SPEC® CFP2006 Result

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Fujitsu Siemens Computers

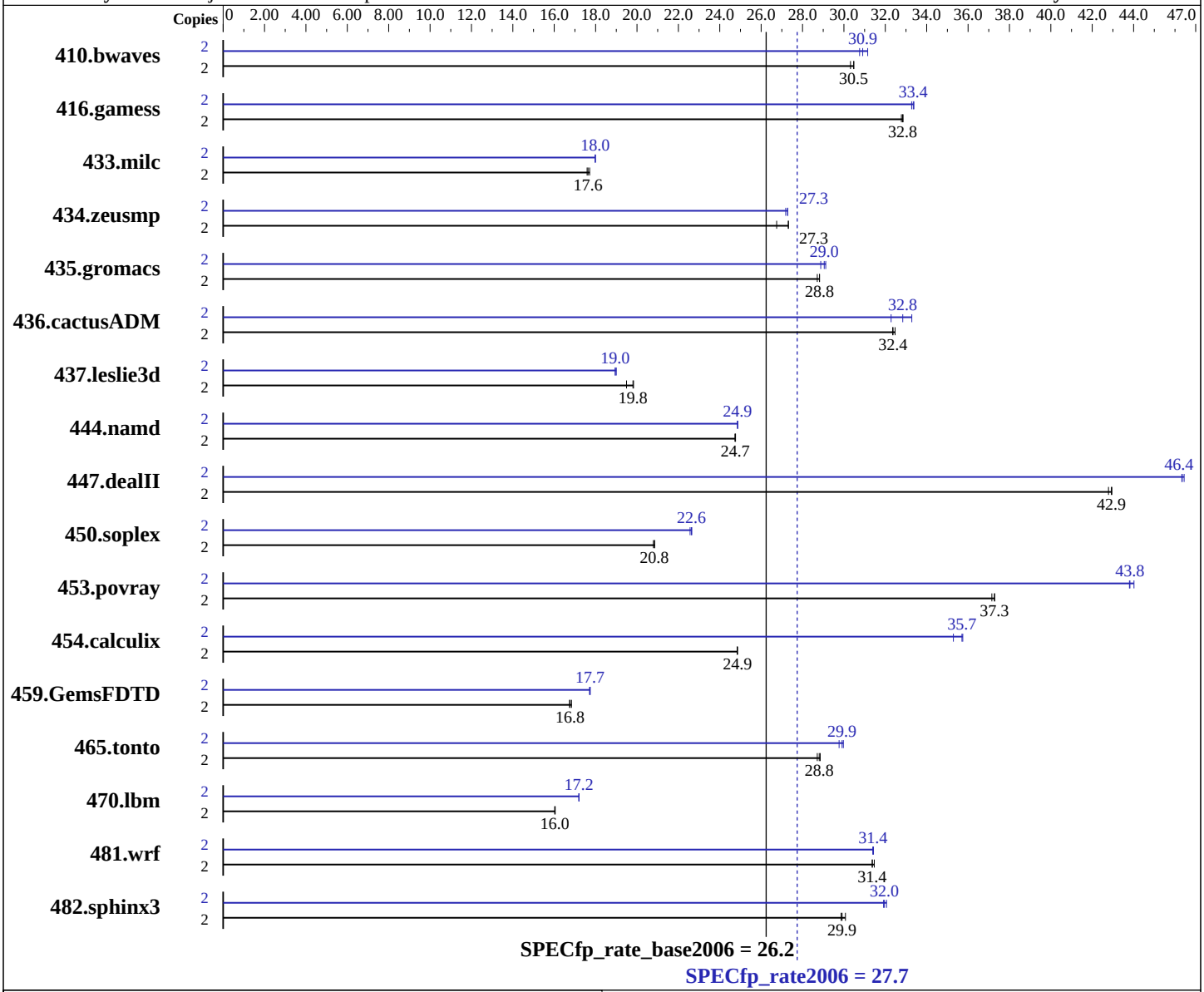
PRIMERGY TX150 S6, Intel Xeon processor 3065, 2.33 GHz

SPECfp®_rate2006 = 27.7

SPECfp_rate_base2006 = 26.2

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

Test date: Sep-2007
Hardware Availability: Nov-2007
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon 3065
CPU Characteristics:	1333 MHz system bus
CPU MHz:	2333
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

