SPEC® CFP2006 Result

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Fujitsu

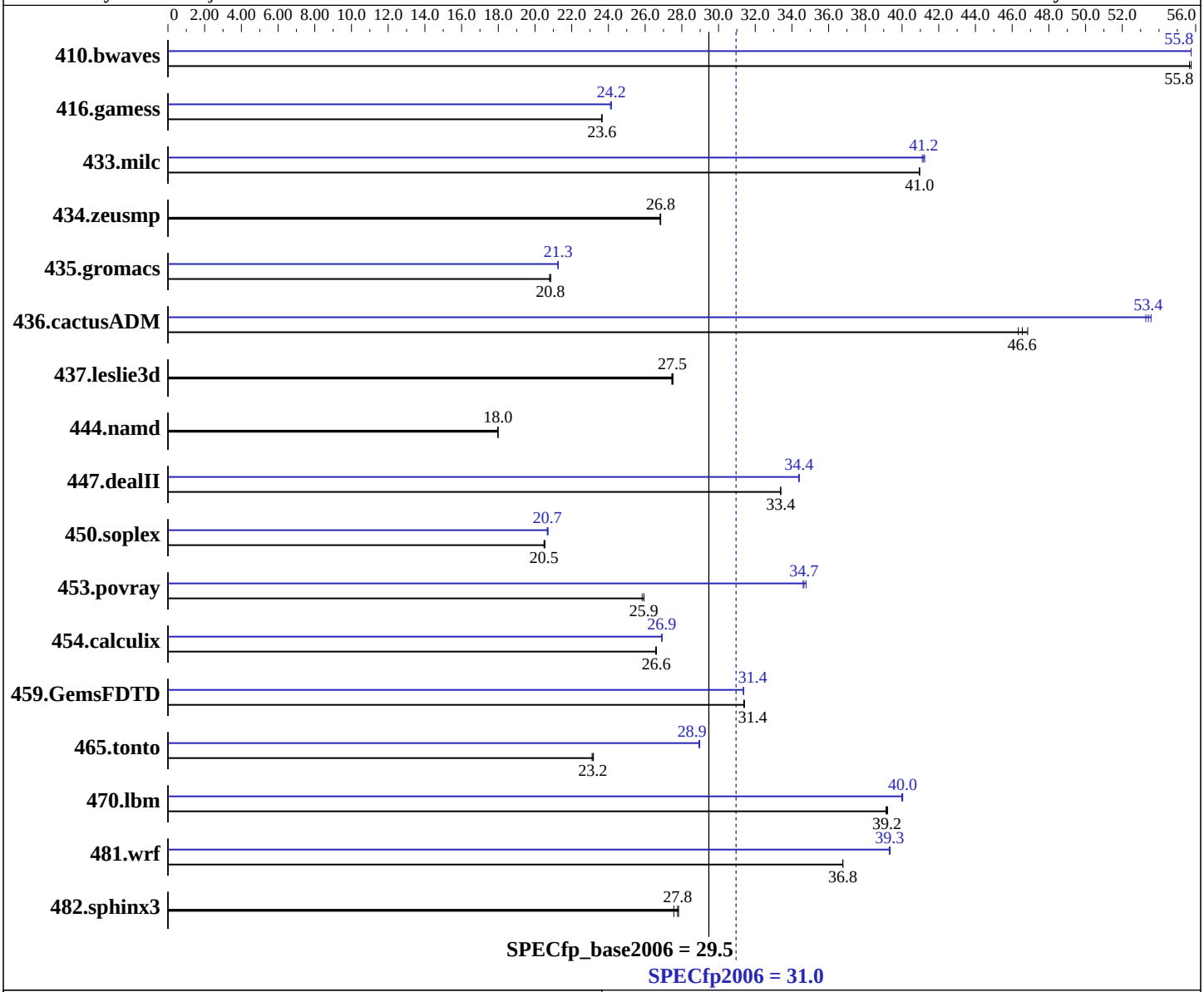
PRIMERGY TX100 S2, Intel Core i3-540, 3.06 GHz

