SPEC® CFP2006 Result

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Fujitsu Siemens Computers

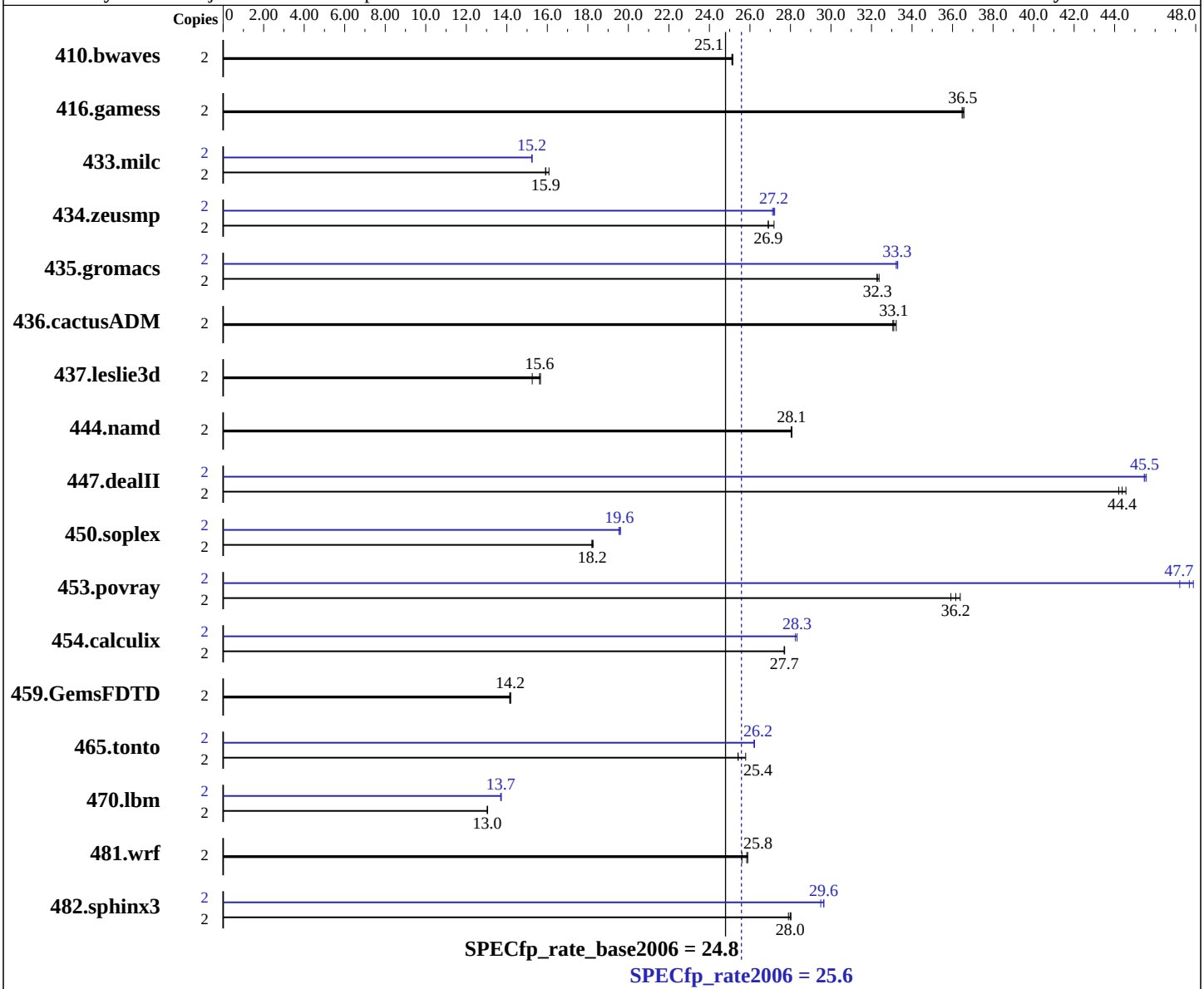
PRIMERGY TX120, Intel Xeon processor 3070, 2.66 GHz

SPECfp®_rate2006 = 25.6

SPECfp_rate_base2006 = 24.8

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

Test date: Jun-2007
Hardware Availability: May-2007
Software Availability: Mar-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: Seagate ST973401SS (SAS, 73GB 10000rpm)
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	1083	25.1	**1081**	**25.1**	1081	25.2	2	1083	25.1	**1081**	**25.1**	1081	25.2
416.gamess	2	**1073**	**36.5**	1074	36.5	1071	36.6	2	**1073**	**36.5**	1074	36.5	1071	36.6
433.milc	2	1142	16.1	1154	15.9	**1153**	**15.9**	2	1204	15.3	**1205**	**15.2**	1206	15.2
434.zeusmp	2	669	27.2	**676**	**26.9**	677	26.9	2	**670**	**27.2**	669	27.2	671	27.1
435.gromacs	2	441	32.4	**442**	**32.3**	442	32.3	2	**429**	**33.3**	429	33.3	430	33.2
436.cactusADM	2	**722**	**33.1**	723	33.1	719	33.2	2	**722**	**33.1**	723	33.1	719	33.2
437.leslie3d	2	1200	15.7	1232	15.3	**1204**	**15.6**	2	1200	15.7	1232	15.3	**1204**	**15.6**
444.namd	2	572	28.0	571	28.1	**572**	**28.1**	2	572	28.0	571	28.1	**572**	**28.1**
447.dealII	2	513	44.6	518	44.2	**516**	**44.4**	2	503	45.5	**503**	**45.5**	502	45.6
450.soplex	2	914	18.3	917	18.2	**915**	**18.2**	2	850	19.6	854	19.5	**853**	**19.6**
453.povray	2	296	35.9	**294**	**36.2**	292	36.4	2	**223**	**47.7**	222	47.9	225	47.2
454.calculix	2	595	27.7	**596**	**27.7**	596	27.7	2	**583**	**28.3**	583	28.3	584	28.2
459.GemsFDTD	2	1495	14.2	**1498**	**14.2**	1500	14.1	2	1495	14.2	**1498**	**14.2**	1500	14.1
465.tonto	2	763	25.8	775	25.4	**774**	**25.4**	2	**751**	**26.2**	750	26.2	751	26.2
470.lbm	2	**2107**	**13.0**	2106	13.0	2108	13.0	2	2001	13.7	**2005**	**13.7**	2006	13.7
481.wrf	2	863	25.9	873	25.6	**865**	**25.8**	2	863	25.9	873	25.6	**865**	**25.8**
482.sphinx3	2	1397	27.9	**1393**	**28.0**	1391	28.0	2	1315	29.6	**1315**	**29.6**	1322	29.5

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 13:18:03 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 July 2007.