SPEC® CFP2006 Result

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Fujitsu Siemens Computers

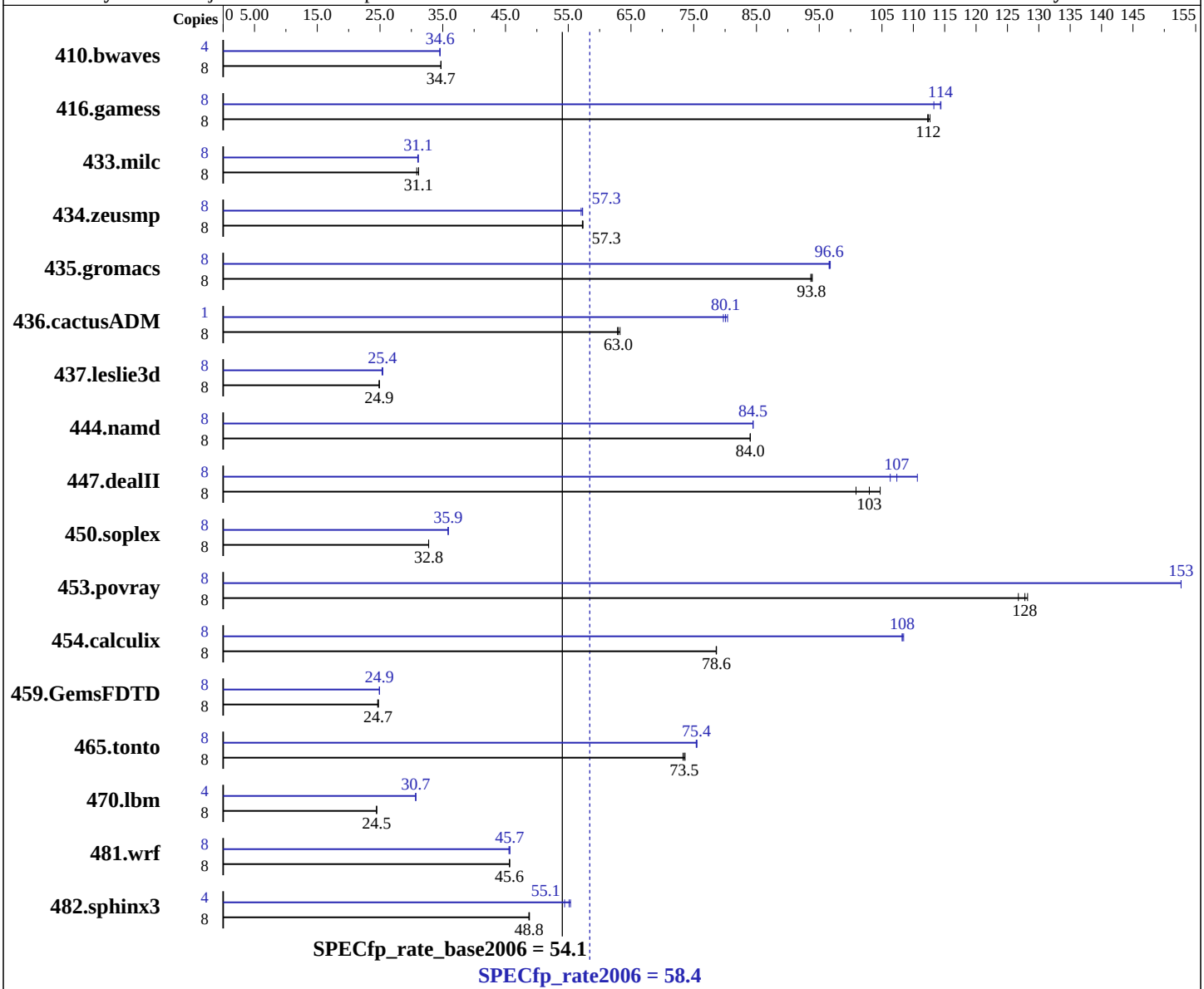
PRIMERGY TX300 S4, Intel Xeon L5335, 2.0 GHz

SPECfp®_rate2006 = 58.4

SPECfp_rate_base2006 = 54.1

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

Test date: Feb-2008
Hardware Availability: Sep-2007
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon L5335
CPU Characteristics:	1333 MHz system bus
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 4 MB shared / 2 cores