Continued on next page

Software

Operating System:	SUSE LINUX Enterprise Server 10 (x86_64), Kernel 2.6.16.21-0.8-smp
Compiler:	Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070725
Auto Parallel:	No
File System:	ext2
System State:	Multiuser, Runlevel 3
Base Pointers:	32/64-bit

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L3 Cache: None
Other Cache: None
Memory: 4 GB (4x1 GB DDR2 PC2-6400E, 2 rank, CAS 6-6-6, with ECC)
Disk Subsystem: Fujtsu MAY2036RC (SAS, 36GB, 10000rpm)
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Smart Heap Library, Version 8.1

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	892	30.5	**892**	**30.5**	897	30.3	2	884	30.8	873	31.1	**879**	**30.9**
416.gamess	2	**1193**	**32.8**	1192	32.9	1195	32.8	2	1173	33.4	**1174**	**33.4**	1177	33.3
433.milc	2	1037	17.7	**1041**	**17.6**	1044	17.6	2	1021	18.0	1021	18.0	**1021**	**18.0**
434.zeusmp	2	666	27.3	**666**	**27.3**	680	26.7	2	669	27.2	**667**	**27.3**	667	27.3
435.gromacs	2	495	28.8	**495**	**28.8**	497	28.7	2	**492**	**29.0**	490	29.1	494	28.9
436.cactusADM	2	739	32.4	736	32.5	**738**	**32.4**	2	**728**	**32.8**	718	33.3	740	32.3
437.leslie3d	2	964	19.5	**949**	**19.8**	948	19.8	2	**992**	**19.0**	989	19.0	992	18.9
444.namd	2	**648**	**24.7**	648	24.7	648	24.8	2	645	24.9	**645**	**24.9**	645	24.9
447.dealII	2	533	43.0	**533**	**42.9**	535	42.8	2	**494**	**46.4**	494	46.3	493	46.4
450.soplex	2	802	20.8	800	20.9	**800**	**20.8**	2	739	22.6	**737**	**22.6**	736	22.6
453.povray	2	285	37.3	**285**	**37.3**	286	37.1	2	242	44.0	**243**	**43.8**	243	43.8
454.calculix	2	664	24.8	**664**	**24.9**	664	24.9	2	**462**	**35.7**	468	35.3	462	35.7
459.GemsFDTD	2	1268	16.7	**1265**	**16.8**	1260	16.8	2	1199	17.7	1196	17.7	**1197**	**17.7**
465.tonto	2	682	28.9	**683**	**28.8**	685	28.7	2	**658**	**29.9**	657	30.0	661	29.8
470.lbm	2	1712	16.0	1715	16.0	**1714**	**16.0**	2	1597	17.2	**1598**	**17.2**	1599	17.2
481.wrf	2	**712**	**31.4**	710	31.5	712	31.4	2	711	31.4	711	31.4	**711**	**31.4**
482.sphinx3	2	1296	30.1	1305	29.9	**1303**	**29.9**	2	1221	31.9	**1220**	**32.0**	1216	32.1

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

```
This result has been produced with binaries provided and compiled by Intel.

BIOS configuration:
Hardware Prefetch = Enable, Adjacent Sector Prefetch = Enable
```

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

Benchmarks using both Fortran and C:
-fast

Peak Compiler Invocation

C benchmarks (except as noted below):
```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

433.milc: `icc`

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

450.soplex: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

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

437.leslie3d: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

Benchmarks using both Fortran and C:
```
icc ifort
```

Peak 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`
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:

433.milc: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -fno-alias -auto-ilp32`

Continued on next page

Peak Optimization Flags (Continued)

470.lbm: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -scalar-rep- -prefetch -opt-malloc-options=3`

482.sphinx3: `-fast -unroll2`

C++ benchmarks:

444.namd: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -fno-alias -auto-ilp32`

447.dealII: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -ansi-alias -scalar-rep-`

450.soplex: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -opt-malloc-options=3`

453.povray: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4 -ansi-alias`

Fortran benchmarks:

410.bwaves: `-fast -prefetch`

416.gamess: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -Ob0 -ansi-alias -scalar-rep-`

434.zeusmp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast`

437.leslie3d: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch -opt-malloc-options=3`

459.GemsFDTD: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -Ob0 -prefetch`

465.tonto: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4 -auto`

Benchmarks using both Fortran and C:

435.gromacs: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch -auto-ilp32`

436.cactusADM: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -prefetch -auto-ilp32`

454.calculix: `-fast -unroll-aggressive -auto-ilp32`

481.wrf: `-fast -auto-ilp32`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.13.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.13.xml

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

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