



SPEC® CFP2006 Result

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Fujitsu Siemens Computers

SPECfp®2006 = 19.9

PRIMERGY RX200 S4, Intel Xeon L5410, 2.33 GHz

SPECfp_base2006 = 16.9

CPU2006 license: 22

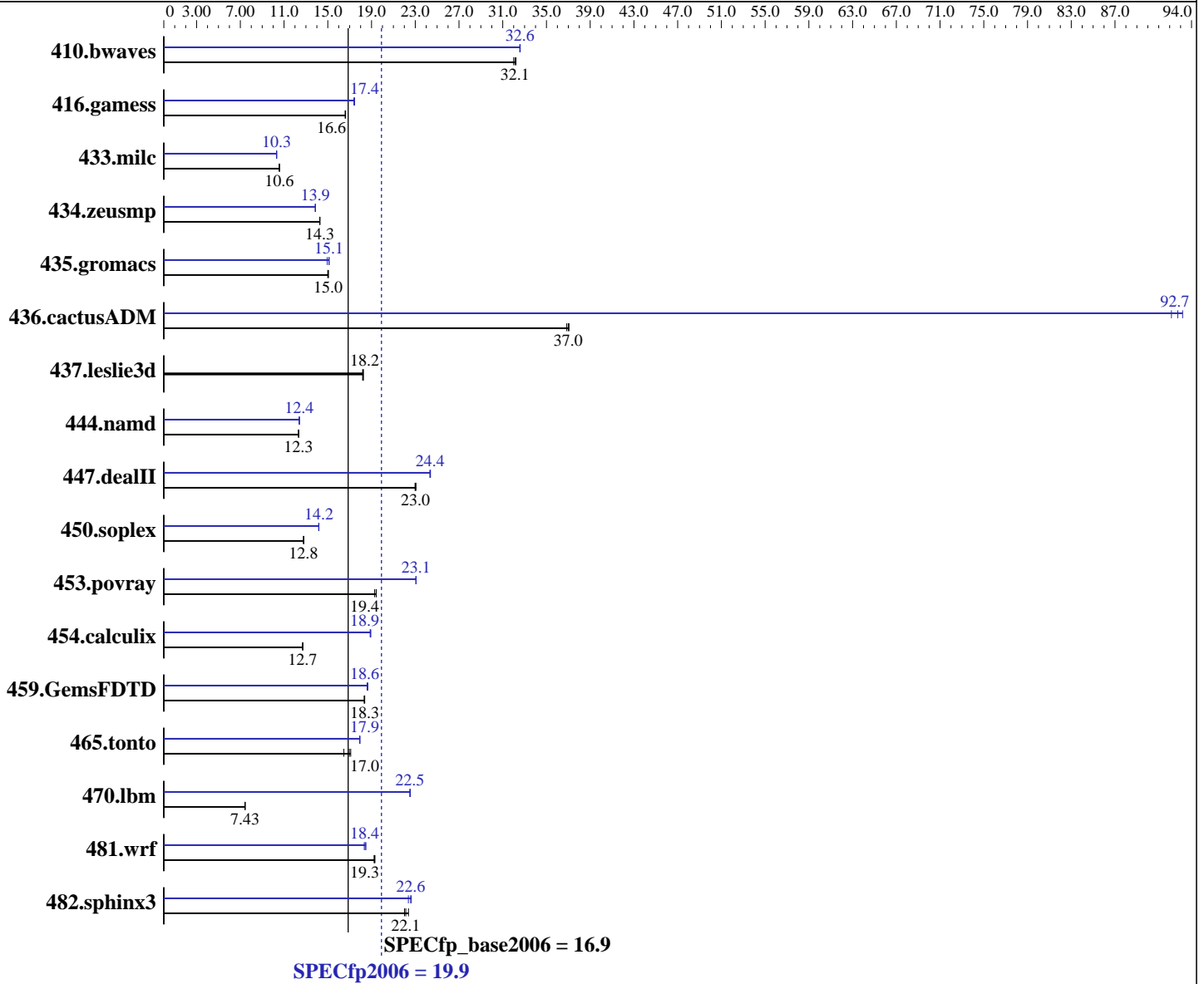
Test date: Jul-2008

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Dec-2007

Tested by: Fujitsu Siemens Computers

Software Availability: May-2008



Hardware

CPU Name: Intel Xeon L5410
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 2333
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

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Software

Operating System: SuSE Linux Enterprise Server 10 (x86_64) with SP2, kernel 2.6.16.60-0.21-smp
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64, version 10.1, Build 20070913
 Auto Parallel: Yes
 File System: ext3
 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	425	32.0	423	32.1	422	32.2	417	32.6	417	32.6	417	32.6
416.gamess	1177	16.6	1179	16.6	1180	16.6	1123	17.4	1126	17.4	1122	17.5
433.milc	867	10.6	869	10.6	869	10.6	891	10.3	888	10.3	890	10.3
434.zeusmp	638	14.3	637	14.3	637	14.3	656	13.9	657	13.8	656	13.9
435.gromacs	474	15.1	475	15.0	476	15.0	472	15.1	473	15.1	478	14.9
436.cactusADM	324	36.9	322	37.1	323	37.0	130	92.2	129	92.7	128	93.2
437.leslie3d	516	18.2	517	18.2	515	18.3	516	18.2	517	18.2	515	18.3
444.namd	651	12.3	650	12.3	651	12.3	646	12.4	647	12.4	648	12.4
447.dealII	496	23.1	497	23.0	498	23.0	469	24.4	470	24.3	469	24.4
450.soplex	651	12.8	652	12.8	653	12.8	588	14.2	589	14.2	588	14.2
453.povray	276	19.3	274	19.4	274	19.4	231	23.1	231	23.1	231	23.1
454.calculix	650	12.7	649	12.7	649	12.7	436	18.9	436	18.9	437	18.9
459.GemsFDTD	578	18.3	579	18.3	577	18.4	571	18.6	568	18.7	570	18.6
465.tonto	580	17.0	576	17.1	597	16.5	548	18.0	549	17.9	549	17.9
470.lbm	1849	7.43	1847	7.44	1849	7.43	609	22.6	610	22.5	610	22.5
481.wrf	581	19.2	579	19.3	579	19.3	606	18.4	609	18.3	604	18.5
482.sphinx3	871	22.4	881	22.1	885	22.0	863	22.6	871	22.4	861	22.6

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Compiler Invocation 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.

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



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General Notes

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

C++ benchmarks:
-fast -parallel

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Base Optimization Flags (Continued)

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



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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.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.xml>

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

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