



SPEC® CFP2006 Result

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Fujitsu Siemens Computers

SPECfp®2006 = 15.7

CELSIUS R550, Intel Xeon E5205, 1.87 GHz

SPECfp_base2006 = 13.6

CPU2006 license: 22

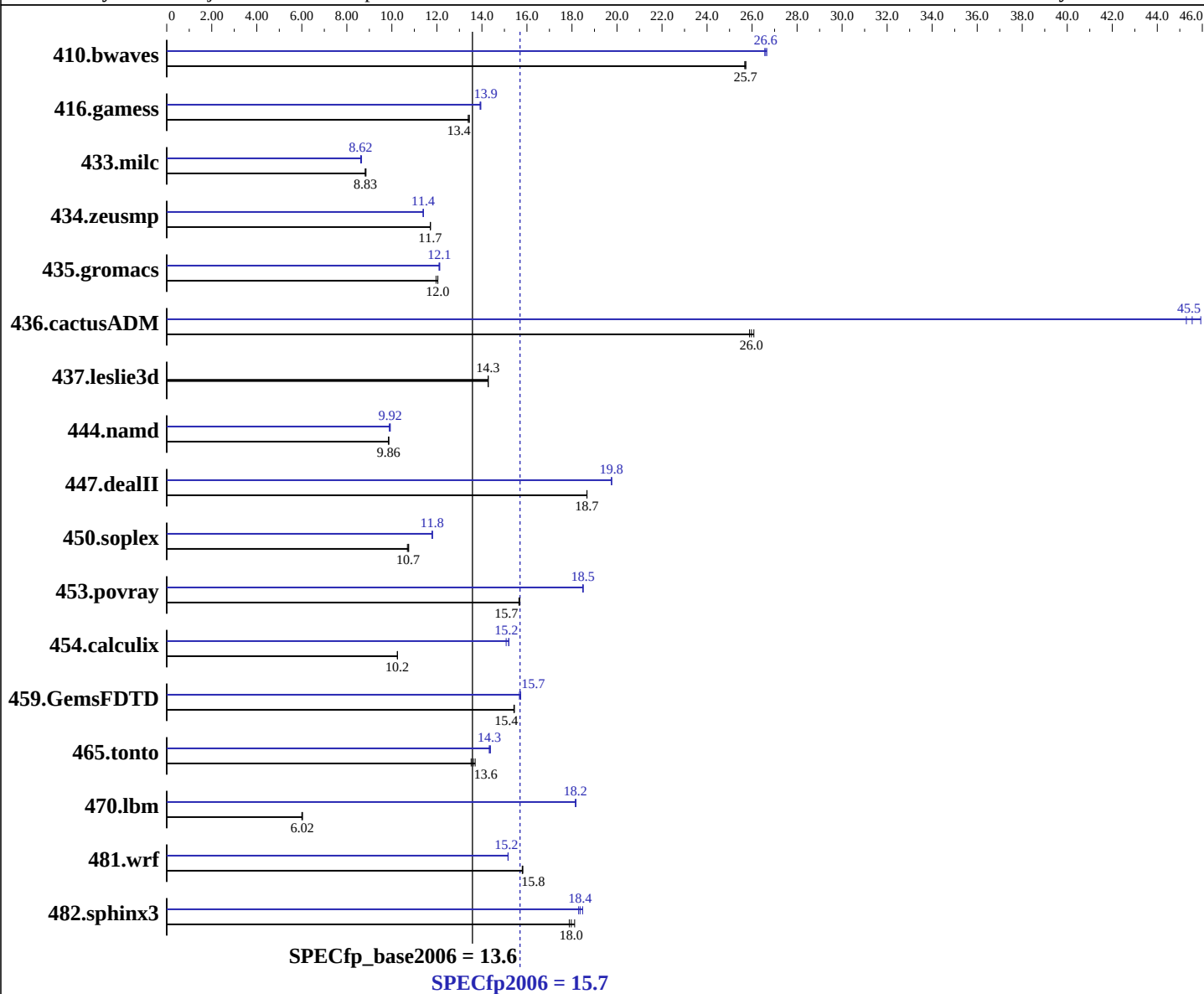
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Jan-2008

