SPEC® CFP2006 Result

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Fujitsu Siemens Computers

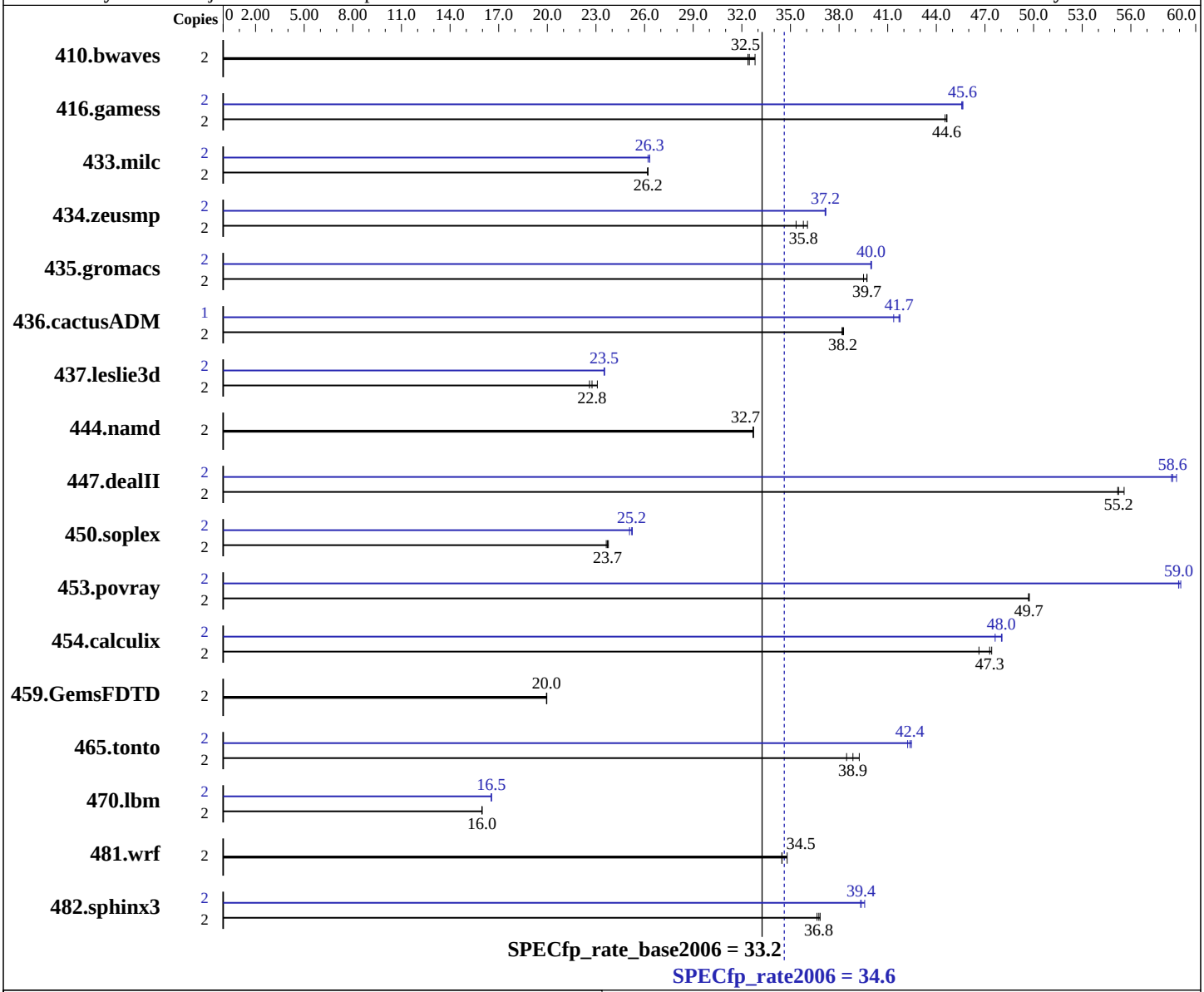
PRIMERGY TX150 S6, Intel Xeon L3110, 3.0 GHz

SPECfp®_rate2006 = 34.6

SPECfp_rate_base2006 = 33.2

CPU2006 license: 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

Test date: Jan-2009
Hardware Availability: Feb-2009
Software Availability: Nov-2008



