



SPEC® CFP2006 Result

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Fujitsu Siemens Computers

SPECfp®_rate2006 = 24.8

PRIMERGY RX100 S5, Intel Core 2 Duo E4600,
2.40 GHz

SPECfp_rate_base2006 = 23.5

CPU2006 license: 22

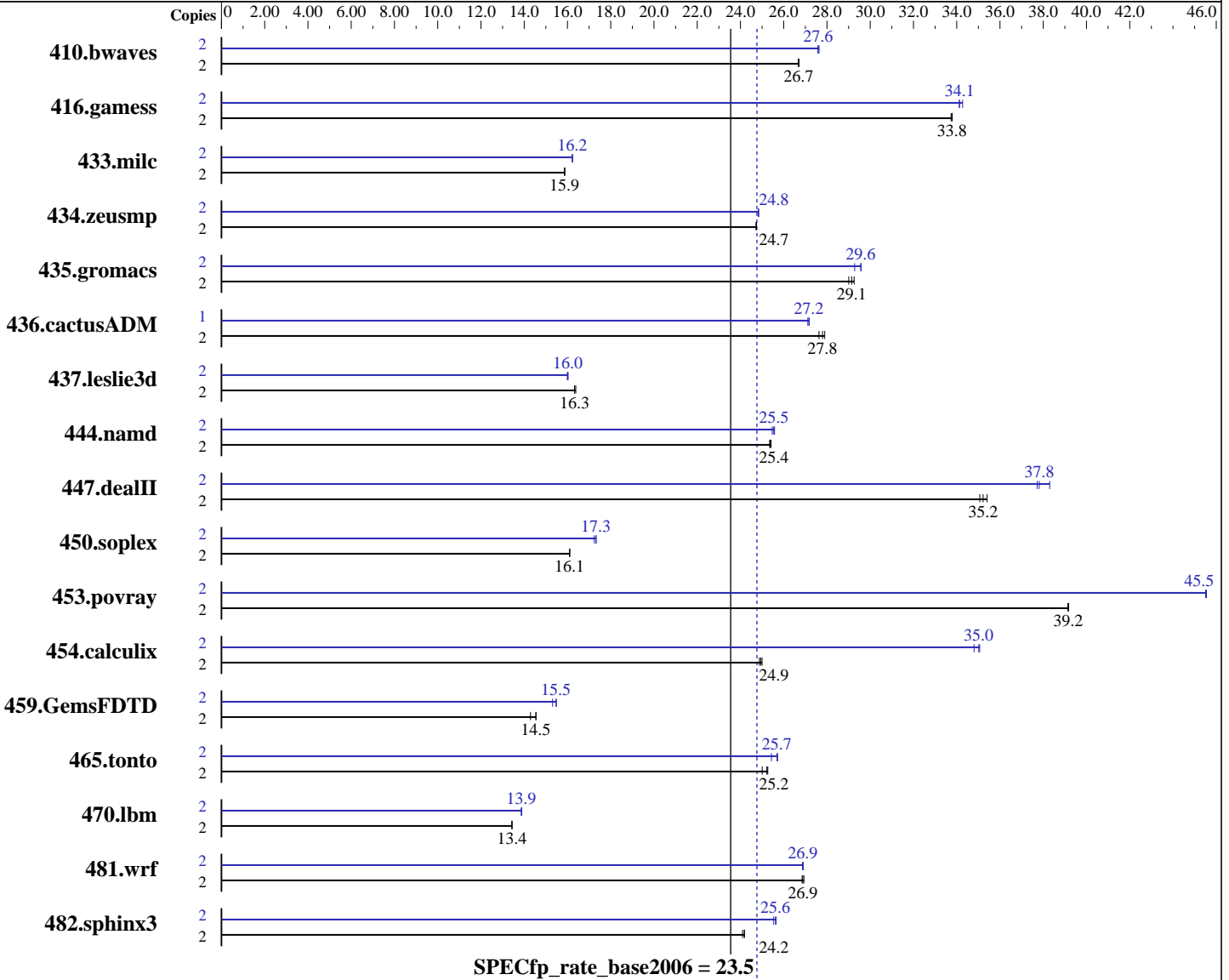
Test date: Mar-2008

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Apr-2008

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2007



Hardware

CPU Name: Intel Core 2 Duo E4600
 CPU Characteristics: 800 MHz system bus
 CPU MHz: 2400
 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: 2 MB I+D on chip per chip