Hardware Availability: Jan-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon E5205
CPU Characteristics: 1067 MHz system bus
CPU MHz: 1867
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: ext3
System State: Multi-User Run Level 3
Base Pointers: 64-bit
Peak Pointers: 32/64-bit

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Hardware (Continued)

L3 Cache: None
Other Cache: None
Memory: 8 GB (4x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1 x SATA II, 400 GB, 7200 rpm
Other Hardware: None

Software (Continued)

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	529	25.7	<u>529</u>	<u>25.7</u>	528	25.7	<u>511</u>	<u>26.6</u>	512	26.6	510	26.7
416.gamess	1462	13.4	<u>1457</u>	<u>13.4</u>	1457	13.4	1406	13.9	<u>1406</u>	<u>13.9</u>	1403	14.0
433.milc	1037	8.85	<u>1040</u>	<u>8.83</u>	1041	8.82	1061	8.65	1065	8.62	<u>1065</u>	<u>8.62</u>
434.zeusmp	<u>777</u>	<u>11.7</u>	777	11.7	777	11.7	799	11.4	<u>798</u>	<u>11.4</u>	798	11.4
435.gromacs	<u>593</u>	<u>12.0</u>	593	12.0	597	12.0	590	12.1	<u>589</u>	<u>12.1</u>	589	12.1
436.cactusADM	462	25.9	458	26.1	<u>460</u>	<u>26.0</u>	260	45.9	<u>262</u>	<u>45.5</u>	264	45.3
437.leslie3d	658	14.3	658	14.3	<u>658</u>	<u>14.3</u>	658	14.3	658	14.3	<u>658</u>	<u>14.3</u>
444.namd	813	9.86	<u>814</u>	<u>9.86</u>	814	9.86	<u>808</u>	<u>9.92</u>	811	9.89	808	9.93
447.dealII	613	18.7	613	18.7	<u>613</u>	<u>18.7</u>	<u>579</u>	<u>19.8</u>	579	19.8	579	19.8
450.soplex	776	10.7	<u>777</u>	<u>10.7</u>	780	10.7	706	11.8	<u>707</u>	<u>11.8</u>	708	11.8
453.povray	<u>340</u>	<u>15.7</u>	339	15.7	340	15.6	288	18.5	<u>288</u>	<u>18.5</u>	288	18.5
454.calculix	805	10.2	805	10.3	<u>805</u>	<u>10.2</u>	<u>543</u>	<u>15.2</u>	547	15.1	543	15.2
459.GemsFDTD	687	15.4	<u>688</u>	<u>15.4</u>	688	15.4	<u>675</u>	<u>15.7</u>	675	15.7	677	15.7
465.tonto	<u>722</u>	<u>13.6</u>	718	13.7	728	13.5	684	14.4	<u>686</u>	<u>14.3</u>	687	14.3
470.lbm	<u>2281</u>	<u>6.02</u>	2280	6.03	2290	6.00	756	18.2	<u>757</u>	<u>18.2</u>	757	18.2
481.wrf	706	15.8	707	15.8	<u>707</u>	<u>15.8</u>	<u>737</u>	<u>15.2</u>	737	15.2	737	15.2
482.sphinx3	1076	18.1	1090	17.9	<u>1085</u>	<u>18.0</u>	1055	18.5	1065	18.3	<u>1062</u>	<u>18.4</u>

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:
Enhanced Speedstep Technology = Disable
Hardware Prefetch = Enable, Adjacent Sector Prefetch = Enable
SnoopFilter = Disable



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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 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



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Base Optimization Flags

C benchmarks:
-fast -parallel

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

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Peak Portability Flags (Continued)

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:

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Peak Optimization Flags (Continued)

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

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-intel64.20080124.html>

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

<http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20080124.xml>

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Tested with SPEC CPU2006 v1.0.

Report generated on Tue Feb 19 19:13:49 2008 by SPEC CPU2006 PS/PDF formatter v5614.