



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp[®]_rate2006 = 210

BL265+ (Intel Xeon X5570, 2.93 GHz)

SPECfp_rate_base2006 = 205

CPU2006 license: 20

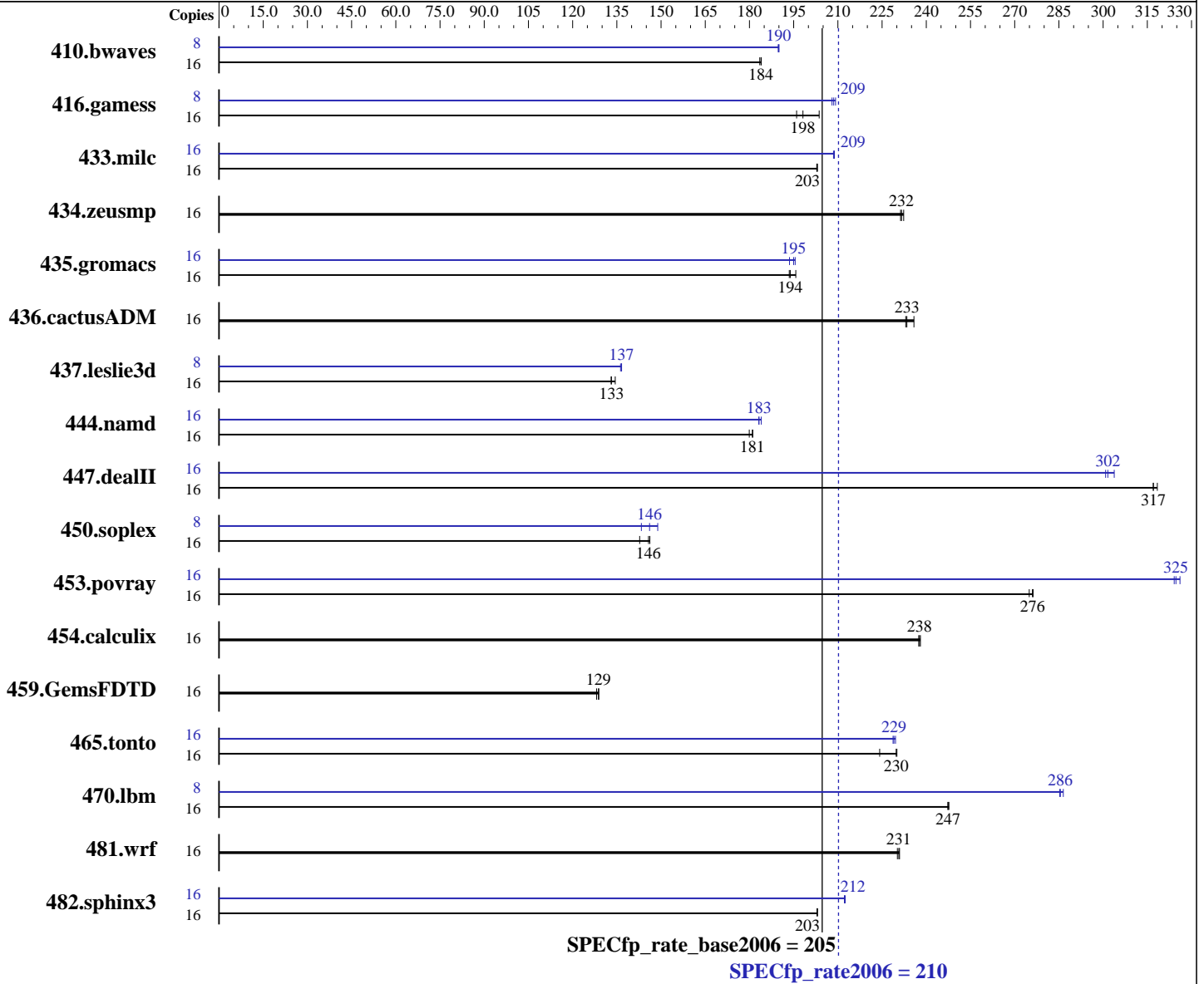
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Jan-2011

Hardware Availability: May-2010

Software Availability: Nov-2010



Hardware

CPU Name: Intel Xeon X5570
 CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz
 CPU MHz: 2933
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) SP1, Kernel 2.6.32.12-0.7-default
 Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0.1.116 Build 20101116
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp_rate2006 = 210

BL265+ (Intel Xeon X5570, 2.93 GHz)

