



SPEC[®] CFP2006 Result

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Fujitsu Siemens Computers

PRIMERGY RX100 S4, Intel Pentium D processor 945,
3.40 GHz

SPECfp[®]_rate2006 = 20.4

SPECfp_rate_base2006 = 19.8

CPU2006 license: 22

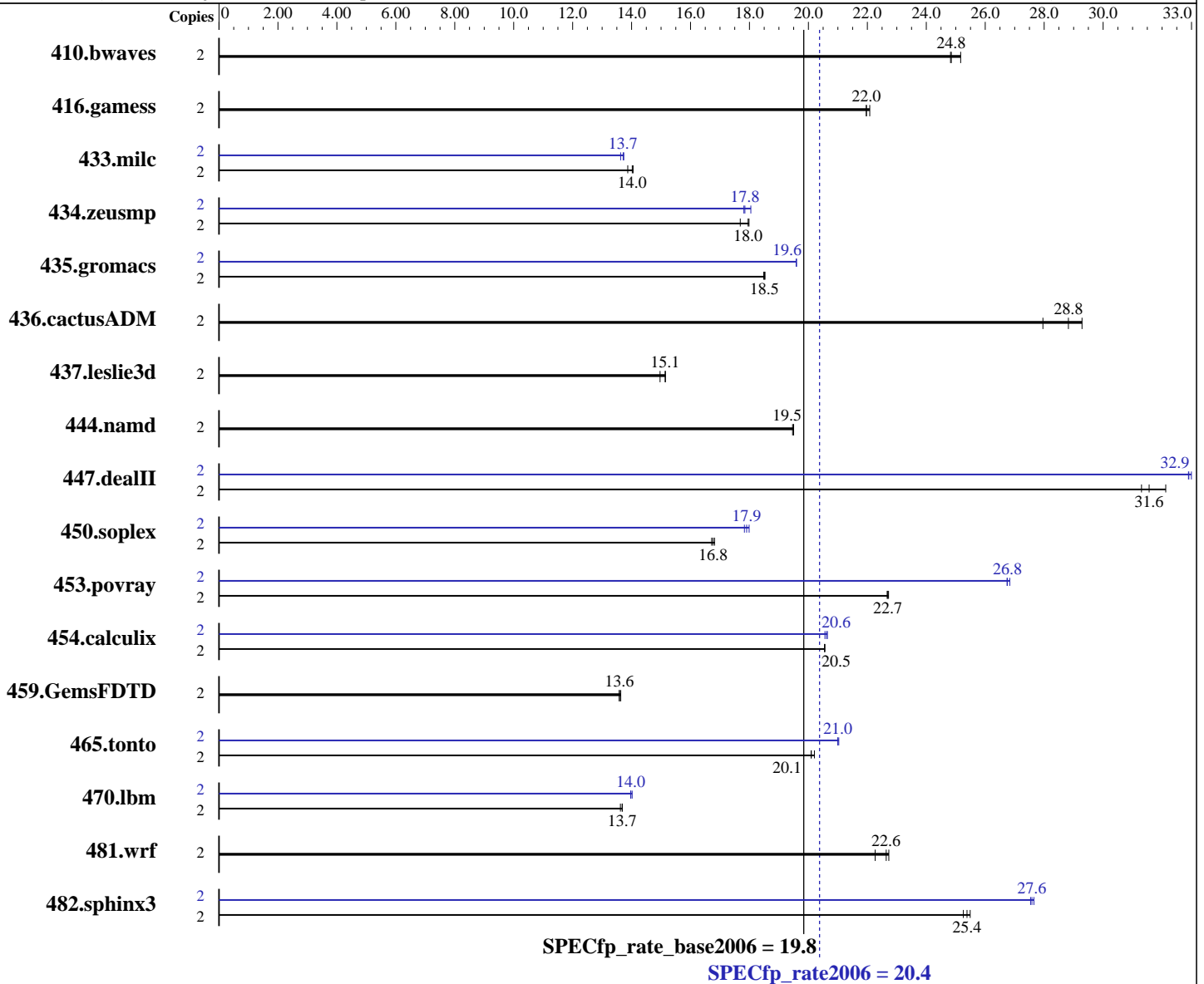
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Jun-2007

Hardware Availability: Sep-2006

Software Availability: Mar-2007



Hardware

CPU Name: Intel Pentium D 945
 CPU Characteristics: 800 MHz system bus
 CPU MHz: 3400
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 12 K micro-ops I + 16 KB D on chip per core
 Secondary Cache: 2 MB I+D on chip per core

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Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86_64
 Compiler: Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package-ID: l_cc_p_9.1.047
 Intel Fortran Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package ID: l_fc_p_9.1.043
 Auto Parallel: No
 File System: ReiserFS

