



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]_rate2006 = 90.2

PRIMERGY BX922 S2, Intel Xeon E5630, 2.53 GHz

SPECfp_rate_base2006 = 86.9

CPU2006 license: 19

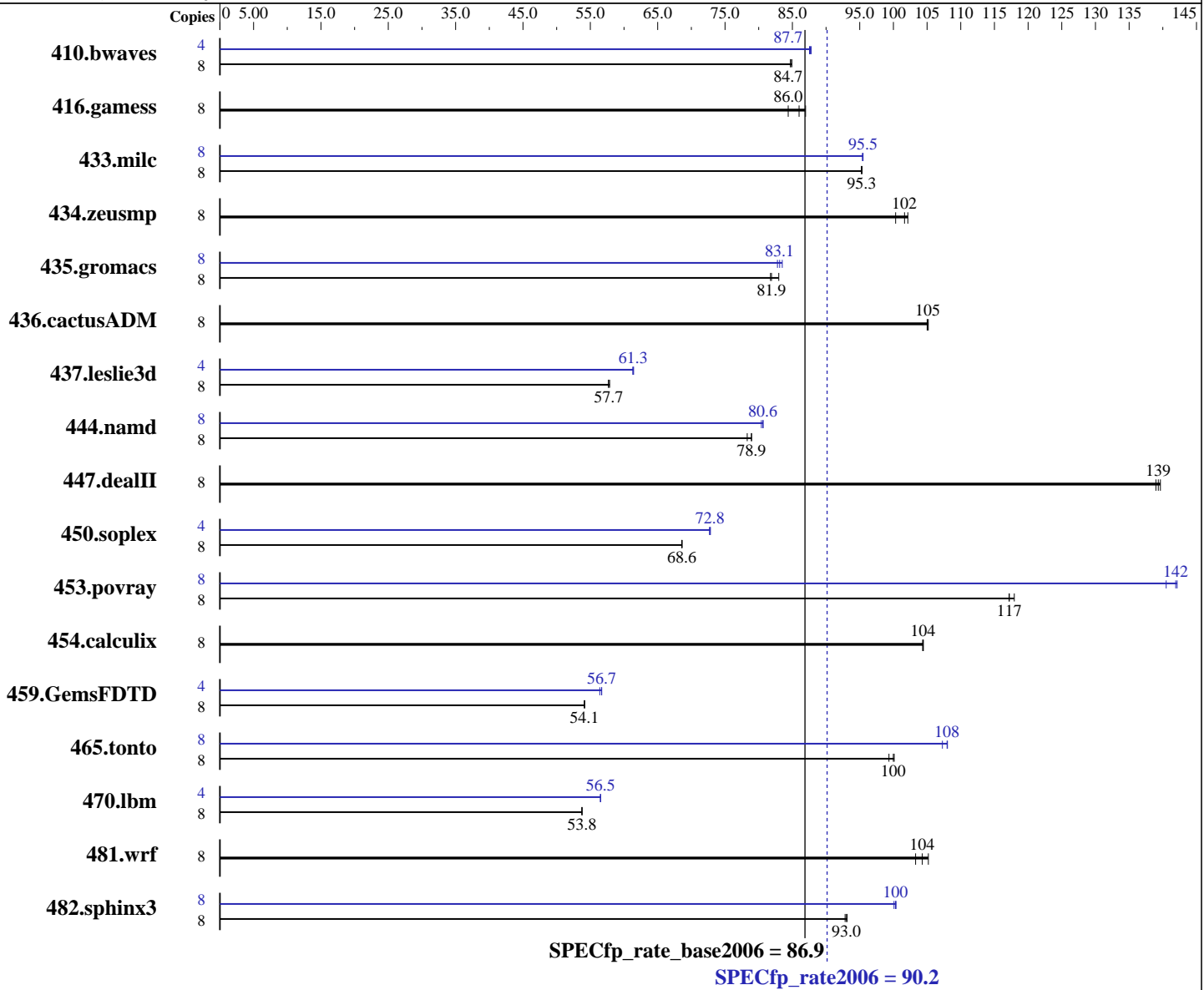
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jun-2010

