SPEC® CFP2006 Result

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Fujitsu Siemens Computers

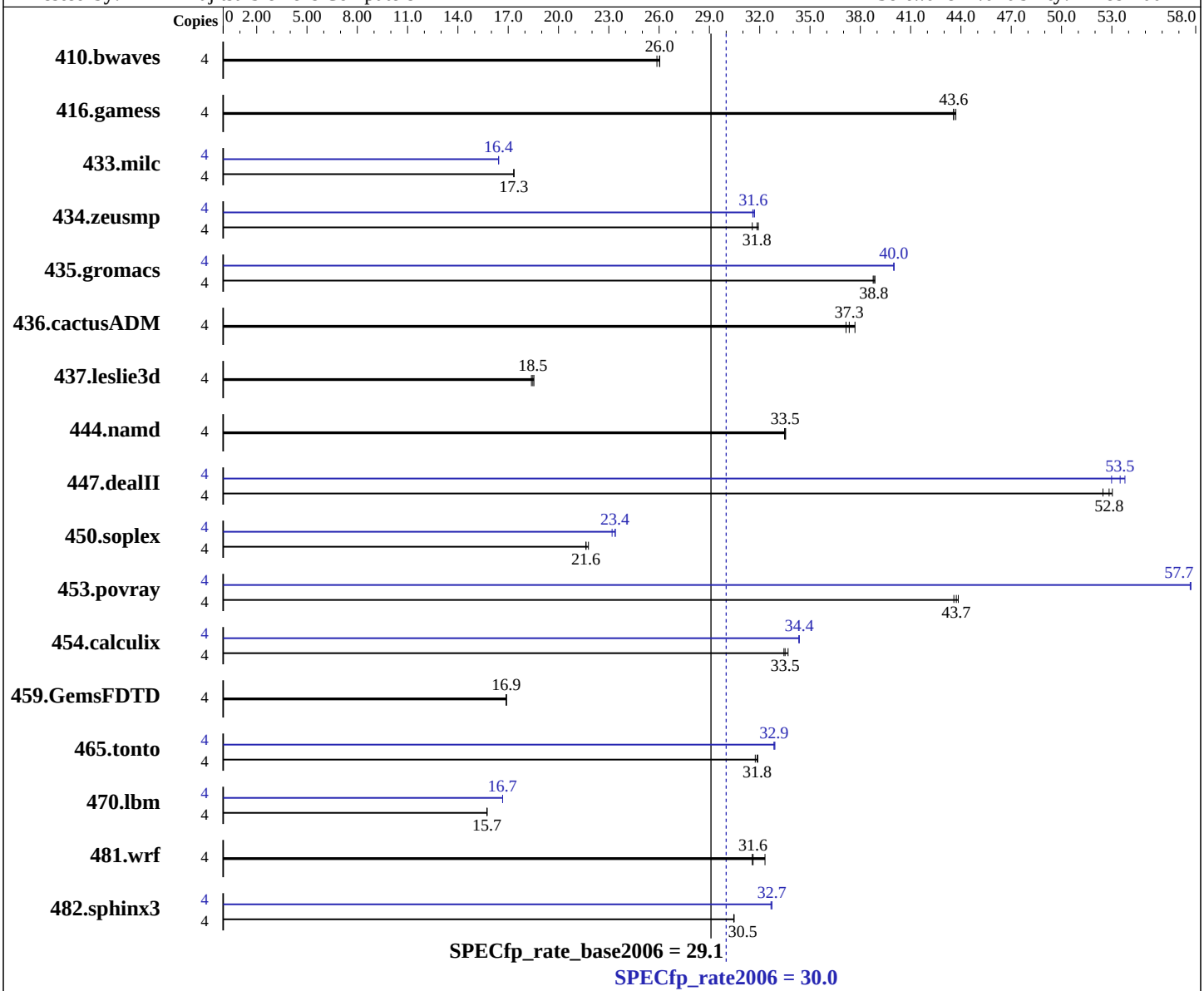
PRIMERGY RX200 S3, Intel Xeon processor 5110, 1.60 GHz

SPECfp®_rate2006 = 30.0

SPECfp_rate_base2006 = 29.1

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

Test date: May-2007
Hardware Availability: Jul-2006
Software Availability: Feb-2007



Hardware

CPU Name:	Intel Xeon 5110
CPU Characteristics:	1067 MHz system bus
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip

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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:	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 (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	4	2088	26.0	**2089**	**26.0**	2101	25.9	4	2088	26.0	**2089**	**26.0**	2101	25.9
416.gamess	4	**1797**	**43.6**	1792	43.7	1798	43.6	4	**1797**	**43.6**	1792	43.7	1798	43.6
433.milc	4	2119	17.3	**2118**	**17.3**	2118	17.3	4	2236	16.4	2235	16.4	**2235**	**16.4**
434.zeusmp	4	**1143**	**31.8**	1154	31.6	1140	31.9	4	**1151**	**31.6**	1149	31.7	1152	31.6
435.gromacs	4	737	38.8	**736**	**38.8**	735	38.9	4	714	40.0	**714**	**40.0**	714	40.0
436.cactusADM	4	1269	37.7	1287	37.1	**1280**	**37.3**	4	1269	37.7	1287	37.1	**1280**	**37.3**
437.leslie3d	4	2029	18.5	**2036**	**18.5**	2045	18.4	4	2029	18.5	**2036**	**18.5**	2045	18.4
444.namd	4	958	33.5	956	33.5	**957**	**33.5**	4	958	33.5	956	33.5	**957**	**33.5**
447.dealII	4	**866**	**52.8**	872	52.5	863	53.0	4	851	53.8	**855**	**53.5**	864	53.0
450.soplex	4	1531	21.8	**1542**	**21.6**	1542	21.6	4	**1427**	**23.4**	1426	23.4	1438	23.2
453.povray	4	485	43.8	**487**	**43.7**	488	43.6	4	**369**	**57.7**	369	57.7	369	57.7
454.calculix	4	979	33.7	987	33.4	**985**	**33.5**	4	**961**	**34.4**	961	34.3	961	34.4
459.GemsFDTD	4	2514	16.9	**2513**	**16.9**	2512	16.9	4	2514	16.9	**2513**	**16.9**	2512	16.9
465.tonto	4	**1236**	**31.8**	1234	31.9	1240	31.7	4	**1198**	**32.9**	1196	32.9	1198	32.9
470.lbm	4	3494	15.7	3492	15.7	**3493**	**15.7**	4	3298	16.7	3297	16.7	**3298**	**16.7**
481.wrf	4	**1414**	**31.6**	1416	31.6	1383	32.3	4	**1414**	**31.6**	1416	31.6	1383	32.3
482.sphinx3	4	2558	30.5	**2560**	**30.5**	2560	30.5	4	2382	32.7	2386	32.7	**2383**	**32.7**

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.

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

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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

Continued on next page

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:

Continued on next page

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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