SPEC® CFP2006 Result

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Fujitsu Siemens Computers

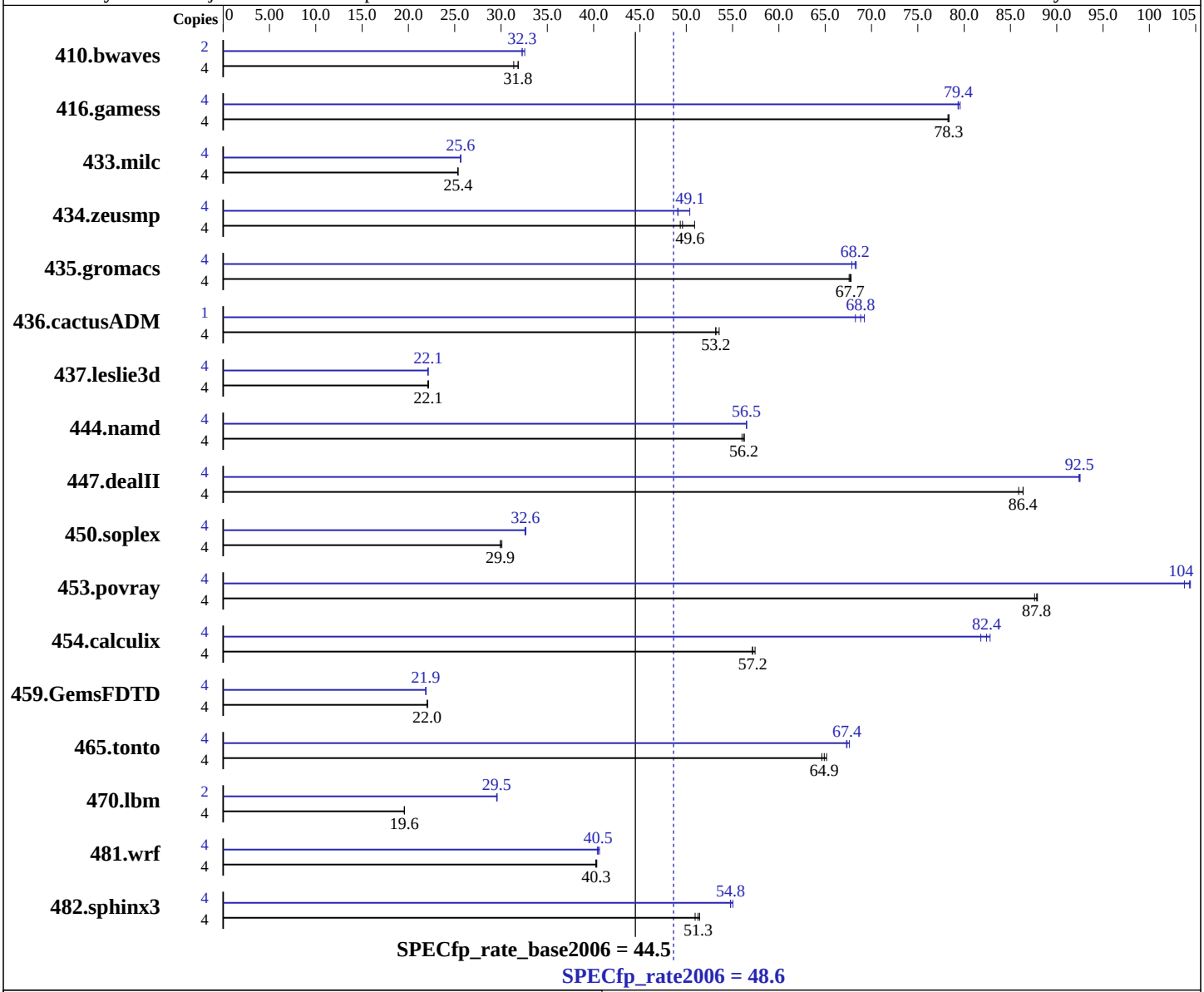
PRIMERGY TX150 S6, Intel Xeon X3350, 2.66 GHz

SPECfp®_rate2006 = 48.6

SPECfp_rate_base2006 = 44.5

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

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



Hardware

CPU Name:	Intel Xeon X3350
CPU Characteristics:	1333 MHz system bus
CPU MHz:	2667
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 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: 4 GB (4x1 GB PC2-6400E, 2 rank, CAS 6-6-6, with ECC)
Disk Subsystem: Fujitsu MAY2036RC (SAS, 36GB, 10000rpm)
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	4	1733	31.4	1706	31.9	**1707**	**31.8**	2	835	32.6	**842**	**32.3**	842	32.3
416.gamess	4	**1000**	**78.3**	1001	78.3	999	78.4	4	984	79.6	**987**	**79.4**	987	79.3
433.milc	4	**1448**	**25.4**	1448	25.4	1449	25.3	4	1431	25.7	1433	25.6	**1432**	**25.6**
434.zeusmp	4	**734**	**49.6**	715	50.9	738	49.4	4	**741**	**49.1**	741	49.1	722	50.4
435.gromacs	4	421	67.8	**422**	**67.7**	423	67.6	4	418	68.4	421	67.9	**419**	**68.2**
436.cactusADM	4	893	53.6	899	53.2	**898**	**53.2**	1	**174**	**68.8**	173	69.2	175	68.3
437.leslie3d	4	1702	22.1	**1699**	**22.1**	1696	22.2	4	1698	22.1	**1699**	**22.1**	1702	22.1
444.namd	4	570	56.3	**571**	**56.2**	573	56.0	4	568	56.5	568	56.5	**568**	**56.5**
447.dealII	4	533	85.9	**530**	**86.4**	530	86.4	4	495	92.5	495	92.4	**495**	**92.5**
450.soplex	4	1109	30.1	1115	29.9	**1115**	**29.9**	4	1024	32.6	1021	32.7	**1022**	**32.6**
453.povray	4	**242**	**87.8**	242	87.9	243	87.6	4	**204**	**104**	204	104	205	104
454.calculix	4	575	57.4	**577**	**57.2**	578	57.1	4	**400**	**82.4**	399	82.8	403	81.8
459.GemsFDTD	4	**1927**	**22.0**	1928	22.0	1923	22.1	4	1939	21.9	1940	21.9	**1940**	**21.9**
465.tonto	4	609	64.6	**606**	**64.9**	604	65.2	4	585	67.3	582	67.6	**584**	**67.4**
470.lbm	4	2808	19.6	**2809**	**19.6**	2809	19.6	2	929	29.6	931	29.5	**930**	**29.5**
481.wrf	4	1107	40.3	1110	40.2	**1109**	**40.3**	4	1100	40.6	**1103**	**40.5**	1106	40.4
482.sphinx3	4	1515	51.4	1530	51.0	**1521**	**51.3**	4	**1423**	**54.8**	1417	55.0	1423	54.8

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:
```

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General Notes (Continued)

```
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

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:
-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.20090714.01.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.20090714.01.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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