SPECfp_rate_base2006 = 205

CPU2006 license: 20

Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Jan-2011

Hardware Availability: May-2010

Software Availability: Nov-2010

L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x 73 GB SAS, 10000 RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	16	1182	184	<u>1182</u>	<u>184</u>	1185	183	8	<u>573</u>	<u>190</u>	573	190	572	190
416.gamess	16	<u>1581</u>	<u>198</u>	1538	204	1598	196	8	749	209	<u>751</u>	<u>209</u>	753	208
433.milc	16	723	203	724	203	<u>724</u>	<u>203</u>	16	703	209	<u>704</u>	<u>209</u>	704	209
434.zeusmp	16	627	232	<u>629</u>	<u>232</u>	630	231	16	627	232	<u>629</u>	<u>232</u>	630	231
435.gromacs	16	584	196	<u>589</u>	<u>194</u>	590	194	16	584	196	<u>586</u>	<u>195</u>	590	194
436.cactusADM	16	811	236	<u>819</u>	<u>233</u>	821	233	16	811	236	<u>819</u>	<u>233</u>	821	233
437.leslie3d	16	<u>1129</u>	<u>133</u>	1130	133	1119	134	8	<u>551</u>	<u>137</u>	552	136	550	137
444.namd	16	708	181	713	180	<u>709</u>	<u>181</u>	16	<u>700</u>	<u>183</u>	697	184	700	183
447.dealII	16	<u>577</u>	<u>317</u>	577	317	575	318	16	608	301	603	304	<u>607</u>	<u>302</u>
450.soplex	16	935	143	<u>916</u>	<u>146</u>	913	146	8	466	143	<u>457</u>	<u>146</u>	448	149
453.povray	16	<u>308</u>	<u>276</u>	308	276	310	275	16	263	324	261	326	<u>262</u>	<u>325</u>
454.calculix	16	555	238	556	237	<u>555</u>	<u>238</u>	16	555	238	556	237	<u>555</u>	<u>238</u>
459.GemsFDTD	16	1317	129	<u>1319</u>	<u>129</u>	1325	128	16	1317	129	<u>1319</u>	<u>129</u>	1325	128
465.tonto	16	684	230	<u>685</u>	<u>230</u>	702	224	16	686	230	<u>687</u>	<u>229</u>	688	229
470.lbm	16	888	248	<u>889</u>	<u>247</u>	889	247	8	<u>385</u>	<u>286</u>	384	286	385	285
481.wrf	16	<u>775</u>	<u>231</u>	774	231	776	230	16	<u>775</u>	<u>231</u>	774	231	776	230
482.sphinx3	16	<u>1536</u>	<u>203</u>	1537	203	1536	203	16	<u>1469</u>	<u>212</u>	1468	212	1469	212

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The config file option 'submit' was used.
numactl was used to bind copies to the cores

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
Hugepages was enabled with the following:
'nodev /mnt/hugepages hugetlbfs defaults 0 0' added to /etc/fstab
echo 7200 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp_rate2006 = 210

BL265+ (Intel Xeon X5570, 2.93 GHz)

SPECfp_rate_base2006 = 205

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Jan-2011
Hardware Availability: May-2010
Software Availability: Nov-2010

Platform Notes

Turbo Mode enabled in BIOS
Turbo Boost set to Traditional in BIOS
Power C-states enabled in BIOS
Demand Scrub disabled in BIOS

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp_rate2006 = 210

BL265+ (Intel Xeon X5570, 2.93 GHz)

SPECfp_rate_base2006 = 205

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Jan-2011
Hardware Availability: May-2010
Software Availability: Nov-2010

Base Optimization Flags (Continued)

Fortran benchmarks:

`-xSSE4.2 -ipo -O3 -no-prec-div -static`

Benchmarks using both Fortran and C:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias`

Peak Compiler Invocation

C benchmarks (except as noted below):

`icc -m64`

`482.sphinx3: icc -m32`

C++ benchmarks (except as noted below):

`icpc -m64`

`450.soplex: icpc -m32`

Fortran benchmarks:

`ifort -m64`

Benchmarks using both Fortran and C:

`icc -m64 ifort -m64`

Peak Portability Flags

410.bwaves: `-DSPEC_CPU_LP64`
416.gamess: `-DSPEC_CPU_LP64`
433.milc: `-DSPEC_CPU_LP64`
434.zeusmp: `-DSPEC_CPU_LP64`
435.gromacs: `-DSPEC_CPU_LP64 -nofor_main`
436.cactusADM: `-DSPEC_CPU_LP64 -nofor_main`
437.leslie3d: `-DSPEC_CPU_LP64`
444.namd: `-DSPEC_CPU_LP64`
447.dealII: `-DSPEC_CPU_LP64`
453.povray: `-DSPEC_CPU_LP64`
454.calculix: `-DSPEC_CPU_LP64 -nofor_main`
459.GemsFDTD: `-DSPEC_CPU_LP64`
465.tonto: `-DSPEC_CPU_LP64`
470.lbm: `-DSPEC_CPU_LP64`
481.wrf: `-DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX`



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp_rate2006 = 210

BL265+ (Intel Xeon X5570, 2.93 GHz)

SPECfp_rate_base2006 = 205

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Jan-2011
Hardware Availability: May-2010
Software Availability: Nov-2010

Peak Optimization Flags

C benchmarks:

433.milc: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3
-ansi-alias -opt-prefetch -static -auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias
-auto-ilp32

447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

410.bwaves: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto
-inline-calloc -opt-malloc-options=3
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp_rate2006 = 210

BL265+ (Intel Xeon X5570, 2.93 GHz)

SPECfp_rate_base2006 = 205

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Jan-2011
Hardware Availability: May-2010
Software Availability: Nov-2010

Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
-static -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 16:36:03 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 March 2011.