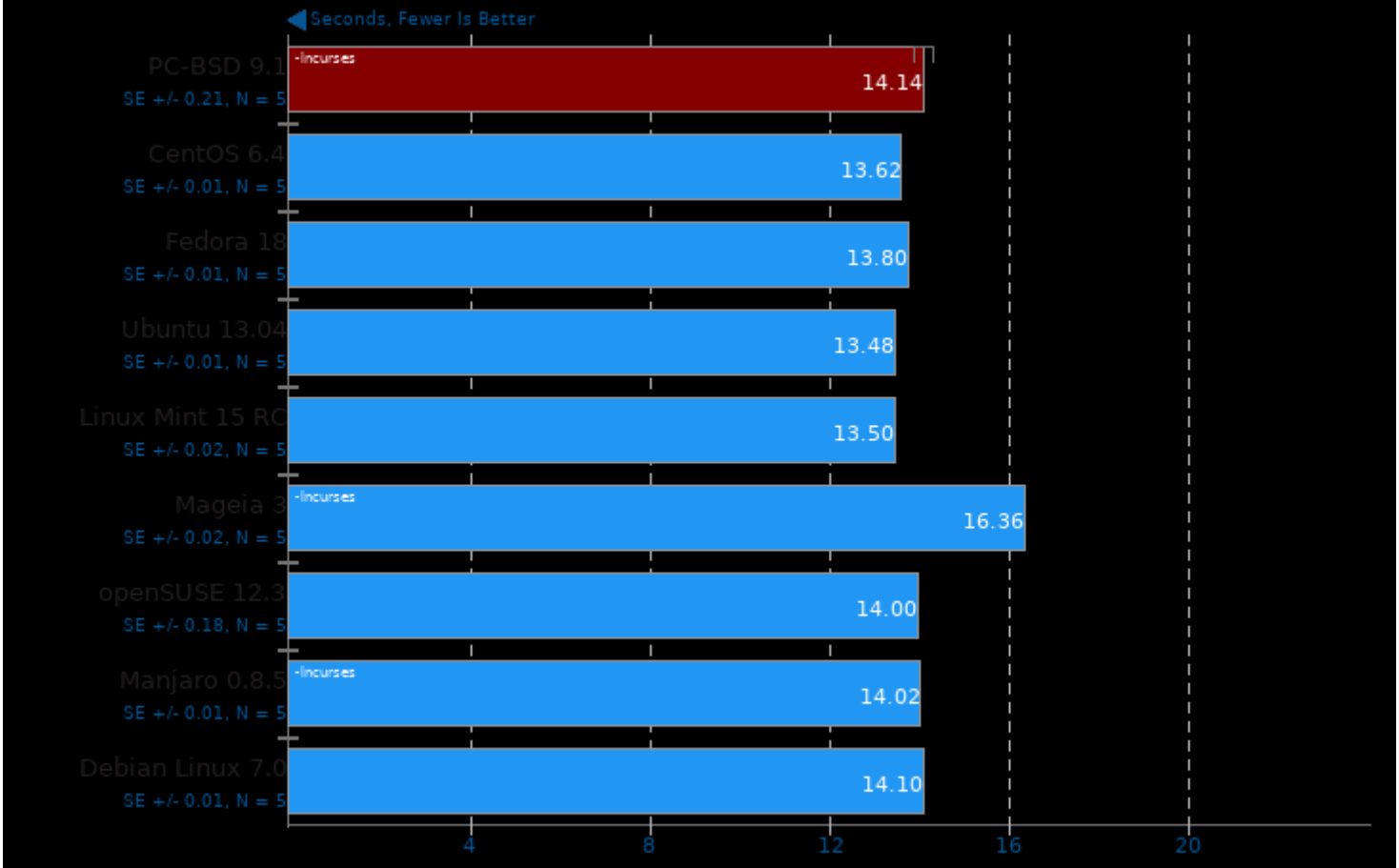

N-Queens 1.0
Elapsed Time
Seconds, Fewer Is Better
PC-BSD 9.1
SE +/- 0.01, N = 3
25.29
DragonFlyBSD 3.4.1
SE +/- 0.02, N = 3
24.82
CentOS 6.4
SE +/- 0.03, N = 3
24.63
Fedora 18
SE +/- 0.57, N = 6
26.98
Ubuntu 13.04
SE +/- 0.13, N = 3
25.83
Linux Mint 15 RC
SE +/- 0.12, N = 3
25.90
Manjaro 0.8.5
SE +/- 0.12, N = 3
26.08
Debian Linux 7.0
SE +/- 0.00, N = 3
25.68
Debian kFreeBSD 7.0
SE +/- 0.02, N = 3
27.38
6
12
18
24
30
1. (CC) gcc options: -static -fopenmp -O3


Rodinia 2.2
Test: OpenMP CFD Solver
Seconds, Fewer Is Better
PC-BSD 9.1
SE +/- 0.35, N = 3
88.90
CentOS 6.4
SE +/- 0.13, N = 3
83.80
Fedora 18
SE +/- 0.01, N = 3
87.67
Ubuntu 13.04
SE +/- 0.17, N = 3
85.56
Linux Mint 15 RC
SE +/- 0.19, N = 3
85.92
Mageia 3
SE +/- 0.03, N = 3
96.59
openSUSE 12.3
SE +/- 0.20, N = 3
86.94
Manjaro 0.8.5
SE +/- 0.61, N = 3
86.93
Debian Linux 7.0
SE +/- 0.04, N = 3
90.33
20
40
60
80
100
1. (CXX) g++ options: -O3 -fopenmp


Timed PHP Compilation 5.2.9
Time To Compile
Seconds, Fewer Is Better
PC-BSD 9.1
SE +/- 0.03, N = 3
-lpthread -lz
21.03
CentOS 6.4
SE +/- 0.04, N = 3
-ldl
21.45
Fedora 18
SE +/- 0.04, N = 3
23.10
Ubuntu 13.04
SE +/- 0.35, N = 3
-ldl
22.65
Linux Mint 15 RC
SE +/- 0.30, N = 3
-ldl -lz
22.73
Mageia 3
SE +/- 0.05, N = 3
-ldl -lz
25.99
openSUSE 12.3
SE +/- 0.36, N = 4
23.35
Manjaro 0.8.5
SE +/- 0.08, N = 3
-ldl -lz
24.49
Debian Linux 7.0
SE +/- 0.03, N = 3
21.83
Debian kFreeBSD 7.0
SE +/- 0.17, N = 3
25.80
6
12
18
24
30
1. (CC) gcc options: -O2 -pedantic -lm

