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

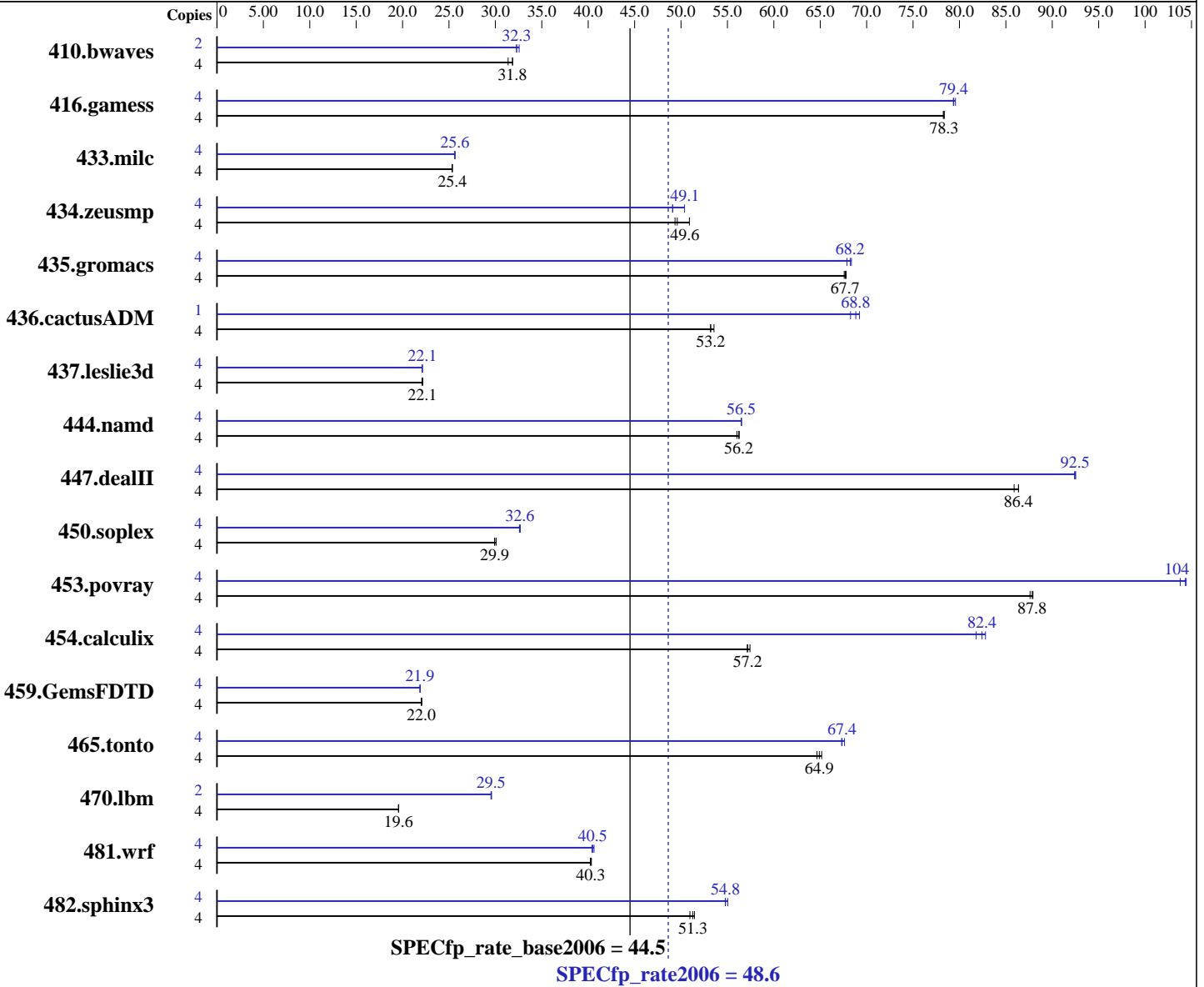**CPU2006 license:** 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

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

	Copies	value
410.bwaves	2	32.3
	4	31.8
416.gamess	4	79.4
	4	78.3
433.milc	4	25.6
	4	25.4
434.zeusmp	4	49.1
	4	49.6
435.gromacs	4	68.2
	4	67.7
436.cactusADM	1	68.8
	4	53.2
437.leslie3d	4	22.1
	4	22.1
444.namd	4	56.5
	4	56.2
447.dealII	4	92.5
	4	86.4
450.soplex	4	32.6
	4	29.9
453.povray	4	104
	4	87.8
454.calculix	4	82.4
	4	57.2
459.GemsFDTD	4	21.9
	4	22.0
465.tonto	4	67.4
	4	64.9
470.lbm	2	29.5
	4	19.6
481.wrf	4	40.5
	4	40.3
482.sphinx3	4	54.8
	4	51.3

SPECfp_rate_base2006 = 44.5

SPECfp_rate2006 = 48.6

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

Continued on next page

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 Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak 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
```

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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

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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`

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

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