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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: 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, CL 6-6-6, ECC)
Disk Subsystem: 1x SATA, 500 GB, 7200 rpm
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: binutils-2.17.50.0.5-0.1.x86_64

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	1019	26.7	1018	26.7	<u>1019</u>	<u>26.7</u>	2	984	27.6	<u>985</u>	<u>27.6</u>	985	27.6
416.gamess	2	1159	33.8	1161	33.7	<u>1159</u>	<u>33.8</u>	2	1148	34.1	1143	34.3	<u>1147</u>	<u>34.1</u>
433.milc	2	1156	15.9	<u>1157</u>	<u>15.9</u>	1158	15.9	2	1131	16.2	<u>1131</u>	<u>16.2</u>	1132	16.2
434.zeusmp	2	736	24.7	<u>736</u>	<u>24.7</u>	736	24.7	2	733	24.8	<u>733</u>	<u>24.8</u>	733	24.8
435.gromacs	2	488	29.3	<u>490</u>	<u>29.1</u>	492	29.0	2	<u>483</u>	<u>29.6</u>	483	29.6	488	29.3
436.cactusADM	2	<u>860</u>	<u>27.8</u>	865	27.6	857	27.9	1	440	27.2	441	27.1	<u>440</u>	<u>27.2</u>
437.leslie3d	2	1147	16.4	<u>1151</u>	<u>16.3</u>	1151	16.3	2	1173	16.0	1176	16.0	<u>1174</u>	<u>16.0</u>
444.namd	2	<u>632</u>	<u>25.4</u>	633	25.4	631	25.4	2	<u>628</u>	<u>25.5</u>	630	25.5	627	25.6
447.dealII	2	646	35.4	652	35.1	<u>650</u>	<u>35.2</u>	2	607	37.7	<u>605</u>	<u>37.8</u>	597	38.3
450.soplex	2	<u>1036</u>	<u>16.1</u>	1035	16.1	1037	16.1	2	968	17.2	<u>963</u>	<u>17.3</u>	963	17.3
453.povray	2	272	39.1	<u>272</u>	<u>39.2</u>	272	39.2	2	234	45.5	234	45.5	<u>234</u>	<u>45.5</u>
454.calculix	2	660	25.0	663	24.9	<u>662</u>	<u>24.9</u>	2	471	35.1	<u>471</u>	<u>35.0</u>	474	34.8
459.GemsFDTD	2	1485	14.3	1459	14.5	<u>1459</u>	<u>14.5</u>	2	1370	15.5	<u>1371</u>	<u>15.5</u>	1386	15.3
465.tonto	2	<u>780</u>	<u>25.2</u>	779	25.3	787	25.0	2	765	25.7	774	25.4	<u>766</u>	<u>25.7</u>
470.lbm	2	2045	13.4	2046	13.4	<u>2046</u>	<u>13.4</u>	2	1981	13.9	<u>1981</u>	<u>13.9</u>	1981	13.9
481.wrf	2	<u>831</u>	<u>26.9</u>	832	26.8	829	26.9	2	<u>831</u>	<u>26.9</u>	831	26.9	830	26.9
482.sphinx3	2	1618	24.1	1612	24.2	<u>1612</u>	<u>24.2</u>	2	1527	25.5	<u>1521</u>	<u>25.6</u>	1520	25.6

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)

Platform Notes

BIOS configuration:
Hardware Prefetch = Enable, Adjacent Sector Prefetch = Disable

General Notes

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

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General Notes (Continued)

the path for include and library files.

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.deallI: -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

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Base Optimization Flags (Continued)

C++ benchmarks:

-fast

Fortran benchmarks:

-fast

Benchmarks using both Fortran and C:

-fast

Peak Compiler Invocation

C benchmarks (except as noted below):

/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include

433.milc: icc

C++ benchmarks (except as noted below):

icpc

450.soplex: /opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: /opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib
-I/opt/intel/fc/10.1.008/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/flags-ic101-linux-intel64.20090713.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20090713.xml>

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