LAME MP3 Encoding 3.99.3

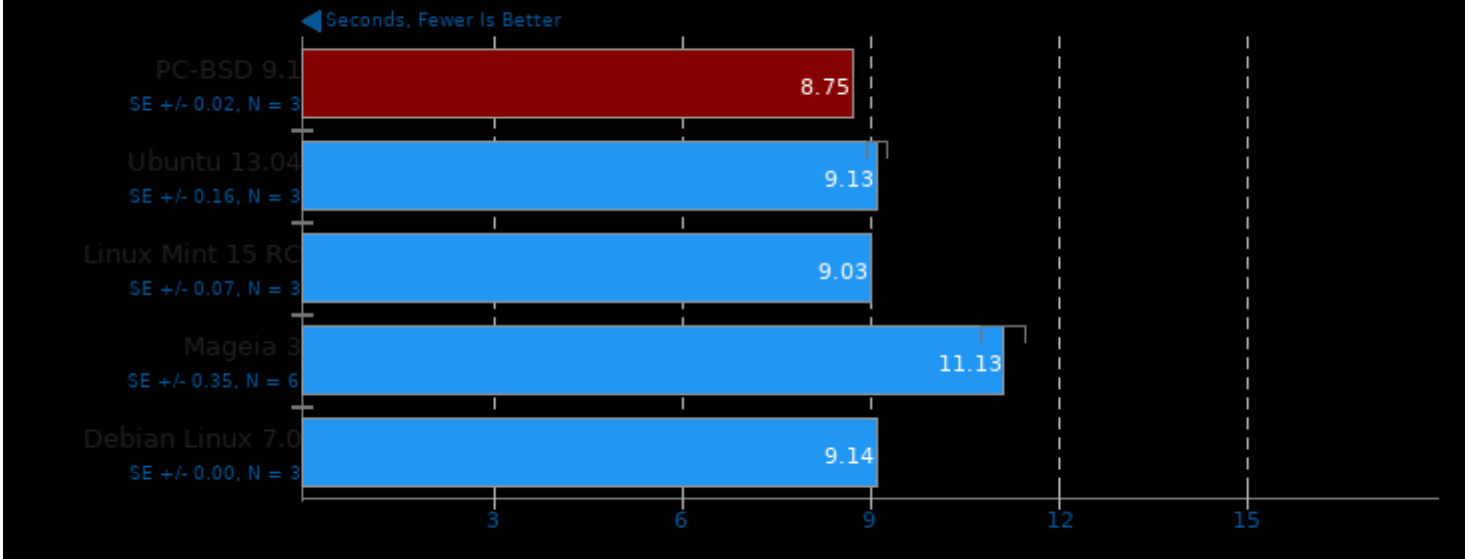
WAV To MP3



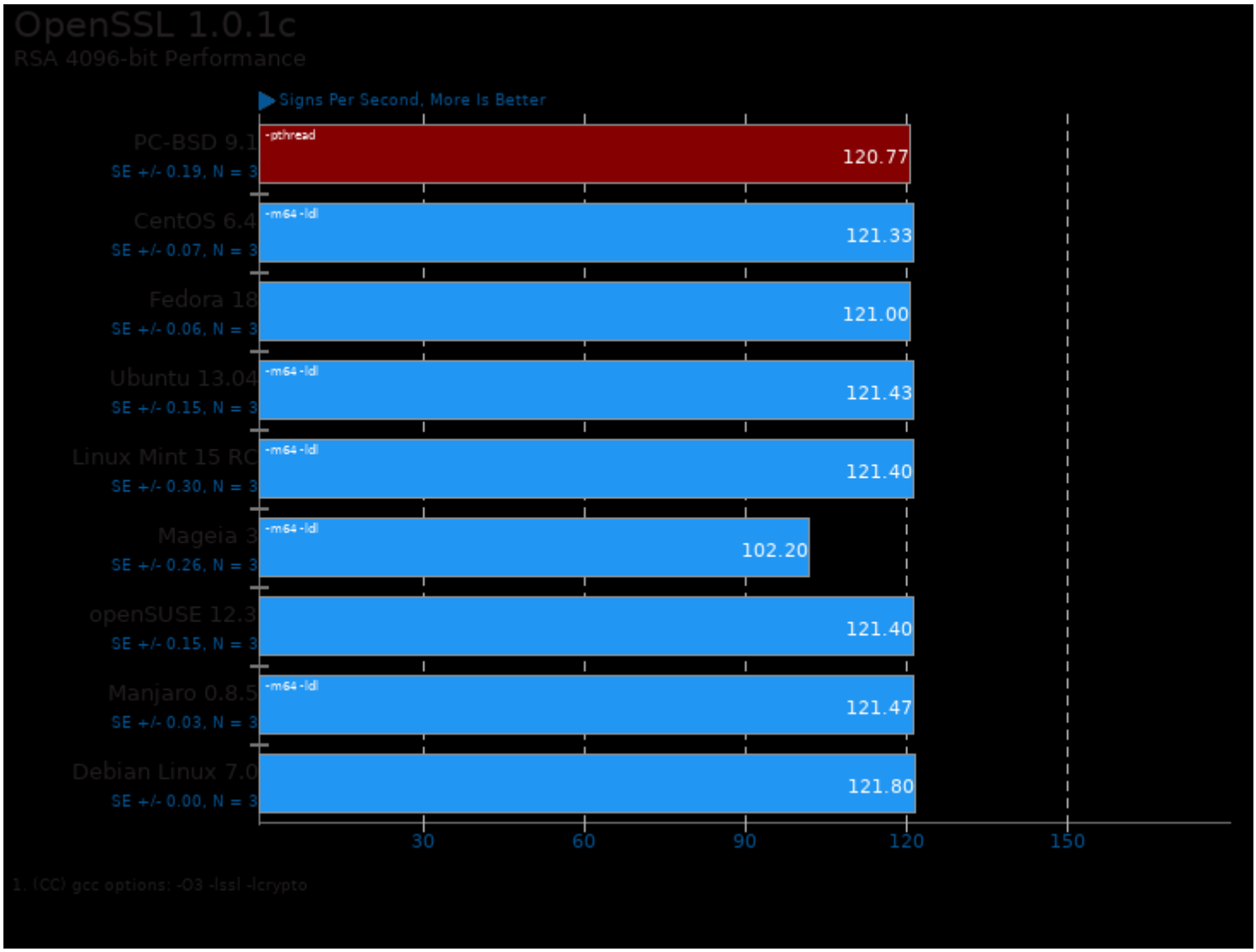
1. (CC) gcc options: -O3 -fomit-frame-pointer -ffast-math -pipe -lm

