SPEC® CFP2006 Result

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Fujitsu Siemens Computers

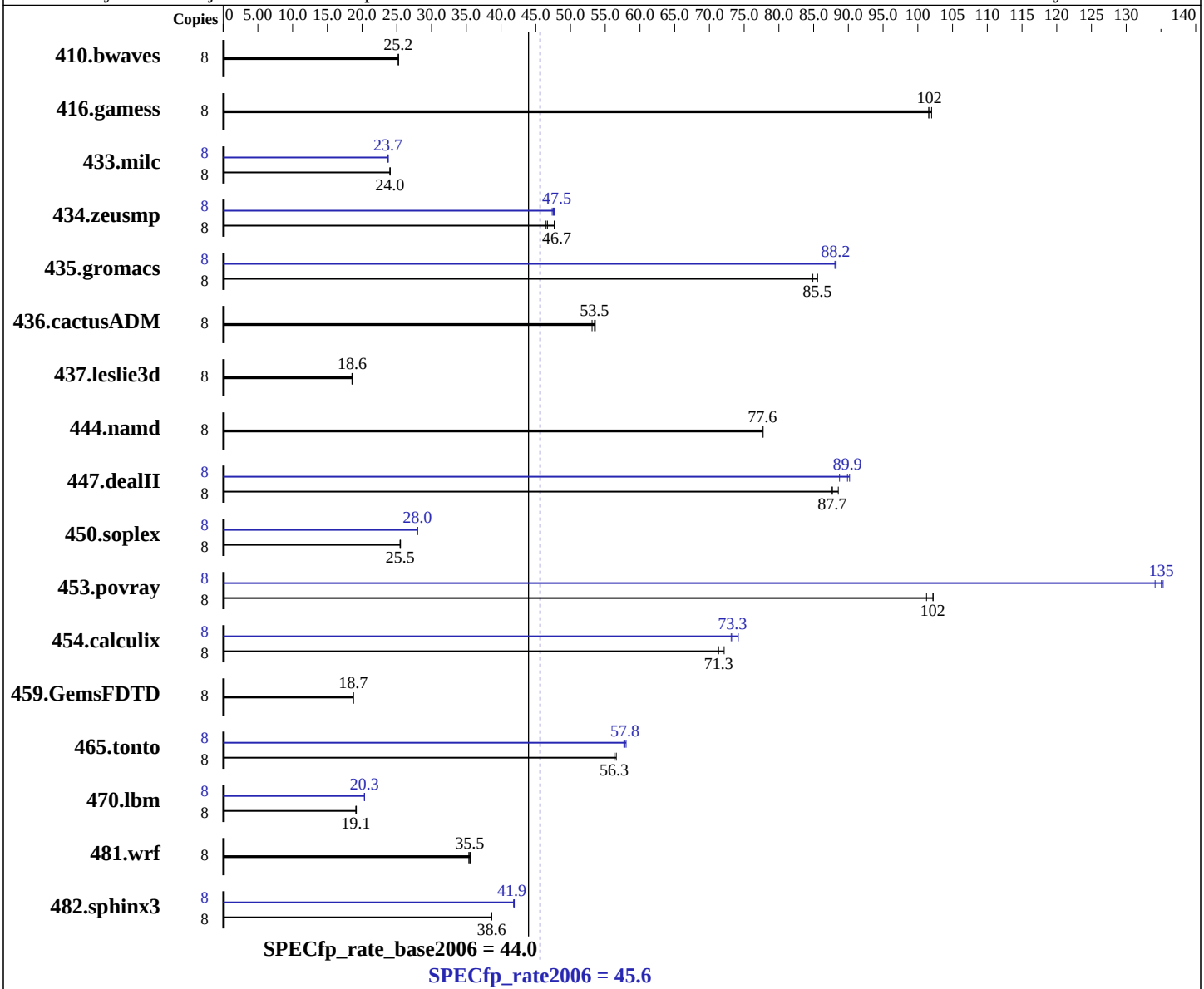
PRIMERGY RX200 S3, Intel Xeon processor L5320, 1.86 GHz