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Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler:	Intel C++ and Fortran Compiler for Linux32 and Linux64 Version 10.1 - Build 20070725
Auto Parallel:	Yes
File System:	ext2
System State:	Multiuser, Runlevel 3
Base Pointers:	64-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB PC2-5300F, 2 rank, CAS 5-5-5, with ECC)
Disk Subsystem: Seagate ST973451SS (SAS, 73GB, 15000rpm)
Other Hardware: None

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	3132	34.7	**3132**	**34.7**	3131	34.7	4	1572	34.6	1574	34.5	**1573**	**34.6**
416.gamess	8	1390	113	1395	112	**1394**	**112**	8	1369	114	**1370**	**114**	1383	113
433.milc	8	2380	30.9	**2359**	**31.1**	2357	31.2	8	**2362**	**31.1**	2368	31.0	2361	31.1
434.zeusmp	8	1272	57.2	**1271**	**57.3**	1269	57.4	8	1276	57.1	1271	57.3	**1272**	**57.3**
435.gromacs	8	608	93.9	**609**	**93.8**	610	93.7	8	590	96.8	591	96.6	**591**	**96.6**
436.cactusADM	8	1521	62.9	**1518**	**63.0**	1511	63.3	1	149	80.4	**149**	**80.1**	150	79.7
437.leslie3d	8	3025	24.9	3018	24.9	**3023**	**24.9**	8	2969	25.3	**2962**	**25.4**	2956	25.4
444.namd	8	**764**	**84.0**	764	84.0	764	84.0	8	**760**	**84.5**	760	84.5	760	84.4
447.dealII	8	874	105	907	101	**889**	**103**	8	827	111	861	106	**852**	**107**
450.soplex	8	**2037**	**32.8**	2037	32.8	2038	32.7	8	**1860**	**35.9**	1859	35.9	1861	35.8
453.povray	8	332	128	**333**	**128**	336	127	8	279	153	**279**	**153**	279	153
454.calculix	8	839	78.6	**840**	**78.6**	840	78.6	8	609	108	610	108	**610**	**108**
459.GemsFDTD	8	3428	24.8	3447	24.6	**3437**	**24.7**	8	3409	24.9	3406	24.9	**3407**	**24.9**
465.tonto	8	**1071**	**73.5**	1074	73.3	1069	73.6	8	1044	75.4	**1044**	**75.4**	1042	75.5
470.lbm	8	**4495**	**24.5**	4495	24.5	4494	24.5	4	1790	30.7	**1791**	**30.7**	1791	30.7
481.wrf	8	**1958**	**45.6**	1959	45.6	1957	45.7	8	1962	45.6	**1956**	**45.7**	1956	45.7
482.sphinx3	8	3199	48.7	**3198**	**48.8**	3194	48.8	4	1408	55.4	**1414**	**55.1**	1433	54.4

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
'OMP_NUM_THREADS' set to number of cores (default)

General Notes

This result has been produced with binaries provided and compiled by Intel.

All binaries were built with 64-bit Intel compiler except:
437.leslie3d, 450.soplex, 470.lbm and 482.sphinx3 in peak were built with
32-bit Intel compiler by changing the path for include and library files.

BIOS configuration:

Continued on next page

General Notes (Continued)

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Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

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

C++ benchmarks:
-fast

Continued on next page

Base Optimization Flags (Continued)

Fortran benchmarks:
-fast

Benchmarks using both Fortran and C:
-fast

Peak Compiler Invocation

C benchmarks (except as noted below):
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include

433.milc: icc

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

450.soplex: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include

Fortran benchmarks (except as noted below):
ifort

437.leslie3d: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include

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

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Peak Portability Flags (Continued)

465.tonto: -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) -fast -fno-alias -auto-ilp32

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -scalar-rep- -prefetch -opt-malloc-options=3

482.sphinx3: -fast -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias -auto-ilp32

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast -opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -opt-malloc-options=3

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

Continued on next page

Peak Optimization Flags (Continued)

435.gromacs: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch -auto-ilp32`

436.cactusADM: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -prefetch -parallel -auto-ilp32`

454.calculix: `-fast -unroll-aggressive -auto-ilp32`

481.wrf: `-fast -auto-ilp32`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090713.02.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090713.02.xml`

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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