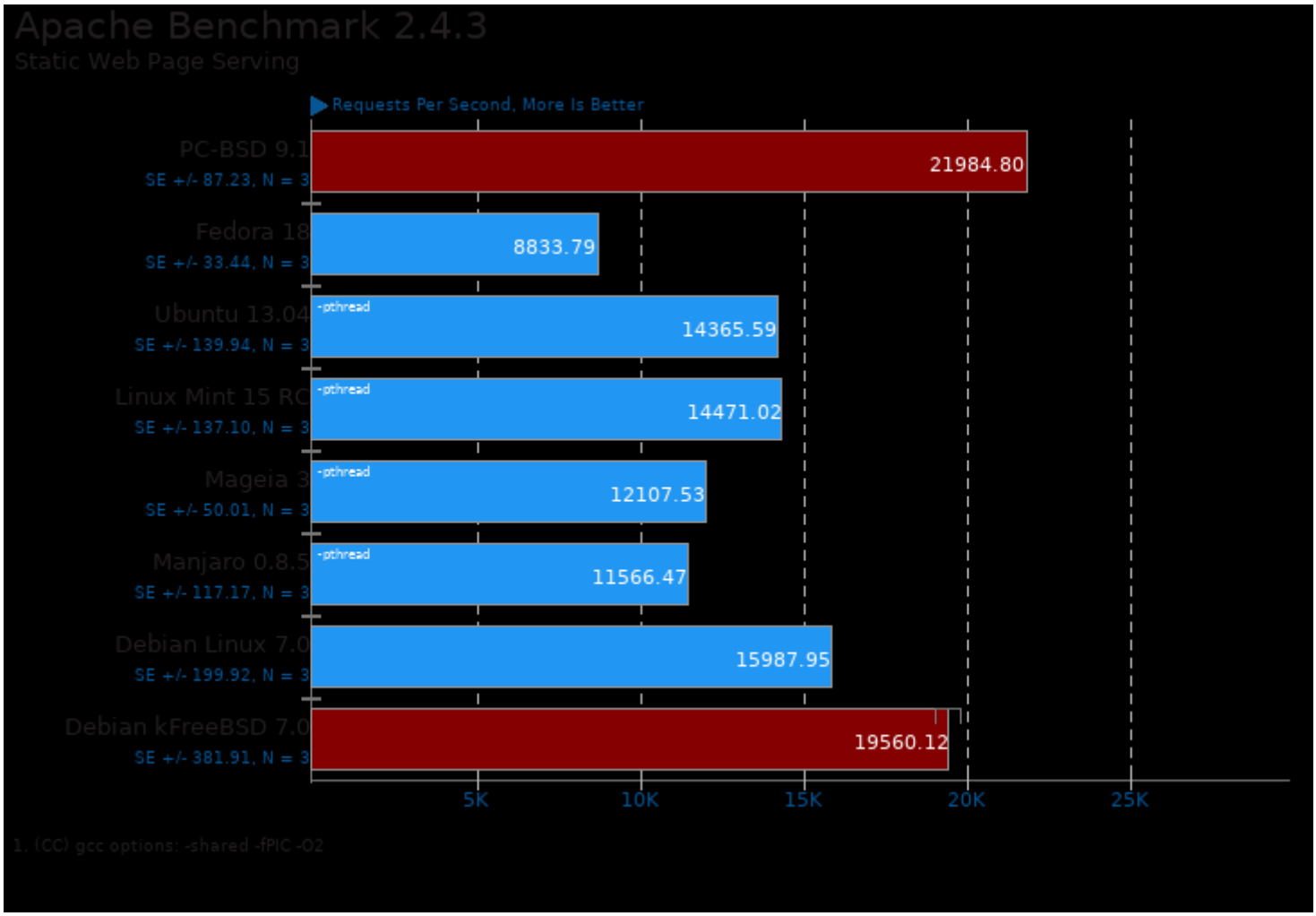
Tachyon 0.98.9

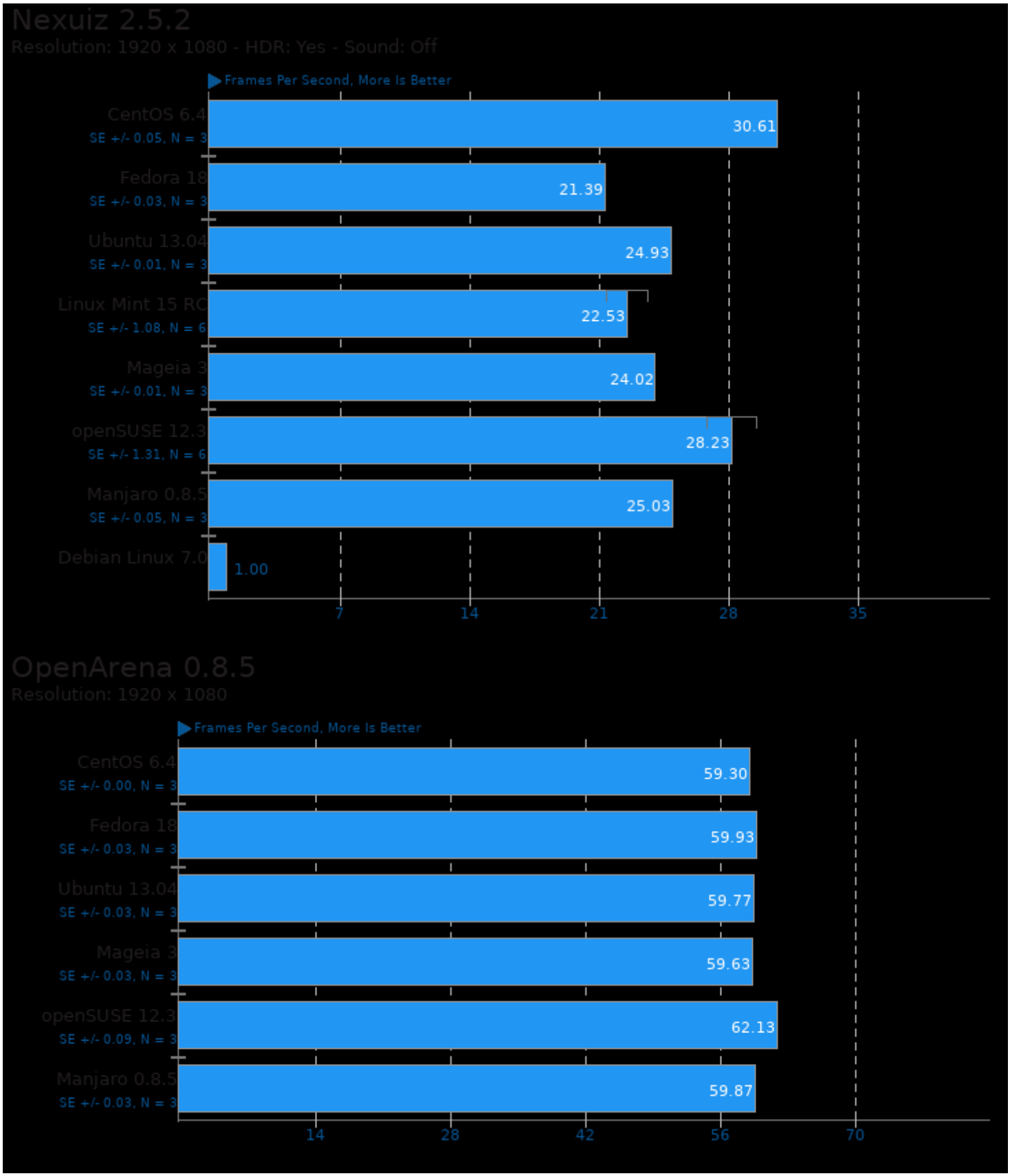
Total Time

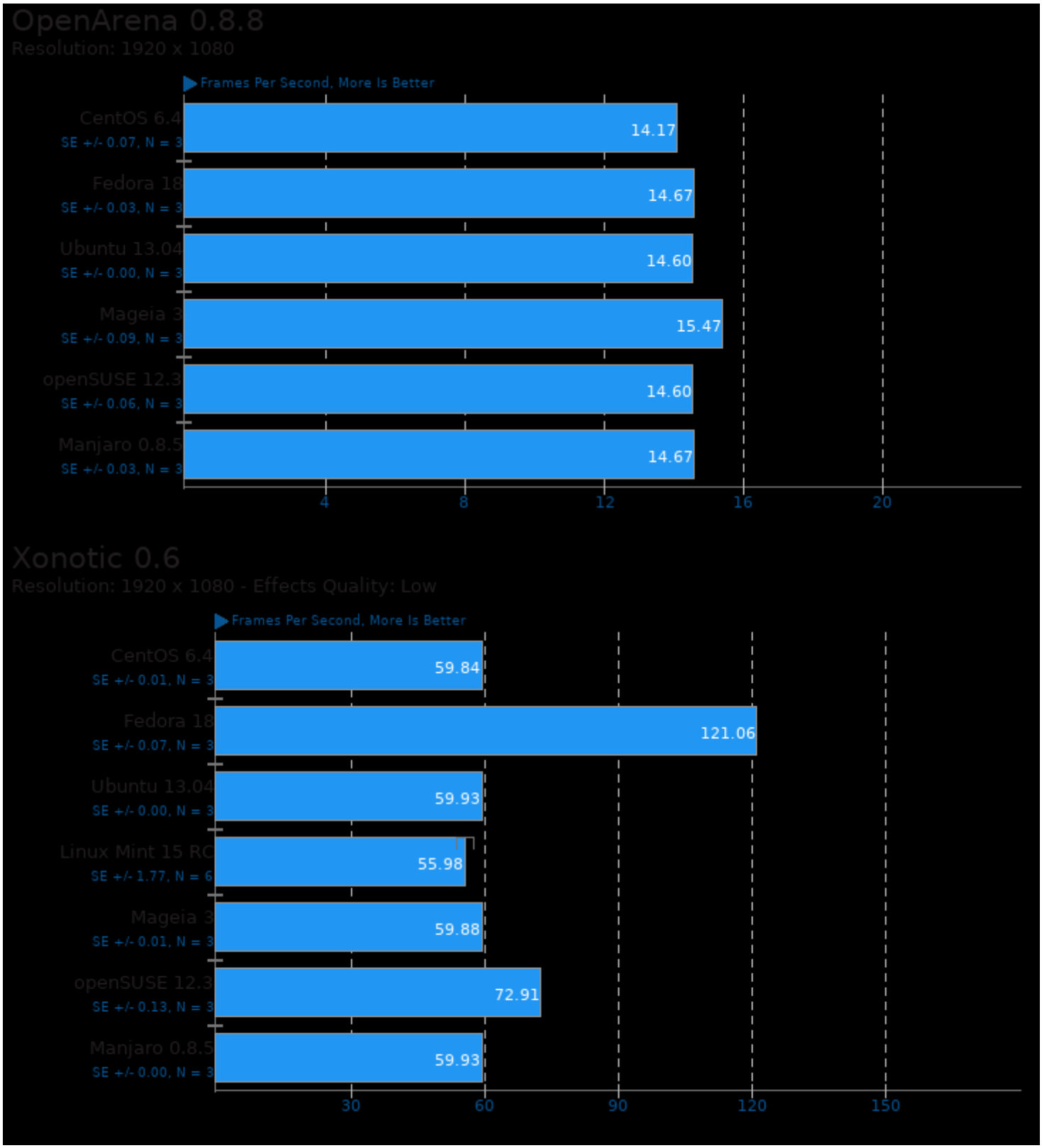