SPECfp®_rate2006 = 45.6

SPECfp_rate_base2006 = 44.0

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

Test date: Mar-2007
Hardware Availability: Mar-2007
Software Availability: Jan-2007



Hardware

CPU Name:	Intel Xeon L5320
CPU Characteristics:	L5320
CPU MHz:	1867
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

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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 - built 20070109, Package-ID: l_cc_p_9.1.046 Intel Fortran Compiler for IA32/EM64T application, Version 9.1 - built 20070109, Package ID: l_fc_p_9.1.041
Auto Parallel:	No
File System:	ReiserFS

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB DDR2 PC2-5300F, 2 rank, CAS 5-5-5, with ECC)
Disk Subsystem: SAS (73GB 15400 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
410.bwaves	8	4309	25.2	4312	25.2	**4311**	**25.2**	8	4309	25.2	4312	25.2	**4311**	**25.2**
416.gamess	8	1536	102	1542	102	**1540**	**102**	8	1536	102	1542	102	**1540**	**102**
433.milc	8	3055	24.0	3058	24.0	**3057**	**24.0**	8	3092	23.8	**3093**	**23.7**	3094	23.7
434.zeusmp	8	**1559**	**46.7**	1566	46.5	1528	47.7	8	1537	47.4	**1532**	**47.5**	1528	47.7
435.gromacs	8	673	84.9	668	85.6	**668**	**85.5**	8	647	88.2	649	88.1	**648**	**88.2**
436.cactusADM	8	1785	53.6	1800	53.1	**1788**	**53.5**	8	1785	53.6	1800	53.1	**1788**	**53.5**
437.leslie3d	8	**4042**	**18.6**	4056	18.5	4042	18.6	8	**4042**	**18.6**	4056	18.5	4042	18.6
444.namd	8	**827**	**77.6**	825	77.7	827	77.6	8	**827**	**77.6**	825	77.7	827	77.6
447.dealII	8	1044	87.7	1034	88.6	**1044**	**87.7**	8	1031	88.7	**1018**	**89.9**	1015	90.2
450.soplex	8	2613	25.5	**2616**	**25.5**	2621	25.5	8	2384	28.0	**2385**	**28.0**	2386	28.0
453.povray	8	**417**	**102**	416	102	420	101	8	315	135	317	134	**315**	**135**
454.calculix	8	915	72.1	**925**	**71.3**	926	71.3	8	890	74.2	**900**	**73.3**	903	73.1
459.GemsFDTD	8	**4532**	**18.7**	4532	18.7	4531	18.7	8	**4532**	**18.7**	4532	18.7	4531	18.7
465.tonto	8	**1398**	**56.3**	1391	56.6	1399	56.3	8	1357	58.0	**1361**	**57.8**	1365	57.7
470.lbm	8	5731	19.2	**5749**	**19.1**	5750	19.1	8	5403	20.3	**5403**	**20.3**	5402	20.3
481.wrf	8	2527	35.4	**2518**	**35.5**	2512	35.6	8	2527	35.4	**2518**	**35.5**	2512	35.6
482.sphinx3	8	4038	38.6	4034	38.6	**4036**	**38.6**	8	**3720**	**41.9**	3720	41.9	3730	41.8

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
'/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

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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/9.1.046/bin/icc -I/opt/intel/cc/9.1.046/include -L/opt/intel/cc/9.1.046/lib`

C++ benchmarks (except as noted below):
`icpc`

450.soplex: `/opt/intel/cc/9.1.046/bin/icpc -I/opt/intel/cc/9.1.046/include -L/opt/intel/cc/9.1.046/lib`

Fortran benchmarks (except as noted below):
`ifort`

434.zeusmp: `/opt/intel/fc/9.1.041/bin/ifort -I/opt/intel/fc/9.1.041/include -L/opt/intel/fc/9.1.041/lib`

Benchmarks using both Fortran and C:
`icc ifort`

Peak Portability Flags

`Same as Base Portability Flags`

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:

Continued on next page

Peak Optimization Flags (Continued)

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.20090714.23.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.23.xml

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

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