Hardware Availability: Mar-2010

Software Availability: Jan-2010



Hardware

CPU Name: Intel Xeon E5630
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
 CPU MHz: 2533
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 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

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Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
 Compiler: Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l_cproc_p_11.1.064, l_cprof_p_11.1.064
 Auto Parallel: No
 File System: ext3
 System State: Multi-User Run Level 3

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L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 24 GB (6x4 GB PC3-10600R, 2 rank, CL9-9-9, ECC, see add'l detail in notes)
Disk Subsystem: 1 x SSD SATA, 64 GB
Other Hardware: None

Base Pointers: 64-bit
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	8	1280	84.9	<u>1283</u>	<u>84.7</u>	1283	84.7	4	621	87.5	619	87.8	<u>620</u>	<u>87.7</u>		
416.gamess	8	1856	84.4	1801	87.0	<u>1822</u>	<u>86.0</u>	8	1856	84.4	1801	87.0	<u>1822</u>	<u>86.0</u>		
433.milc	8	<u>771</u>	<u>95.3</u>	771	95.2	770	95.4	8	770	95.4	<u>769</u>	<u>95.5</u>	769	95.5		
434.zeusmp	8	726	100	<u>716</u>	<u>102</u>	713	102	8	726	100	<u>716</u>	<u>102</u>	713	102		
435.gromacs	8	688	83.0	<u>697</u>	<u>81.9</u>	699	81.7	8	<u>687</u>	<u>83.1</u>	690	82.8	684	83.5		
436.cactusADM	8	910	105	909	105	<u>910</u>	<u>105</u>	8	910	105	909	105	<u>910</u>	<u>105</u>		
437.leslie3d	8	<u>1303</u>	<u>57.7</u>	1300	57.9	1303	57.7	4	<u>613</u>	<u>61.3</u>	613	61.3	612	61.4		
444.namd	8	819	78.3	813	78.9	<u>813</u>	<u>78.9</u>	8	795	80.7	<u>796</u>	<u>80.6</u>	798	80.4		
447.dealII	8	659	139	655	140	<u>657</u>	<u>139</u>	8	659	139	655	140	<u>657</u>	<u>139</u>		
450.soplex	8	<u>973</u>	<u>68.6</u>	972	68.6	973	68.6	4	459	72.7	<u>459</u>	<u>72.8</u>	458	72.8		
453.povray	8	363	117	361	118	<u>363</u>	<u>117</u>	8	303	141	<u>300</u>	<u>142</u>	299	142		
454.calculix	8	633	104	<u>632</u>	<u>104</u>	632	104	8	633	104	<u>632</u>	<u>104</u>	632	104		
459.GemsFDTD	8	1568	54.1	1567	54.2	<u>1568</u>	<u>54.1</u>	4	752	56.4	749	56.7	<u>749</u>	<u>56.7</u>		
465.tonto	8	786	100	<u>787</u>	<u>100</u>	792	99.3	8	729	108	734	107	<u>729</u>	<u>108</u>		
470.lbm	8	<u>2045</u>	<u>53.8</u>	2045	53.8	2044	53.8	4	973	56.5	972	56.5	<u>973</u>	<u>56.5</u>		
481.wrf	8	850	105	<u>857</u>	<u>104</u>	865	103	8	850	105	<u>857</u>	<u>104</u>	865	103		
482.sphinx3	8	1674	93.1	<u>1676</u>	<u>93.0</u>	1680	92.8	8	1553	100	<u>1554</u>	<u>100</u>	1558	100		

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

Platform Notes

The system automatically configures the memory to run at 1067 MHz.
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 SLES 10 with Binutils 2.18.50.0.7.20080502

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

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

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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

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) -static(pass 2) -prof-use(pass 2)
-fno-alias -opt-prefetch
470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-opt-malloc-options=3 -ansi-alias -auto-ilp32
482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-fno-alias -auto-ilp32
447.dealIII: basepeak = yes
450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-opt-malloc-options=3
453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
416.gamess: basepeak = yes
434.zeusmp: basepeak = yes
437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static
459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -Ob0
465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll4 -auto -inline-calloc -opt-malloc-options=3

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) -static(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32

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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-ic11.1-linux64-revE.20100708.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100708.xml>

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Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 10:38:20 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 3 August 2010.