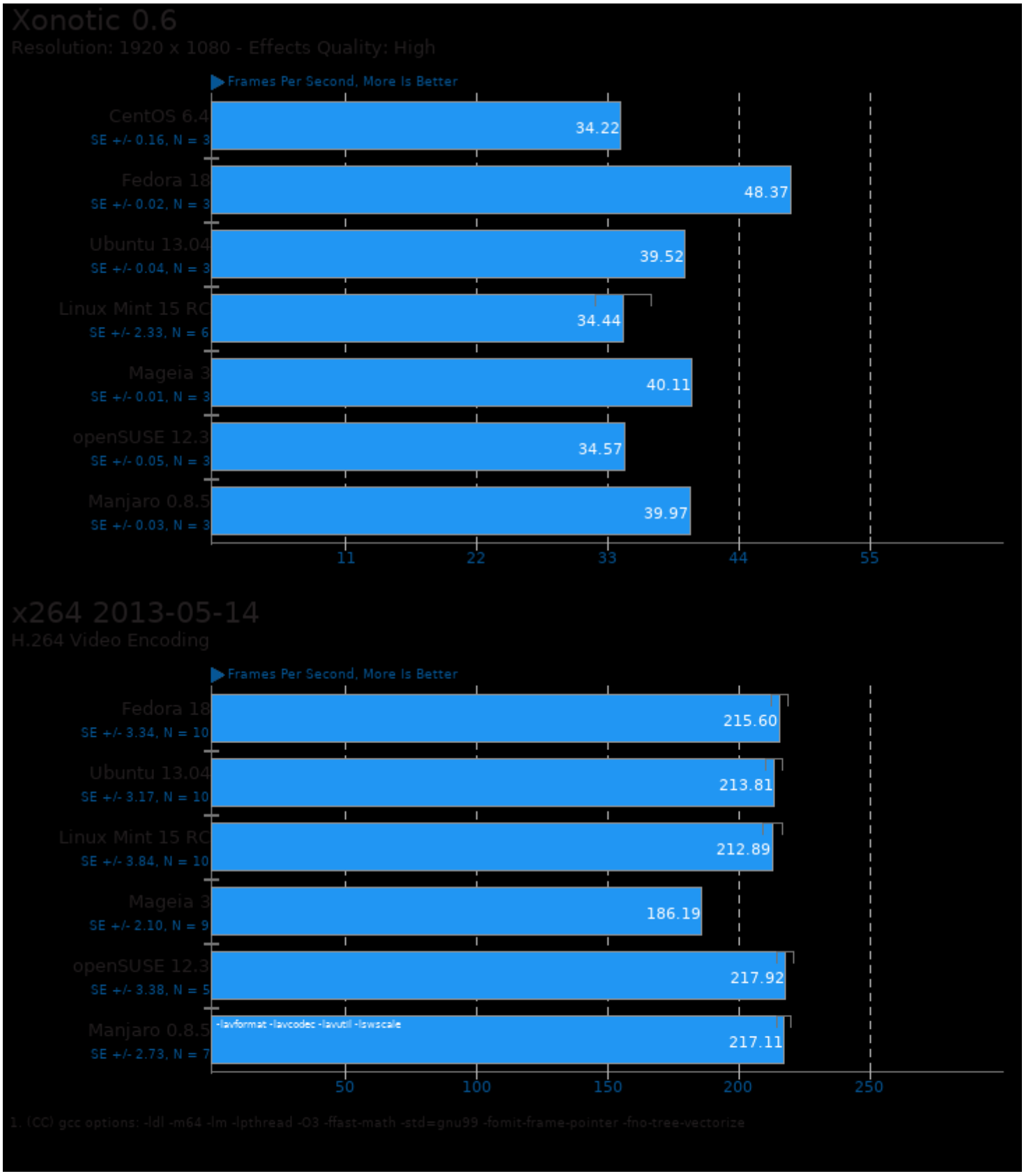
1. (CC) gcc options: -m32 -O3 -fomit-frame-pointer -ffast-math -ltachyon -lm -lpthread

