



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]_rate2006 = 114

PRIMERGY RX300 S6, Intel Xeon X5677, 3.46 GHz

SPECfp_rate_base2006 = 110

CPU2006 license: 19

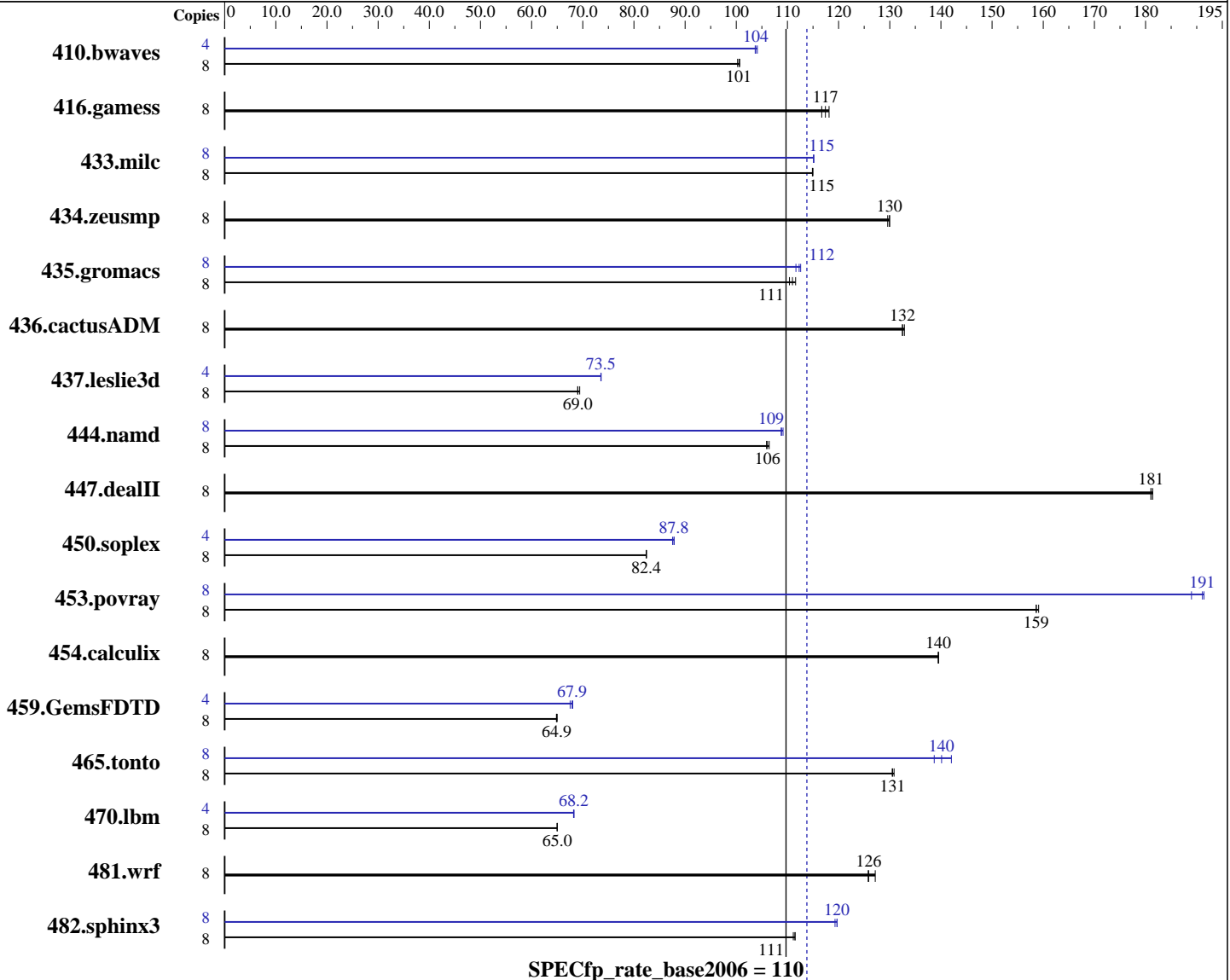
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-2010

Hardware Availability: Apr-2010

Software Availability: Jan-2010



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Hardware

CPU Name: Intel Xeon X5677
 CPU Characteristics: Intel Turbo Boost Technology up to 3.73 GHz
 CPU MHz: 3467
 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: 48 GB (6x8 GB PC3-10600R, 2 rank, CL9-9-9, ECC)
Disk Subsystem: 1 x SATA, 160 GB, 5.4 krpm
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	1080	101	<u>1082</u>	<u>101</u>	1084	100	4	524	104	522	104	<u>524</u>	<u>104</u>
416.gamess	8	<u>1334</u>	<u>117</u>	1342	117	1326	118	8	<u>1334</u>	<u>117</u>	1342	117	1326	118
433.milc	8	639	115	639	115	<u>639</u>	<u>115</u>	8	638	115	638	115	<u>638</u>	<u>115</u>
434.zeusmp	8	562	130	560	130	<u>560</u>	<u>130</u>	8	562	130	560	130	<u>560</u>	<u>130</u>
435.gromacs	8	512	112	<u>515</u>	<u>111</u>	517	110	8	<u>509</u>	<u>112</u>	512	112	507	113
436.cactusADM	8	722	132	720	133	<u>722</u>	<u>132</u>	8	722	132	720	133	<u>722</u>	<u>132</u>
437.leslie3d	8	1084	69.4	<u>1090</u>	<u>69.0</u>	1090	69.0	4	511	73.5	<u>511</u>	<u>73.5</u>	511	73.6
444.namd	8	603	106	<u>605</u>	<u>106</u>	606	106	8	<u>589</u>	<u>109</u>	588	109	590	109
447.dealII	8	505	181	505	181	<u>505</u>	<u>181</u>	8	505	181	505	181	<u>505</u>	<u>181</u>
450.soplex	8	<u>810</u>	<u>82.4</u>	809	82.5	810	82.4	4	<u>380</u>	<u>87.8</u>	380	87.9	381	87.5
453.povray	8	268	159	268	159	<u>268</u>	<u>159</u>	8	<u>223</u>	<u>191</u>	225	189	222	191
454.calculix	8	473	140	<u>473</u>	<u>140</u>	473	139	8	473	140	<u>473</u>	<u>140</u>	473	139
459.GemsFDTD	8	1306	65.0	1309	64.8	<u>1308</u>	<u>64.9</u>	4	624	68.0	628	67.5	<u>625</u>	<u>67.9</u>
465.tonto	8	603	130	<u>603</u>	<u>131</u>	602	131	8	554	142	568	139	<u>562</u>	<u>140</u>
470.lbm	8	1691	65.0	<u>1691</u>	<u>65.0</u>	1691	65.0	4	806	68.2	<u>805</u>	<u>68.2</u>	805	68.3
481.wrf	8	703	127	710	126	<u>710</u>	<u>126</u>	8	703	127	710	126	<u>710</u>	<u>126</u>
482.sphinx3	8	1398	111	<u>1399</u>	<u>111</u>	1403	111	8	<u>1303</u>	<u>120</u>	1303	120	1307	119

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

BIOS configuration:
Data Reuse Optimization = Disable



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General Notes

This result was measured on the PRIMERGY TX300 S6. The PRIMERGY TX300 S6 and the PRIMERGY RX300 S6 are electronically equivalent.

For information about Fujitsu please visit: <http://www.fujitsu.com>

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.20100330.02.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.20100330.02.xml>

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