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L3 Cache: None
Other Cache: None
Memory: 8 GB (4x2 GB DDR2 PC2-4200E, 2 rank, CAS 4-4-4, with ECC)
Disk Subsystem: Seagate ST373454SS (SAS, 73GB, 15000rpm)
Other Hardware: None

System State: Multiuser, Runlevel 3
Base Pointers: 64-bit
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	2	1080	25.2	1094	24.8	1095	24.8	2	1080	25.2	1094	24.8	1095	24.8		
416.gamess	2	1783	22.0	1773	22.1	1782	22.0	2	1783	22.0	1773	22.1	1782	22.0		
433.milc	2	1324	13.9	1307	14.1	1309	14.0	2	1347	13.6	1339	13.7	1337	13.7		
434.zeusmp	2	1029	17.7	1012	18.0	1014	18.0	2	1020	17.8	1009	18.0	1022	17.8		
435.gromacs	2	771	18.5	772	18.5	773	18.5	2	729	19.6	729	19.6	729	19.6		
436.cactusADM	2	855	28.0	816	29.3	829	28.8	2	855	28.0	816	29.3	829	28.8		
437.leslie3d	2	1256	15.0	1242	15.1	1241	15.1	2	1256	15.0	1242	15.1	1241	15.1		
444.namd	2	823	19.5	824	19.5	823	19.5	2	823	19.5	824	19.5	823	19.5		
447.dealII	2	712	32.1	731	31.3	725	31.6	2	695	32.9	693	33.0	696	32.9		
450.soplex	2	998	16.7	995	16.8	992	16.8	2	927	18.0	932	17.9	936	17.8		
453.povray	2	469	22.7	468	22.7	469	22.7	2	398	26.8	397	26.8	398	26.7		
454.calculix	2	803	20.6	803	20.5	803	20.5	2	799	20.6	803	20.6	800	20.6		
459.GemsFDTD	2	1557	13.6	1562	13.6	1562	13.6	2	1557	13.6	1562	13.6	1562	13.6		
465.tonto	2	980	20.1	979	20.1	974	20.2	2	936	21.0	937	21.0	937	21.0		
470.lbm	2	2008	13.7	2017	13.6	2008	13.7	2	1960	14.0	1967	14.0	1966	14.0		
481.wrf	2	983	22.7	987	22.6	1003	22.3	2	983	22.7	987	22.6	1003	22.3		
482.sphinx3	2	1529	25.5	1543	25.3	1536	25.4	2	1415	27.5	1410	27.7	1413	27.6		

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
'/usr/bin/taskset' used to bind processes to CPUs

General Notes

The system bus runs at 800 MHz

All binaries were built with 64-bit Intel compiler except:
433.milc, 434.zeusmp, 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.

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General Notes (Continued)

<http://www.fujitsu-siemens.com/countries>

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

Fortran benchmarks:

-fast

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

-fast

Peak Compiler Invocation

C benchmarks:

```
/opt/intel/cc/9.1.047/bin/icc -I/opt/intel/cc/9.1.047/include  
-L/opt/intel/cc/9.1.047/lib
```

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /opt/intel/cc/9.1.047/bin/icpc  
-I/opt/intel/cc/9.1.047/include -L/opt/intel/cc/9.1.047/lib
```

Fortran benchmarks (except as noted below):

ifort

```
434.zeusmp: /opt/intel/fc/9.1.043/bin/ifort  
-I/opt/intel/fc/9.1.043/include -L/opt/intel/fc/9.1.043/lib
```

Benchmarks using both Fortran and C:

icc ifort

Peak Portability Flags

```
410.bwaves: -DSPEC_CPU_LP64  
416.gamess: -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  
453.povray: -DSPEC_CPU_LP64  
454.calculix: -DSPEC_CPU_LP64 -nofor_main  
459.GemsFDTD: -DSPEC_CPU_LP64  
465.tonto: -DSPEC_CPU_LP64  
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

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Peak Optimization Flags (Continued)

433.milc: -prof_gen(pass 1) -prof_use(pass 2) -fast

470.lbm: Same as 433.milc

482.sphinx3: -fast

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -prof_gen(pass 1) -prof_use(pass 2) -fast

450.soplex: Same as 447.dealII

453.povray: Same as 447.dealII

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: -fast

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -prof_gen(pass 1) -prof_use(pass 2) -fast

Benchmarks using both Fortran and C:

435.gromacs: -prof_gen(pass 1) -prof_use(pass 2) -fast

436.cactusADM: basepeak = yes

454.calculix: Same as 435.gromacs

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.html

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.xml



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