SPEC® CFP2006 Result

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Fujitsu Siemens Computers

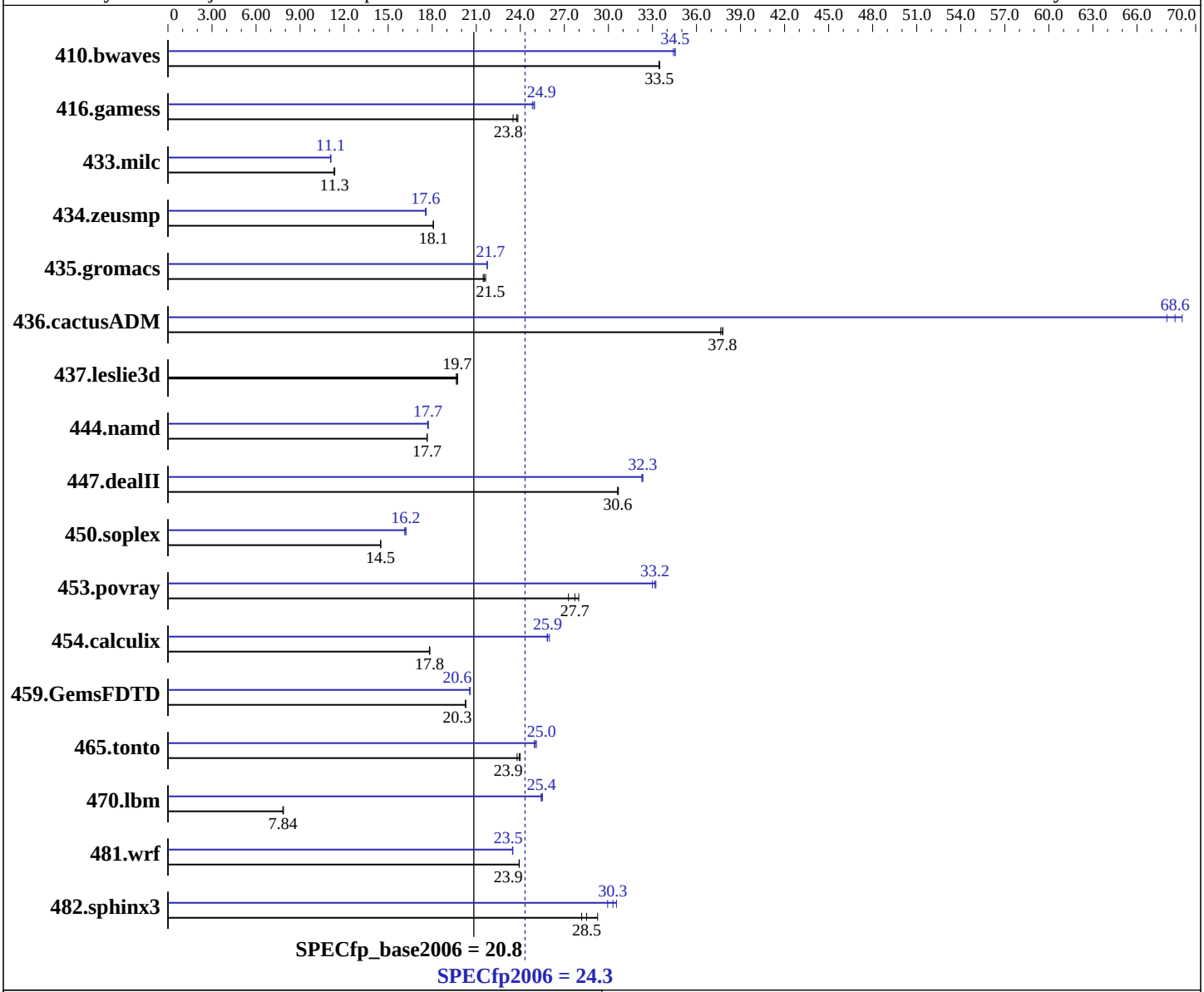
PRIMERGY RX200 S4, Intel Xeon X5260, 3.33 GHz