Hardware

CPU Name:	Intel Xeon L3110
CPU Characteristics:	1333 MHz system bus
CPU MHz:	3000
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:	6 MB I+D on chip per chip

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Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
Compiler:	Intel C++ and Fortran Compiler 11.0 for Linux Build 20080730 Package ID: l_cproc_b_11.0.066, l_fproc_b_11.0.066
Auto Parallel:	Yes
File System:	ext3
System State:	Multi-User Run Level 3
Base Pointers:	64-bit

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L3 Cache: None
Other Cache: None
Memory: 8 GB (4x2 GB PC2-6400E, 2 rank, CL6-6-6, ECC)
Disk Subsystem: 1x SATA, 160 GB, 7200 rpm
Other Hardware: None

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	2	828	32.8	**837**	**32.5**	839	32.4	2	828	32.8	**837**	**32.5**	839	32.4
416.gamess	2	**877**	**44.6**	879	44.5	877	44.7	2	**858**	**45.6**	859	45.6	858	45.6
433.milc	2	701	26.2	700	26.2	**700**	**26.2**	2	700	26.2	**698**	**26.3**	698	26.3
434.zeusmp	2	**508**	**35.8**	515	35.3	505	36.1	2	489	37.2	**490**	**37.2**	490	37.1
435.gromacs	2	**360**	**39.7**	359	39.7	361	39.5	2	357	40.0	357	40.0	**357**	**40.0**
436.cactusADM	2	**625**	**38.2**	626	38.2	624	38.3	1	289	41.4	286	41.8	**287**	**41.7**
437.leslie3d	2	**826**	**22.8**	814	23.1	832	22.6	2	800	23.5	**800**	**23.5**	799	23.5
444.namd	2	**491**	**32.7**	491	32.7	490	32.7	2	**491**	**32.7**	491	32.7	490	32.7
447.dealII	2	415	55.2	**414**	**55.2**	412	55.6	2	**391**	**58.6**	389	58.8	391	58.5
450.soplex	2	706	23.6	**704**	**23.7**	702	23.8	2	661	25.2	**662**	**25.2**	665	25.1
453.povray	2	214	49.7	**214**	**49.7**	214	49.7	2	180	59.1	181	58.9	**180**	**59.0**
454.calculix	2	348	47.4	354	46.6	**349**	**47.3**	2	**344**	**48.0**	343	48.1	346	47.6
459.GemsFDTD	2	1064	19.9	1063	20.0	**1063**	**20.0**	2	1064	19.9	1063	20.0	**1063**	**20.0**
465.tonto	2	501	39.2	512	38.5	**507**	**38.9**	2	463	42.5	466	42.2	**464**	**42.4**
470.lbm	2	1720	16.0	1722	16.0	**1721**	**16.0**	2	1661	16.5	**1661**	**16.5**	1660	16.6
481.wrf	2	648	34.5	**648**	**34.5**	642	34.8	2	648	34.5	**648**	**34.5**	642	34.8
482.sphinx3	2	1064	36.6	1058	36.8	**1061**	**36.8**	2	985	39.6	991	39.3	**990**	**39.4**

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.
 taskset has been used to bind processes to cores except
 for 436.cactusADM peak
```

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M
```

Platform Notes

```
BIOS configuration:
Adjacent Sector Prefetch = Disable
```

General Notes

```
For information about Fujitsu Siemens Computers please see:
http://www.fujitsu-siemens.com
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

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:
`-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`

C++ benchmarks:
`-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`

Fortran benchmarks:
`-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`

Benchmarks using both Fortran and C:
`-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc`

482.sphinx3: `icc -m32`

C++ benchmarks (except as noted below):
`icpc`

450.soplex: `icpc -m32`

Fortran benchmarks (except as noted below):
`ifort`

437.leslie3d: `ifort -m32`

Benchmarks using both Fortran and C:
`icc ifort`

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`
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`

Continued on next page

Peak Portability Flags (Continued)

465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

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

470.lbm: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch -auto-ilp32

482.sphinx3: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -Ob0 -ansi-alias -scalar-rep-

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

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-malloc-options=3 -opt-prefetch

459.GemsFDTD: basepeak = yes

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll4 -auto

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Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

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

436.cactusADM: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -opt-prefetch -parallel -auto-ilp32`

454.calculix: `-xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32`

481.wrf: `basepeak = yes`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.05.html
http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090710.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.05.xml
http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090710.xml

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