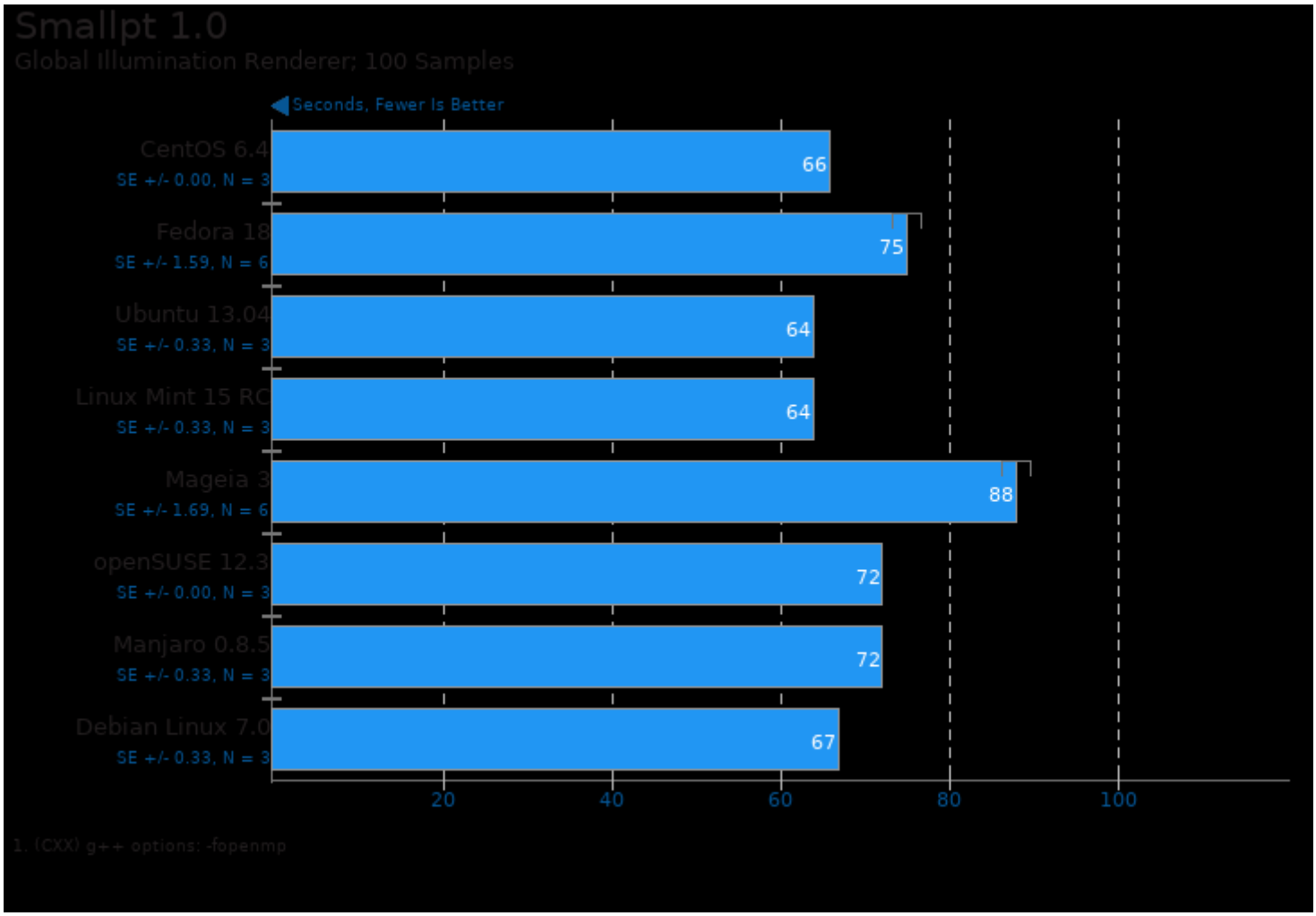

OpenSSL 1.0.1c
RSA 4096-bit Performance
Signs Per Second, More Is Better
PC-BSD 9.1
SE +/- 0.19, N = 3
-pthread
120.77
CentOS 6.4
SE +/- 0.07, N = 3
-m64 -ldl
121.33
Fedora 18
SE +/- 0.06, N = 3
121.00
Ubuntu 13.04
SE +/- 0.15, N = 3
-m64 -ldl
121.43
Linux Mint 15 RC
SE +/- 0.30, N = 3
-m64 -ldl
121.40
Mageia 3
SE +/- 0.26, N = 3
-m64 -ldl
102.20
openSUSE 12.3
SE +/- 0.15, N = 3
121.40
Manjaro 0.8.5
SE +/- 0.03, N = 3
-m64 -ldl
121.47
Debian Linux 7.0
SE +/- 0.00, N = 3
121.80
30
60
90
120
150
1. (CC) gcc options: -O3 -lssl -lcrypto

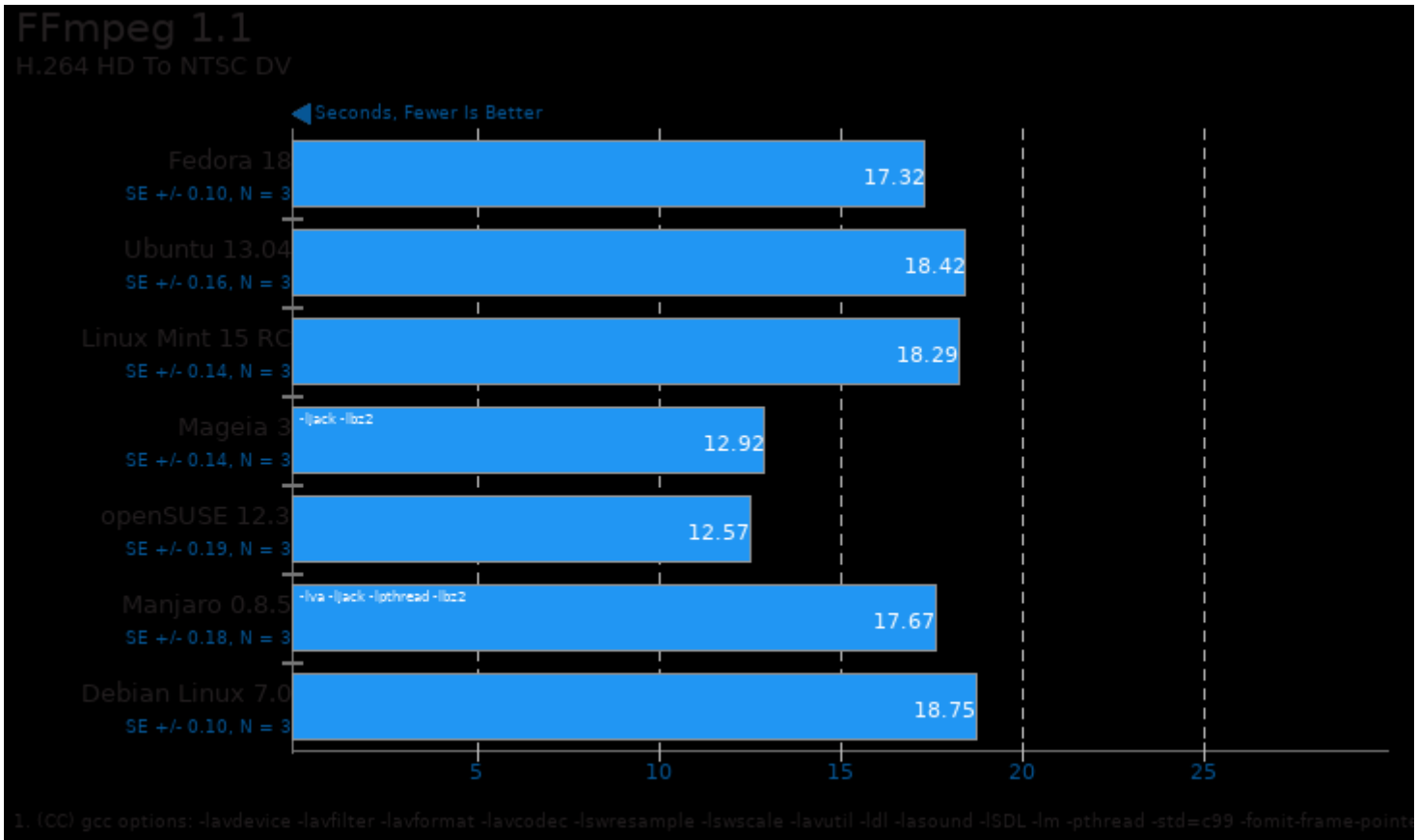

Apache Benchmark 2.4.3
Static Web Page Serving
Requests Per Second, More Is Better
PC-BSD 9.1
SE +/- 87.23, N = 3
21984.80
Fedora 18
SE +/- 33.44, N = 3
8833.79
Ubuntu 13.04
SE +/- 139.94, N = 3
-pthread
14365.59
Linux Mint 15 RC
SE +/- 137.10, N = 3
-pthread
14471.02
Mageia 3
SE +/- 50.01, N = 3
-pthread
12107.53
Manjaro 0.8.5
SE +/- 117.17, N = 3
-pthread
11566.47
Debian Linux 7.0
SE +/- 199.92, N = 3
15987.95
Debian kFreeBSD 7.0
SE +/- 381.91, N = 3
19560.12
5K
10K
15K
20K
25K
1. (CC) gcc options: -shared -fPIC -O2