SPECfp®2006 = 24.3

SPECfp_base2006 = 20.8

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

Test date: Jul-2008
Hardware Availability: Dec-2007
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon X5260
CPU Characteristics:	1333 MHz system bus
CPU MHz:	3333
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:	6 MB I+D on chip per chip

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Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler:	Intel C++ and Fortran Compiler for Linux32 and Linux64, version 10.1, Build 20070913
Auto Parallel:	Yes
File System:	ext2
System State:	Multi-User Run Level 3
Base Pointers:	64-bit
Peak Pointers:	32/64-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB PC2-5300F, 2 rank, CL 5-5-5, ECC)
Disk Subsystem: 1x SAS, 73 GB, 15000 rpm
Other Hardware: None

Other Software: binutils-2.17.50.0.5-0.1.x86_64

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	406	33.5	**406**	**33.5**	406	33.4	393	34.5	395	34.4	**393**	**34.5**
416.gamess	833	23.5	821	23.8	**824**	**23.8**	789	24.8	784	25.0	**786**	**24.9**
433.milc	811	11.3	**810**	**11.3**	808	11.4	829	11.1	827	11.1	**828**	**11.1**
434.zeusmp	503	18.1	**503**	**18.1**	503	18.1	519	17.5	517	17.6	**518**	**17.6**
435.gromacs	**332**	**21.5**	333	21.5	330	21.6	328	21.7	328	21.7	**328**	**21.7**
436.cactusADM	**316**	**37.8**	316	37.8	317	37.6	173	69.1	**174**	**68.6**	176	68.0
437.leslie3d	476	19.7	479	19.6	**477**	**19.7**	476	19.7	479	19.6	**477**	**19.7**
444.namd	454	17.7	454	17.6	**454**	**17.7**	452	17.7	**453**	**17.7**	453	17.7
447.dealII	373	30.7	374	30.6	**373**	**30.6**	354	32.3	**354**	**32.3**	354	32.3
450.soplex	575	14.5	**576**	**14.5**	576	14.5	**515**	**16.2**	514	16.2	517	16.1
453.povray	190	28.0	195	27.3	**192**	**27.7**	160	33.2	161	33.0	**160**	**33.2**
454.calculix	**463**	**17.8**	463	17.8	463	17.8	319	25.8	**319**	**25.9**	318	26.0
459.GemsFDTD	523	20.3	**524**	**20.3**	524	20.3	516	20.6	**516**	**20.6**	516	20.6
465.tonto	410	24.0	**411**	**23.9**	414	23.8	392	25.1	**393**	**25.0**	394	25.0
470.lbm	1747	7.87	1755	7.83	**1753**	**7.84**	540	25.4	539	25.5	**540**	**25.4**
481.wrf	**467**	**23.9**	467	23.9	467	23.9	**476**	**23.5**	475	23.5	476	23.5
482.sphinx3	**683**	**28.5**	666	29.3	692	28.2	**643**	**30.3**	638	30.6	651	29.9

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
OMP_NUM_THREADS set to number of cores (default)
```

Platform Notes

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

General Notes

```
All binaries were built with 64-bit Intel compiler except:
450.soplex, 470.lbm and 482.sphinx3 in peak were built with
32-bit Intel compiler by changing the path
```

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General Notes (Continued)

```
for include and library files.

For information about Fujitsu Siemens Computers please see:
http://www.fujitsu-siemens.com
```

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 -parallel`

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Base Optimization Flags (Continued)

C++ benchmarks:
`-fast -parallel`

Fortran benchmarks:
`-fast -parallel`

Benchmarks using both Fortran and C:
`-fast -parallel`

Peak Compiler Invocation

C benchmarks (except as noted below):
`/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib -I/opt/intel/cc/10.1.008/include`

433.milc: `icc`

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

450.soplex: `/opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib -I/opt/intel/cc/10.1.008/include`

Fortran benchmarks:
`ifort`

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`
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:

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

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 -parallel

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: basepeak = yes

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

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 -parallel -auto-ilp32

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

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Peak Optimization Flags (Continued)

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

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20090713.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20090713.xml`

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

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 19:05:25 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 September 2008.