SPECfp®2006 = 31.0

SPECfp_base2006 = 29.5

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Jul-2010
Hardware Availability: Jul-2010
Software Availability: Jan-2010



Hardware

CPU Name:	Intel Core i3-540
CPU Characteristics:	
CPU MHz:	3067
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
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 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:	Yes
File System:	ext3
System State:	Run level 3 (multi-user)

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L3 Cache: 4 MB I+D on chip per chip
Other Cache: None
Memory: 16 GB (4x4 GB PC3-10600E, 2 rank, CL9-9-9, ECC)
Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM
Other Hardware: None

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

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	244	55.7	244	55.8	**244**	**55.8**	244	55.8	**244**	**55.8**	244	55.8
416.gamess	828	23.7	829	23.6	**828**	**23.6**	**811**	**24.2**	810	24.2	812	24.1
433.milc	224	40.9	224	41.0	**224**	**41.0**	223	41.2	223	41.1	**223**	**41.2**
434.zeusmp	339	26.8	**339**	**26.8**	339	26.8	339	26.8	**339**	**26.8**	339	26.8
435.gromacs	342	20.9	**343**	**20.8**	343	20.8	336	21.2	**336**	**21.3**	336	21.3
436.cactusADM	**257**	**46.6**	258	46.3	255	46.8	**224**	**53.4**	224	53.3	223	53.6
437.leslie3d	342	27.5	**342**	**27.5**	342	27.5	342	27.5	**342**	**27.5**	342	27.5
444.namd	446	18.0	**446**	**18.0**	446	18.0	446	18.0	**446**	**18.0**	446	18.0
447.dealII	343	33.4	343	33.4	**343**	**33.4**	333	34.4	**333**	**34.4**	333	34.4
450.soplex	406	20.5	407	20.5	**407**	**20.5**	404	20.7	**403**	**20.7**	403	20.7
453.povray	205	25.9	206	25.8	**205**	**25.9**	154	34.6	**153**	**34.7**	153	34.8
454.calculix	310	26.6	**310**	**26.6**	310	26.6	306	26.9	307	26.9	**307**	**26.9**
459.GemsFDTD	338	31.4	**338**	**31.4**	338	31.4	338	31.4	**338**	**31.4**	338	31.3
465.tonto	424	23.2	**425**	**23.2**	426	23.1	340	29.0	**340**	**28.9**	340	28.9
470.lbm	**351**	**39.2**	351	39.1	350	39.2	344	40.0	343	40.0	**343**	**40.0**
481.wrf	304	36.8	304	36.8	**304**	**36.8**	284	39.3	**284**	**39.3**	284	39.4
482.sphinx3	700	27.8	**702**	**27.8**	707	27.6	700	27.8	**702**	**27.8**	707	27.6

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

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

Platform Notes

BIOS configuration:
Intel HT Technology = Disable

General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M
For information about Fujitsu please visit: http://www.fujitsu.com

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General Notes (Continued)

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 -parallel -opt-prefetch

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

Fortran benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
`-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch`

Peak Compiler Invocation

C benchmarks:
`icc -m64`

C++ benchmarks:
`icpc -m64`

Fortran benchmarks:
`ifort -m64`

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

Peak Portability Flags

`Same as Base Portability Flags`

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) `-ansi-alias`

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) `-parallel -ansi-alias -auto-ilp32`

482.sphinx3: `basepeak = yes`

C++ benchmarks:

444.namd: `basepeak = yes`

447.dealII: `-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 -ansi-alias -scalar-rep- -auto-ilp32`

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Peak Optimization Flags (Continued)

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 -auto-ilp32

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 -parallel

416.gamess: -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 -ansi-alias -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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 -opt-prefetch -parallel

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) -inline-calloc -opt-malloc-options=3 -auto -unroll4

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

436.cactusADM: -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 -opt-prefetch -parallel -auto-ilp32

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: Same as 454.calculix

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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