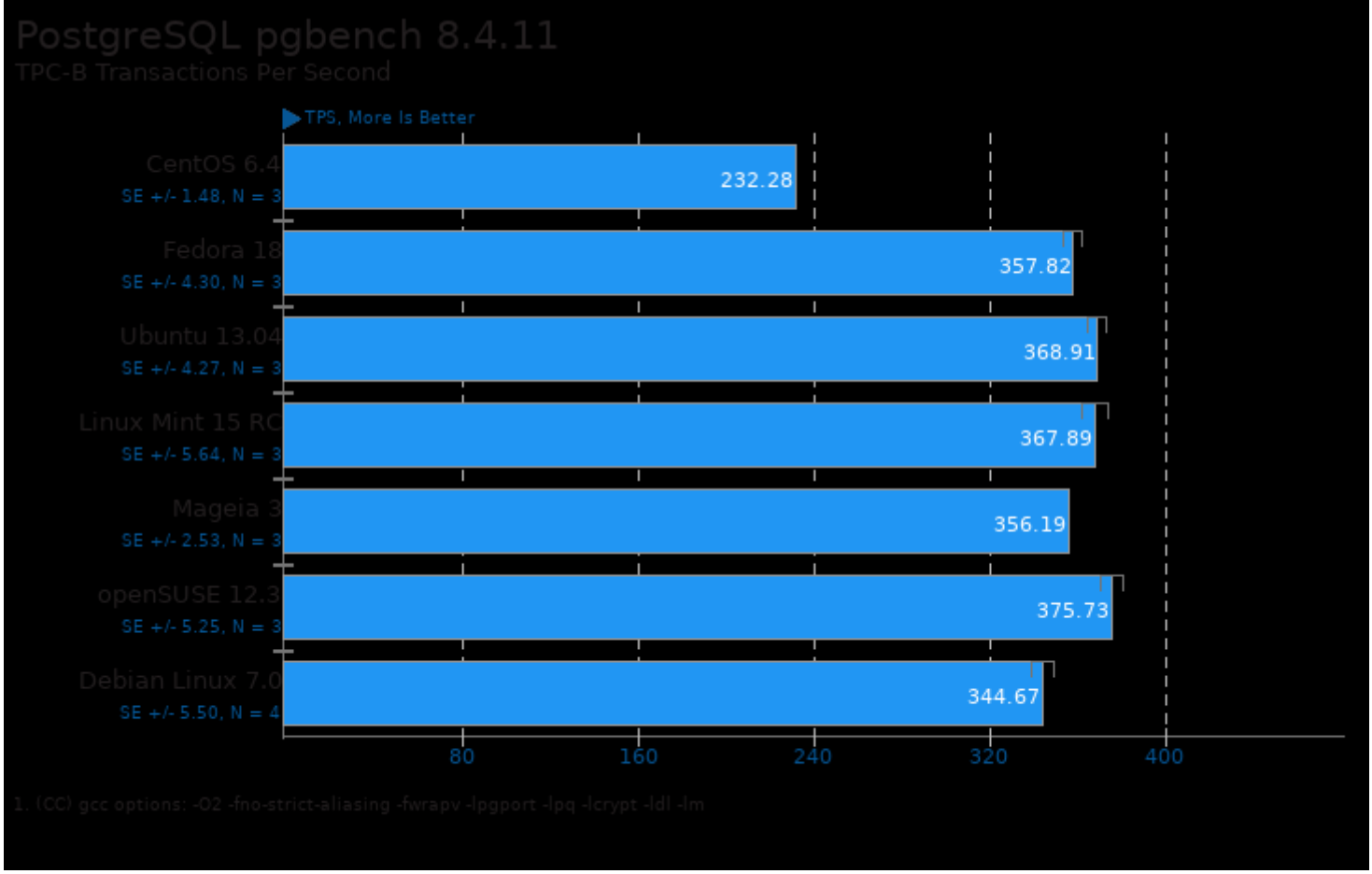

Nexuiz 2.5.2
Resolution: 1920 x 1080 - HDR: Yes - Sound: Off
Frames Per Second, More Is Better
CentOS 6.4
SE +/- 0.05, N = 3
30.61
Fedora 18
SE +/- 0.03, N = 3
21.39
Ubuntu 13.04
SE +/- 0.01, N = 3
24.93
Linux Mint 15 RC
SE +/- 1.08, N = 6
22.53
Mageia 3
SE +/- 0.01, N = 3
24.02
openSUSE 12.3
SE +/- 1.31, N = 6
28.23
Manjaro 0.8.5
SE +/- 0.05, N = 3
25.03
Debian Linux 7.0
1.00
7
14
21
28
35
OpenArena 0.8.5
Resolution: 1920 x 1080
Frames Per Second, More Is Better
CentOS 6.4
SE +/- 0.00, N = 3
59.30
Fedora 18
SE +/- 0.03, N = 3
59.93
Ubuntu 13.04
SE +/- 0.03, N = 3
59.77
Mageia 3
SE +/- 0.03, N = 3
59.63
openSUSE 12.3
SE +/- 0.09, N = 3
62.13
Manjaro 0.8.5
SE +/- 0.03, N = 3
59.87
14
28
42
56
70


OpenArena 0.8.8
Resolution: 1920 x 1080
Frames Per Second, More Is Better
CentOS 6.4
SE +/- 0.07, N = 3
14.17
Fedora 18
SE +/- 0.03, N = 3
14.67
Ubuntu 13.04
SE +/- 0.00, N = 3
14.60
Mageia 3
SE +/- 0.09, N = 3
15.47
openSUSE 12.3
SE +/- 0.06, N = 3
14.60
Manjaro 0.8.5
SE +/- 0.03, N = 3
14.67
4
8
12
16
20
Xonotic 0.6
Resolution: 1920 x 1080 - Effects Quality: Low
Frames Per Second, More Is Better
CentOS 6.4
SE +/- 0.01, N = 3
59.84
Fedora 18
SE +/- 0.07, N = 3
121.06
Ubuntu 13.04
SE +/- 0.00, N = 3
59.93
Linux Mint 15 RC
SE +/- 1.77, N = 6
55.98
Mageia 3
SE +/- 0.01, N = 3
59.88
openSUSE 12.3
SE +/- 0.13, N = 3
72.91
Manjaro 0.8.5
SE +/- 0.00, N = 3
59.93
30
60
90
120
150

