



SPEC® CFP2006 Result

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Fujitsu Siemens Computers

PRIMERGY BX620 S3, Intel Xeon processor E5320,
1.86 GHz

SPECfp®_rate2006 = 26.4

SPECfp_rate_base2006 = 25.6

CPU2006 license: 22

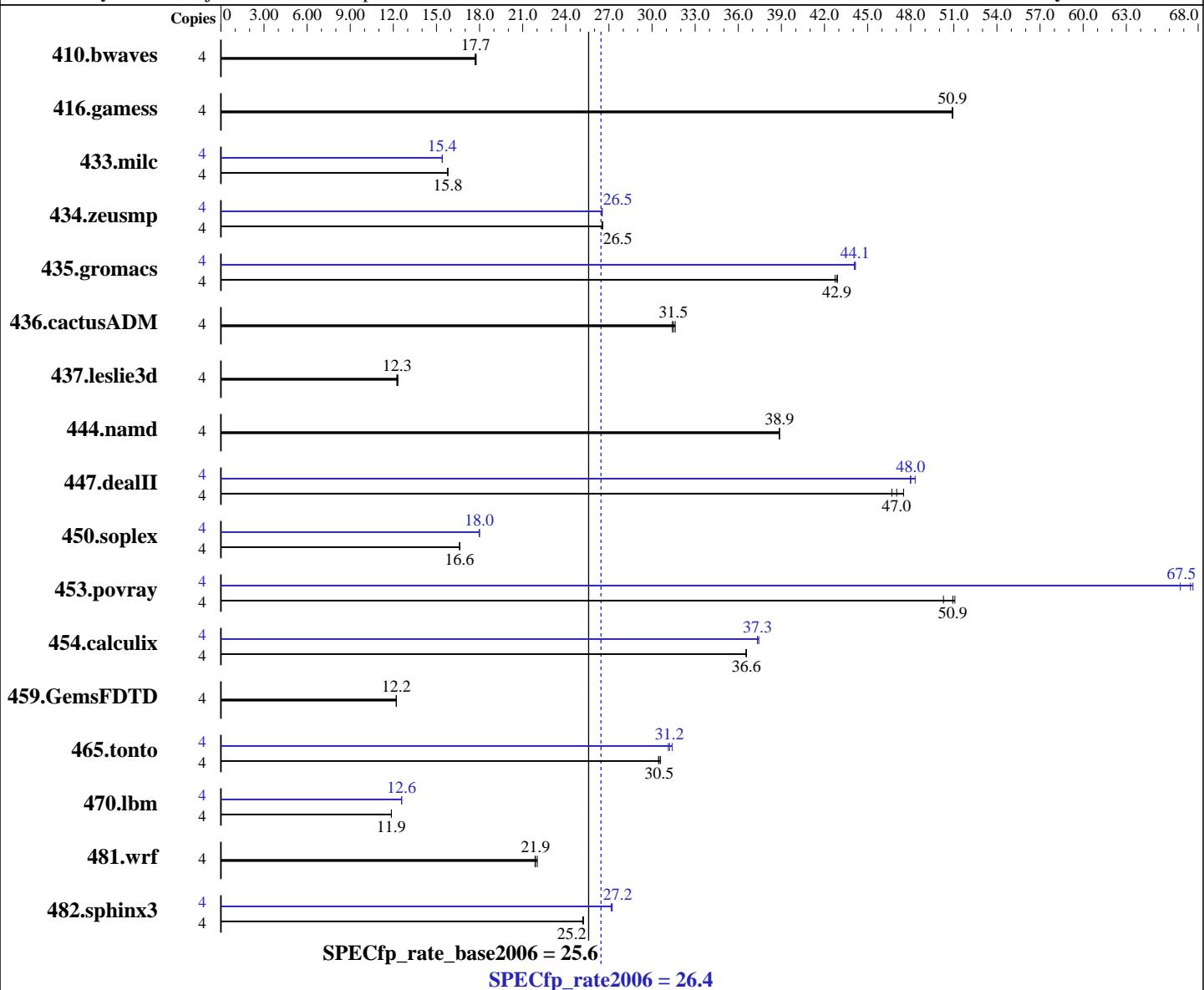
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: May-2007

Hardware Availability: Nov-2006

Software Availability: Mar-2007



Hardware

CPU Name: Intel Xeon E5320
CPU Characteristics: 1067 MHz system bus
CPU MHz: 1867
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 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

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: ext2

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L3 Cache:	None
Other Cache:	None
Memory:	8 GB (8x1 GB DDR2 PC2-5300F, 2 rank, CAS 5-5-5, with ECC)
Disk Subsystem:	SAS (36GB 10000 rpm)
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	Seconds	Ratio
410.bwaves	4	3074	17.7	3060	17.8	3065	17.7	4	3074	17.7	3060	17.8	3065	17.7		
416.gamess	4	1539	50.9	1538	50.9	1539	50.9	4	1539	50.9	1538	50.9	1539	50.9		
433.milc	4	2325	15.8	2324	15.8	2329	15.8	4	2382	15.4	2385	15.4	2383	15.4		
434.zeusmp	4	1372	26.5	1370	26.6	1372	26.5	4	1371	26.5	1373	26.5	1373	26.5		
435.gromacs	4	666	42.9	668	42.7	666	42.9	4	647	44.2	648	44.1	647	44.1		
436.cactusADM	4	1522	31.4	1518	31.5	1512	31.6	4	1522	31.4	1518	31.5	1512	31.6		
437.leslie3d	4	3052	12.3	3065	12.3	3070	12.2	4	3052	12.3	3065	12.3	3070	12.2		
444.namd	4	825	38.9	825	38.9	826	38.9	4	825	38.9	825	38.9	826	38.9		
447.dealII	4	980	46.7	963	47.5	973	47.0	4	947	48.3	954	48.0	953	48.0		
450.soplex	4	2008	16.6	2009	16.6	2007	16.6	4	1855	18.0	1853	18.0	1856	18.0		
453.povray	4	423	50.3	417	51.1	418	50.9	4	315	67.6	315	67.5	319	66.8		
454.calculix	4	903	36.6	902	36.6	903	36.5	4	884	37.3	882	37.4	884	37.3		
459.GemsFDTD	4	3478	12.2	3476	12.2	3476	12.2	4	3478	12.2	3476	12.2	3476	12.2		
465.tonto	4	1291	30.5	1287	30.6	1293	30.4	4	1253	31.4	1261	31.2	1264	31.1		
470.lbm	4	4632	11.9	4633	11.9	4631	11.9	4	4373	12.6	4370	12.6	4370	12.6		
481.wrf	4	2041	21.9	2029	22.0	2044	21.9	4	2041	21.9	2029	22.0	2044	21.9		
482.sphinx3	4	3090	25.2	3097	25.2	3091	25.2	4	2867	27.2	2871	27.2	2863	27.2		

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 1067 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.

BIOS configuration:

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General Notes (Continued)

Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

For information about Fujitsu Siemens Computers in your country please see:
<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

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Base Optimization Flags (Continued)

Fortran benchmarks:

-fast

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
```



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Peak Optimization Flags

C benchmarks:

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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For other inquiries, please contact webmaster@spec.org.

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