



SPEC® CFP2006 Result

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Fujitsu

SPECfp®_rate2006 = 137

PRIMERGY BX620 S6, Intel Xeon X5675, 3.07 GHz

SPECfp_rate_base2006 = 134

CPU2006 license: 19

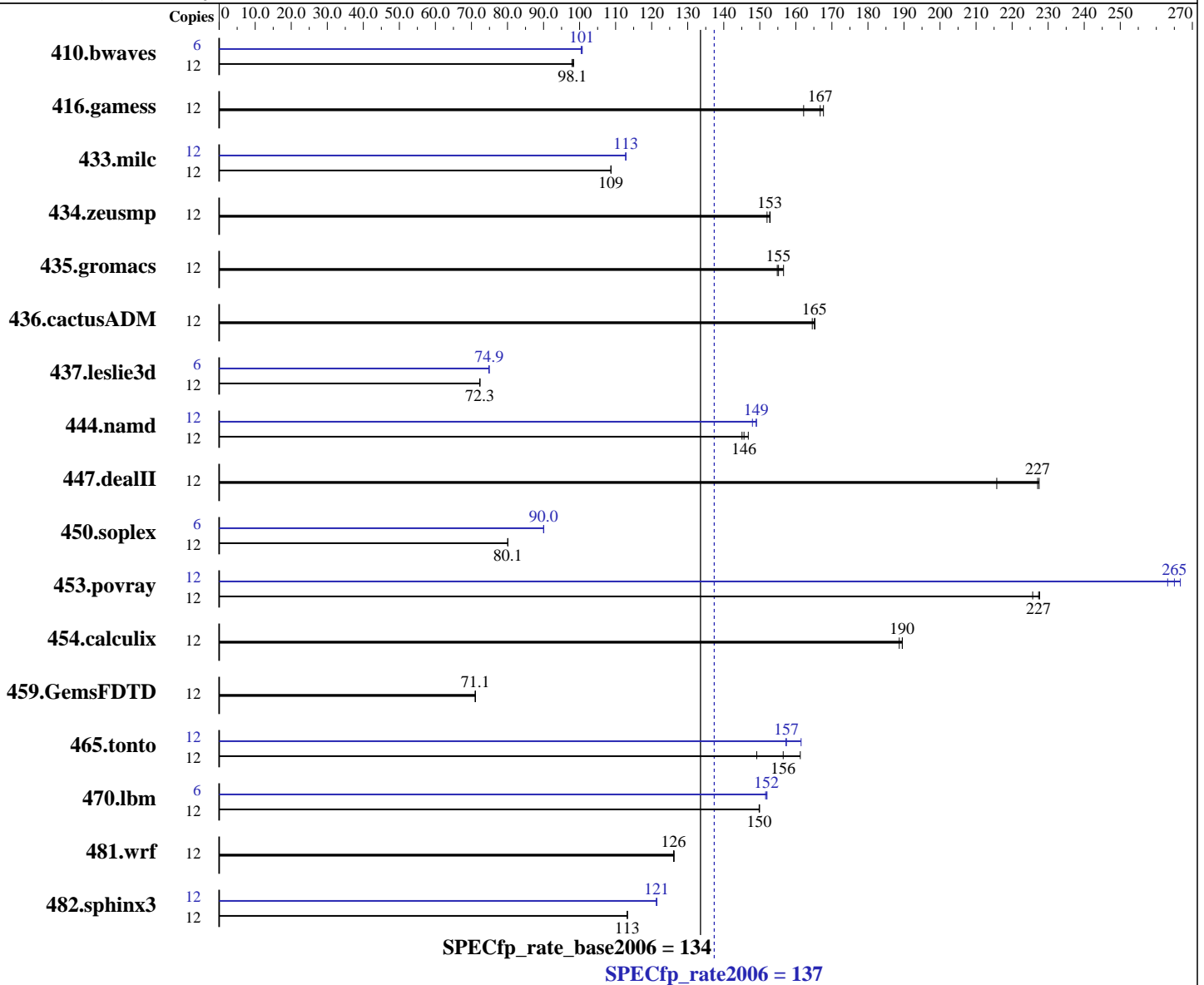
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011



Hardware

CPU Name: Intel Xeon X5675
 CPU Characteristics: Intel Turbo Boost Technology up to 3.47 GHz
 CPU MHz: 3067
 FPU: Integrated
 CPU(s) enabled: 6 cores, 1 chip, 6 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

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Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) with 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

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L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (6 x 8 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM
Other Hardware: --

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	12	1658	98.4	<u>1663</u>	<u>98.1</u>	1665	97.9	6	<u>811</u>	<u>101</u>	809	101	812	100
416.gamess	12	1449	162	<u>1409</u>	<u>167</u>	1401	168	12	1449	162	<u>1409</u>	<u>167</u>	1401	168
433.milc	12	1014	109	<u>1013</u>	<u>109</u>	1013	109	12	976	113	<u>976</u>	<u>113</u>	977	113
434.zeusmp	12	<u>715</u>	<u>153</u>	714	153	718	152	12	<u>715</u>	<u>153</u>	714	153	718	152
435.gromacs	12	547	157	553	155	<u>552</u>	<u>155</u>	12	547	157	553	155	<u>552</u>	<u>155</u>
436.cactusADM	12	867	165	<u>868</u>	<u>165</u>	871	165	12	867	165	<u>868</u>	<u>165</u>	871	165
437.leslie3d	12	1560	72.3	1558	72.4	<u>1560</u>	<u>72.3</u>	6	<u>753</u>	<u>74.9</u>	754	74.8	753	74.9
444.namd	12	656	147	663	145	<u>661</u>	<u>146</u>	12	650	148	<u>646</u>	<u>149</u>	646	149
447.dealII	12	603	227	<u>605</u>	<u>227</u>	636	216	12	603	227	<u>605</u>	<u>227</u>	636	216
450.soplex	12	1249	80.1	1250	80.1	<u>1250</u>	<u>80.1</u>	6	556	90.1	<u>556</u>	<u>90.0</u>	556	90.0
453.povray	12	280	228	283	226	<u>281</u>	<u>227</u>	12	239	267	243	263	<u>241</u>	<u>265</u>
454.calculix	12	<u>522</u>	<u>190</u>	522	190	525	189	12	<u>522</u>	<u>190</u>	522	190	525	189
459.GemsFDTD	12	<u>1791</u>	<u>71.1</u>	1791	71.1	1792	71.0	12	<u>1791</u>	<u>71.1</u>	1791	71.1	1792	71.0
465.tonto	12	792	149	732	161	<u>755</u>	<u>156</u>	12	731	161	<u>750</u>	<u>157</u>	751	157
470.lbm	12	1100	150	<u>1100</u>	<u>150</u>	1101	150	6	542	152	544	152	<u>543</u>	<u>152</u>
481.wrf	12	<u>1063</u>	<u>126</u>	1062	126	1063	126	12	<u>1063</u>	<u>126</u>	1062	126	1063	126
482.sphinx3	12	<u>2065</u>	<u>113</u>	2065	113	2066	113	12	1926	121	<u>1927</u>	<u>121</u>	1928	121

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 were not configured on the system

Platform Notes

BIOS configuration:
Data Reuse Optimization = Disable
Performance/Power Setting = Traditional



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General Notes

For information about Fujitsu please visit: <http://www.fujitsu.com>
Binaries were compiled on RHEL5.5 with binutils-2.17.50.0.6-14.el5

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

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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



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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: basepeak = yes

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: basepeak = yes

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

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

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Peak Optimization Flags (Continued)

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.20110222.00.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.20110222.00.xml>

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