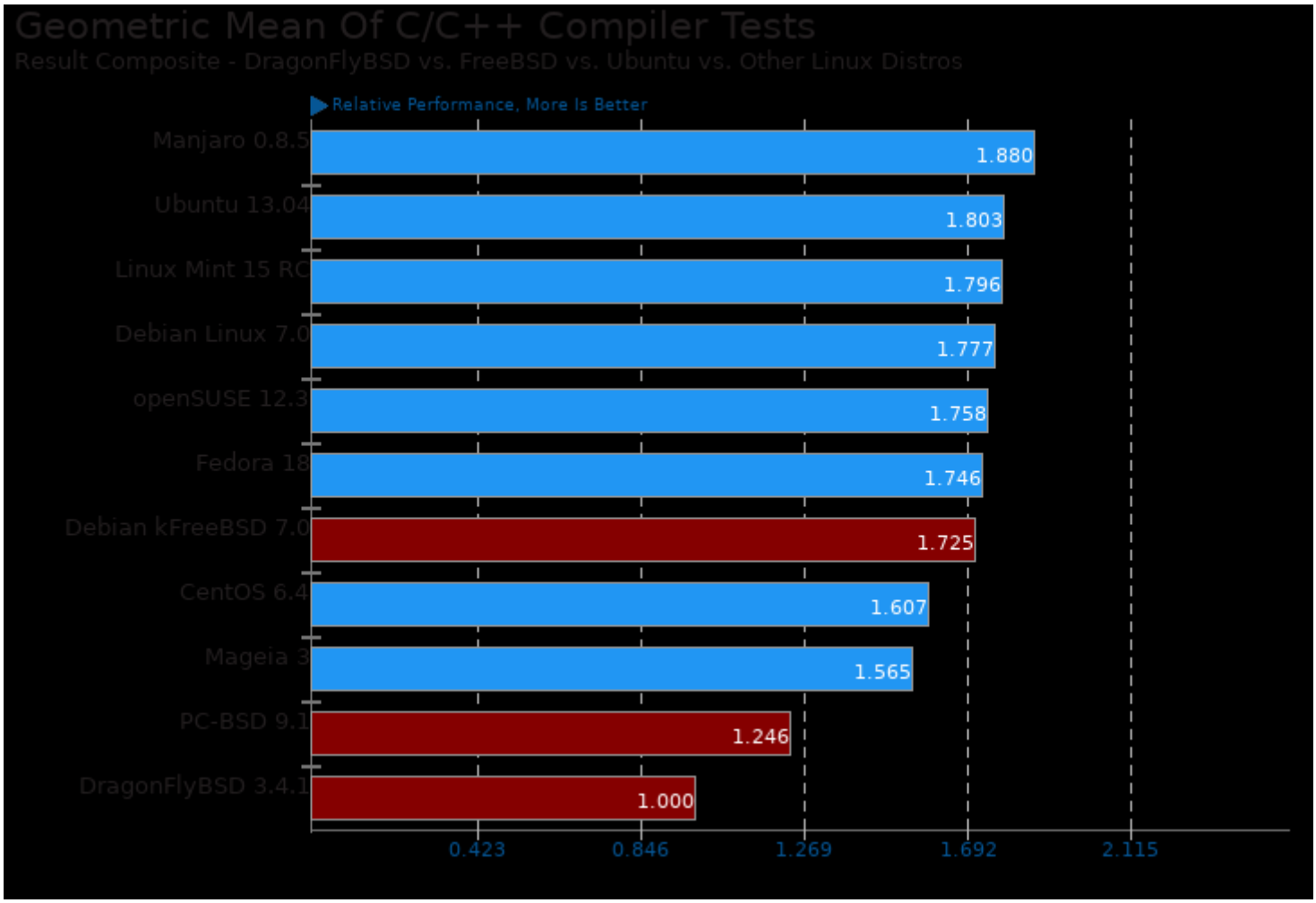

Xonotic 0.6
Resolution: 1920 x 1080 - Effects Quality: High
Frames Per Second, More Is Better
CentOS 6.4
SE +/- 0.16, N = 3
34.22
Fedora 18
SE +/- 0.02, N = 3
48.37
Ubuntu 13.04
SE +/- 0.04, N = 3
39.52
Linux Mint 15 RC
SE +/- 2.33, N = 6
34.44
Mageia 3
SE +/- 0.01, N = 3
40.11
openSUSE 12.3
SE +/- 0.05, N = 3
34.57
Manjaro 0.8.5
SE +/- 0.03, N = 3
39.97
11
22
33
44
55
x264 2013-05-14
H.264 Video Encoding
Frames Per Second, More Is Better
Fedora 18
SE +/- 3.34, N = 10
215.60
Ubuntu 13.04
SE +/- 3.17, N = 10
213.81
Linux Mint 15 RC
SE +/- 3.84, N = 10
212.89
Mageia 3
SE +/- 2.10, N = 9
186.19
openSUSE 12.3
SE +/- 3.38, N = 5
217.92
Manjaro 0.8.5
SE +/- 2.73, N = 7
-lavformat -lavcodec -lavutil -lswscale
217.11
50
100
150
200
250
1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -fomit-frame-pointer -fno-tree-vectorize


Smallpt 1.0
Global Illumination Renderer; 100 Samples
Seconds, Fewer Is Better
CentOS 6.4
SE +/- 0.00, N = 3
66
Fedora 18
SE +/- 1.59, N = 6
75
Ubuntu 13.04
SE +/- 0.33, N = 3
64
Linux Mint 15 RC
SE +/- 0.33, N = 3
64
Mageia 3
SE +/- 1.69, N = 6
88
openSUSE 12.3
SE +/- 0.00, N = 3
72
Manjaro 0.8.5
SE +/- 0.33, N = 3
72
Debian Linux 7.0
SE +/- 0.33, N = 3
67
20
40
60
80
100
1. (CXX) g++ options: -fopenmp

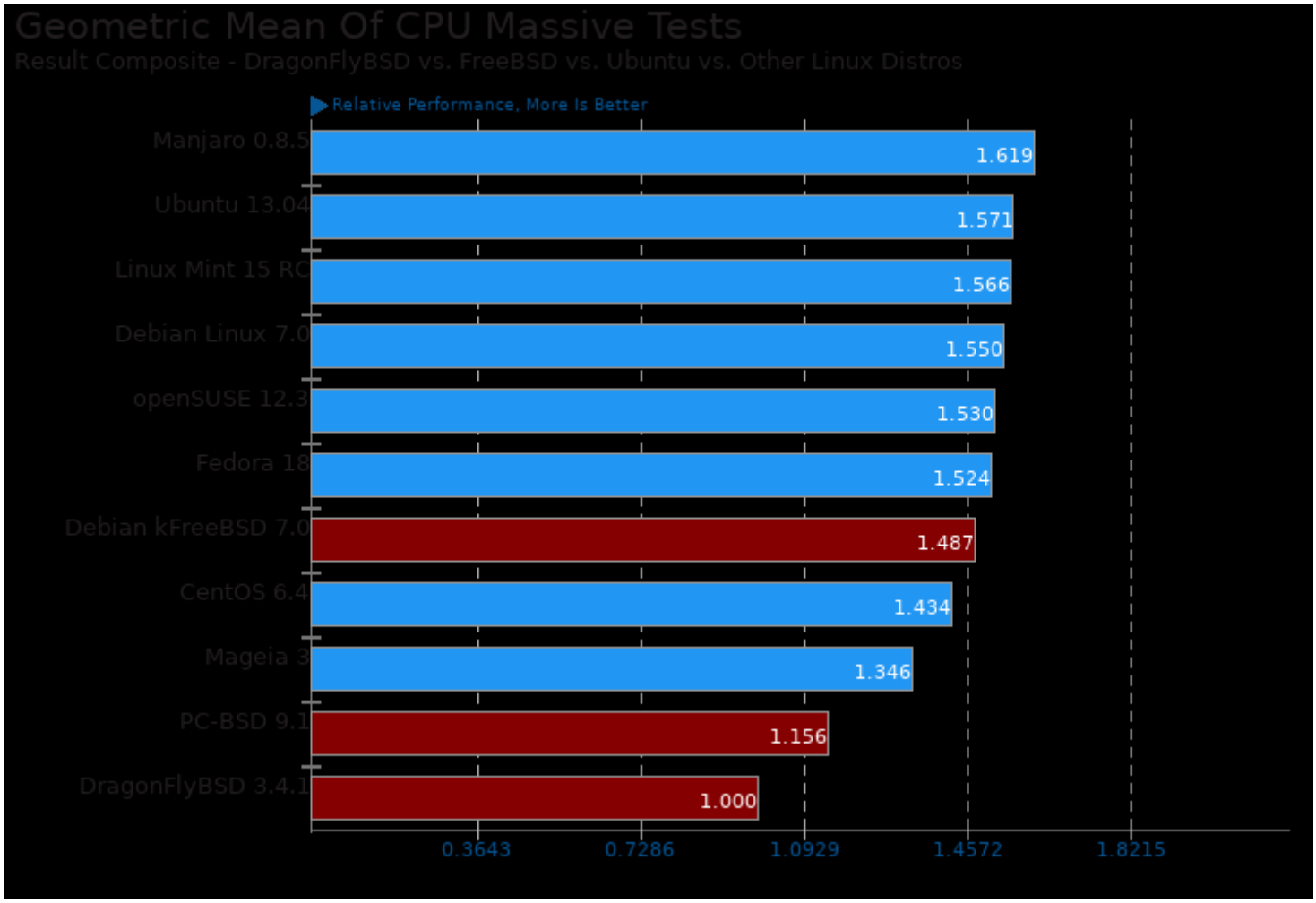

FFmpeg 1.1
H.264 HD To NTSC DV
Seconds, Fewer Is Better
Fedora 18
SE +/- 0.10, N = 3
17.32
Ubuntu 13.04
SE +/- 0.16, N = 3
18.42
Linux Mint 15 RC
SE +/- 0.14, N = 3
18.29
Mageia 3
SE +/- 0.14, N = 3
-ljack -lbz2
12.92
openSUSE 12.3
SE +/- 0.19, N = 3
12.57
Manjaro 0.8.5
SE +/- 0.18, N = 3
-lva -ljack -lpthread -lbz2
17.67
Debian Linux 7.0
SE +/- 0.10, N = 3
18.75
5
10
15
20
25
1. (CC) gcc options: -lavdevice -lavfilter -lavformat -lavcodec -lswresample -lswscale -lavutil -ldl -lasound -lSDL -lm -pthread -std=c99 -fomit-frame-pointe


PostgreSQL pgbench 8.4.11
TPC-B Transactions Per Second
TPS, More Is Better
CentOS 6.4
SE +/- 1.48, N = 3
232.28
Fedora 18
SE +/- 4.30, N = 3
357.82
Ubuntu 13.04
SE +/- 4.27, N = 3
368.91
Linux Mint 15 RC
SE +/- 5.64, N = 3
367.89
Mageia 3
SE +/- 2.53, N = 3
356.19
openSUSE 12.3
SE +/- 5.25, N = 3
375.73
Debian Linux 7.0
SE +/- 5.50, N = 4
344.67
80
160
240
320
400
1. (CC) gcc options: -O2 -fno-strict-aliasing -fwrapv -lpgport -lpq -lcrypt -ldl -lm

