SPEC® CFP2006 Result

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Fujitsu Siemens Computers

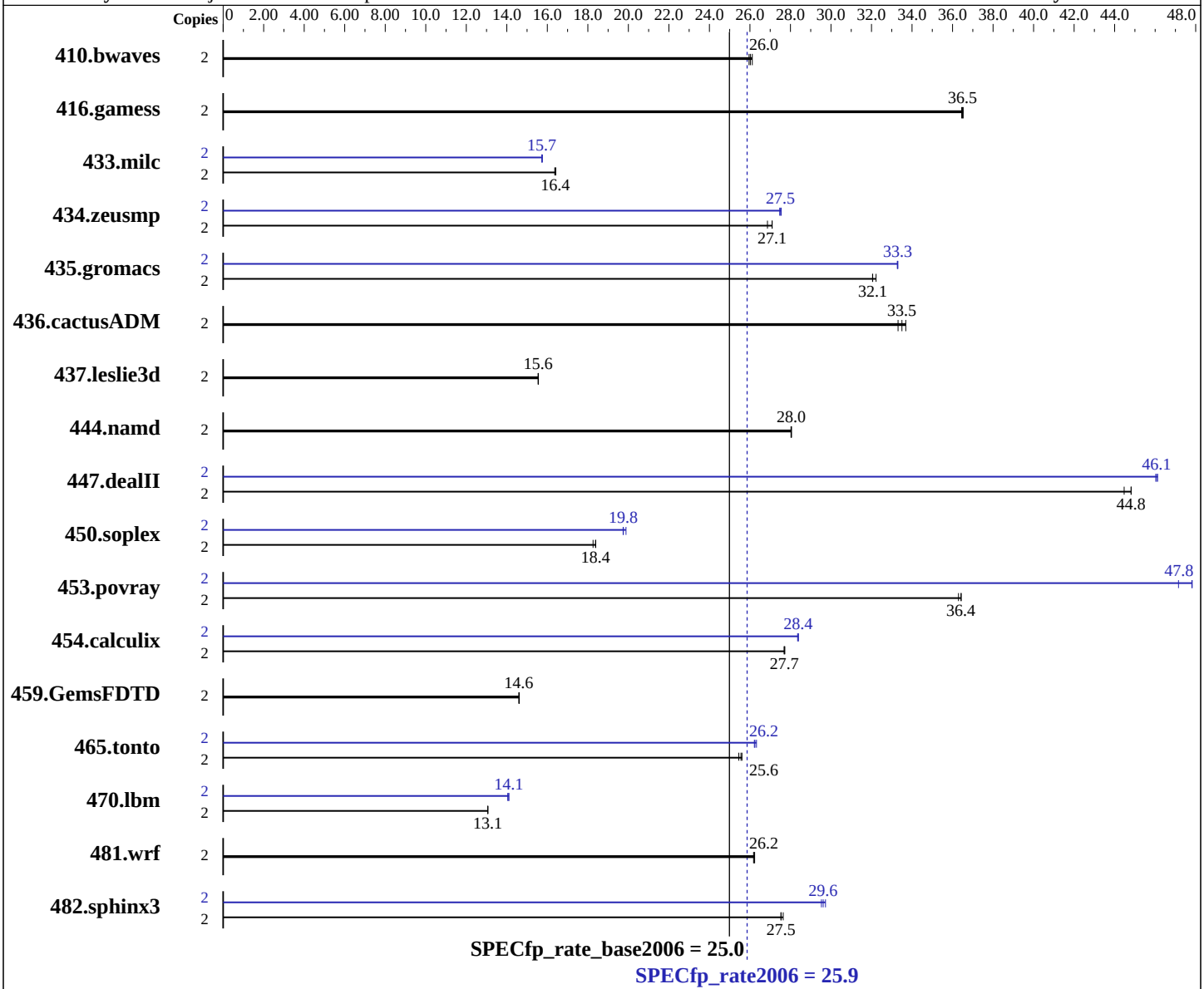
PRIMERGY RX100 S4, Intel Xeon processor 3070, 2.67 GHz

SPECfp®_rate2006 = 25.9

SPECfp_rate_base2006 = 25.0

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

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



Hardware

CPU Name:	Intel Xeon 3070
CPU Characteristics:	1067 MHz system bus
CPU MHz:	2667
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:	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:	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: SATA (160 GB, 7200 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	2	1041	26.1	**1045**	**26.0**	1047	26.0	2	1041	26.1	**1045**	**26.0**	1047	26.0
416.gamess	2	1072	36.5	1074	36.5	**1073**	**36.5**	2	1072	36.5	1074	36.5	**1073**	**36.5**
433.milc	2	1122	16.4	1118	16.4	**1120**	**16.4**	2	1165	15.8	1167	15.7	**1167**	**15.7**
434.zeusmp	2	677	26.9	672	27.1	**672**	**27.1**	2	663	27.5	661	27.5	**662**	**27.5**
435.gromacs	2	**445**	**32.1**	446	32.1	443	32.2	2	**429**	**33.3**	429	33.3	429	33.3
436.cactusADM	2	717	33.3	709	33.7	**713**	**33.5**	2	717	33.3	709	33.7	**713**	**33.5**
437.leslie3d	2	**1209**	**15.6**	1209	15.6	1209	15.6	2	**1209**	**15.6**	1209	15.6	1209	15.6
444.namd	2	572	28.1	572	28.0	**572**	**28.0**	2	572	28.1	572	28.0	**572**	**28.0**
447.dealII	2	515	44.5	**511**	**44.8**	511	44.8	2	497	46.0	**497**	**46.1**	496	46.1
450.soplex	2	914	18.3	**908**	**18.4**	907	18.4	2	**844**	**19.8**	845	19.7	839	19.9
453.povray	2	**292**	**36.4**	293	36.3	292	36.4	2	222	47.8	226	47.2	**223**	**47.8**
454.calculix	2	595	27.7	**596**	**27.7**	596	27.7	2	582	28.4	**581**	**28.4**	581	28.4
459.GemsFDTD	2	**1453**	**14.6**	1454	14.6	1452	14.6	2	**1453**	**14.6**	1454	14.6	1452	14.6
465.tonto	2	769	25.6	773	25.5	**770**	**25.6**	2	**750**	**26.2**	751	26.2	748	26.3
470.lbm	2	2105	13.1	2102	13.1	**2104**	**13.1**	2	1957	14.0	1949	14.1	**1950**	**14.1**
481.wrf	2	853	26.2	852	26.2	**852**	**26.2**	2	853	26.2	852	26.2	**852**	**26.2**
482.sphinx3	2	**1416**	**27.5**	1410	27.6	1416	27.5	2	1320	29.5	1311	29.7	**1316**	**29.6**

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 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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Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 11:43:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 May 2007.