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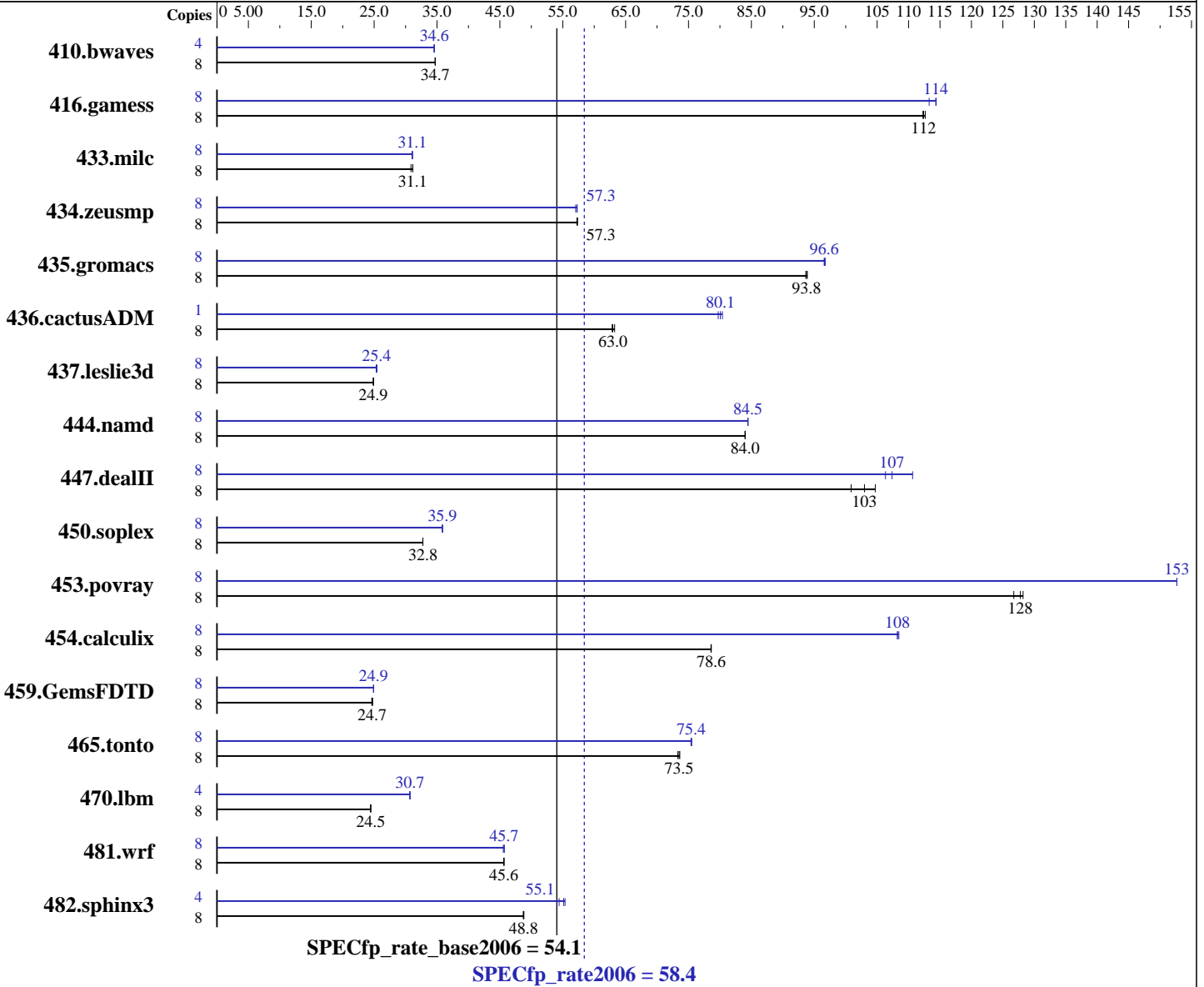
CPU2006 license: 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

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

Benchmark	Copies	Result
410.bwaves	4	34.6
	8	34.7
416.gamess	8	114
	8	112
433.milc	8	31.1
	8	31.1
434.zeusmp	8	57.3
	8	57.3
435.gromacs	8	96.6
	8	93.8
436.cactusADM	1	80.1
	8	63.0
437.leslie3d	8	25.4
	8	24.9
444.namd	8	84.5
	8	84.0
447.dealII	8	107
	8	103
450.soplex	8	35.9
	8	32.8
453.povray	8	153
	8	128
454.calculix	8	108
	8	78.6
459.GemsFDTD	8	24.9
	8	24.7
465.tonto	8	75.4
	8	73.5
470.lbm	4	30.7
	8	24.5
481.wrf	8	45.7
	8	45.6
482.sphinx3	4	55.1
	8	48.8

SPECfp_rate_base2006 = 54.1

SPECfp_rate2006 = 58.4

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

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

Continued on next page

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L3 Cache:	None	Peak Pointers:	32/64-bit
Other Cache:	None	Other Software:	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		

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:

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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:

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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.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

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

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