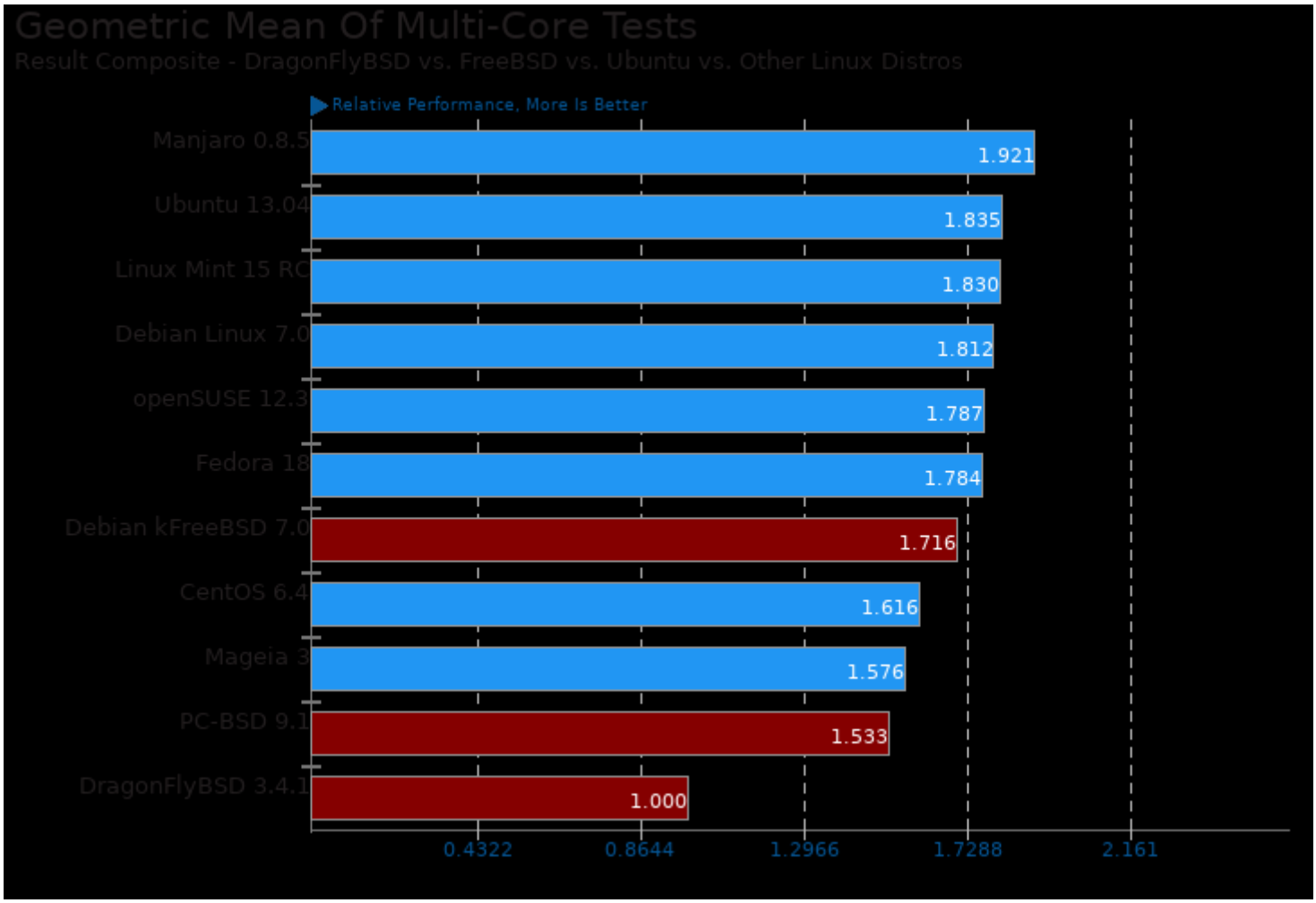
These geometric means are based upon test groupings / test suites for this result file.



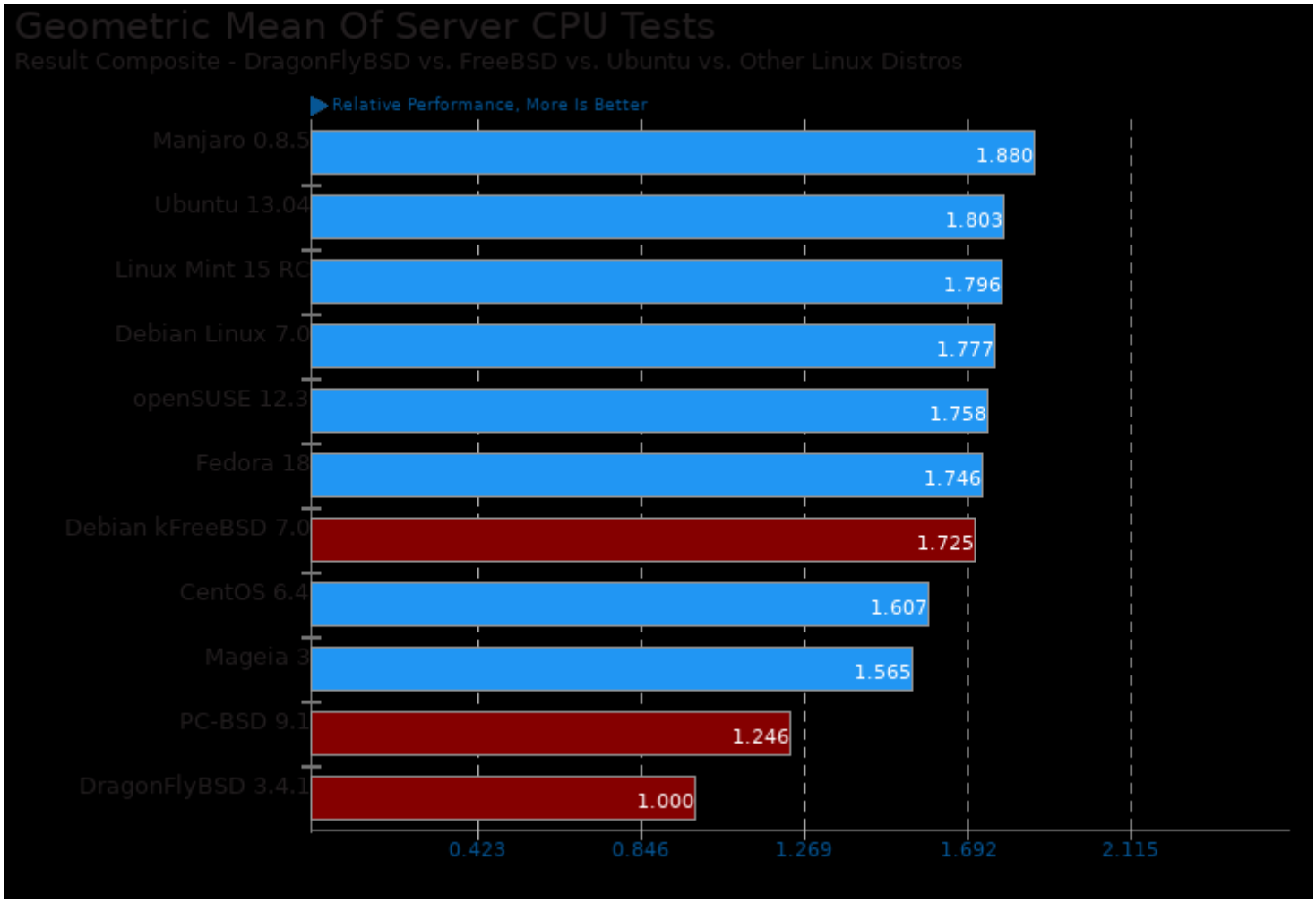
Geometric mean based upon tests: pts/himeno, pts/build-php, pts/c-ray, pts/compress-7zip, pts/encode-mp3, pts/pgbench, pts/apache, pts/x264, pts/openssl and pts/tachyon



Geometric mean based upon tests: pts/apache, pts/build-php, pts/c-ray, pts/compress-7zip, pts/x264, pts/encode-mp3, pts/himeno, pts/openssl, pts/pgbench, pts/primesieve, pts/rodinia and pts/tachyon



Geometric mean based upon tests: pts/c-ray, pts/tachyon, pts/n-queens, pts/x264, pts/ffmpeg, pts/primesieve, pts/rodinia, pts/smallpt, pts/compress-7zip, pts/build-php and pts/pgbench



Geometric mean based upon tests: pts/rodinia, 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 Thursday, 28 March 2024 21:22.