



SPEC[®] CFP2006 Result

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Fujitsu Siemens Computers

SPECfp[®]_rate2006 = 50.7

PRIMERGY RX100 S5, Intel Xeon X3360, 2.83 GHz

SPECfp_rate_base2006 = 46.5

CPU2006 license: 22

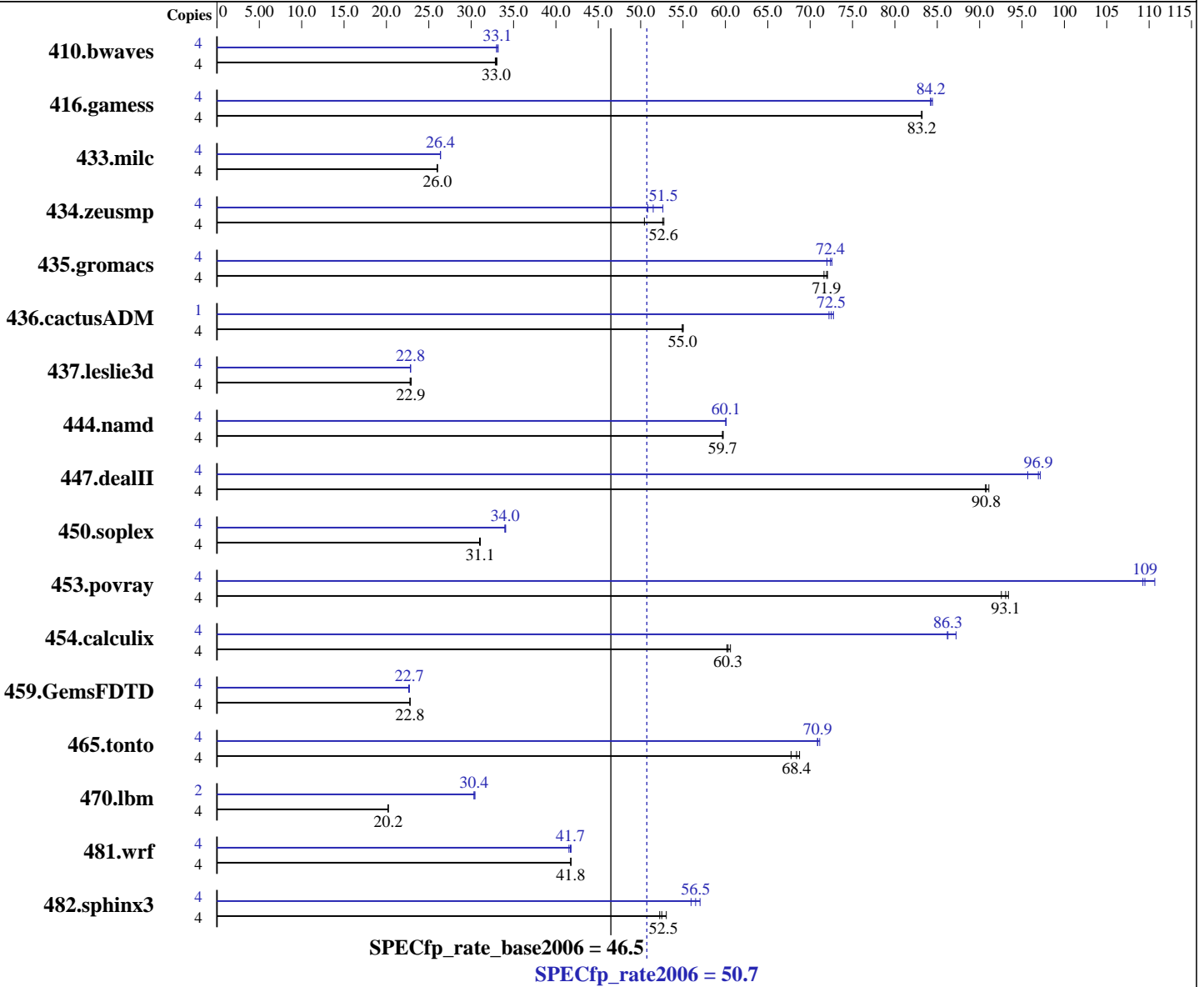
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Feb-2008

Hardware Availability: Mar-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X3360
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 2833
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 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) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 Version 10.1 - Build 20070725
 Auto Parallel: Yes
 File System: ext2
 System State: Multiuser, Runlevel 3
 Base Pointers: 64-bit

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L3 Cache: None
 Other Cache: None
 Memory: 8 GB (4x2 GB PC2-6400E, 2 rank, CAS 6-6-6, with ECC)
 Disk Subsystem: Western Digital WD5000AAKS (SATA, 500GB, 7200rpm)
 Other Hardware: None

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 | 4 | 1645 | 33.0 | 1650 | 33.0 | 1655 | 32.8 | 4 | 1643 | 33.1 | 1638 | 33.2 | 1648 | 33.0 |
| 416.gamess | 4 | 941 | 83.2 | 942 | 83.1 | 942 | 83.2 | 4 | 930 | 84.2 | 928 | 84.4 | 930 | 84.2 |
| 433.milc | 4 | 1412 | 26.0 | 1412 | 26.0 | 1411 | 26.0 | 4 | 1393 | 26.4 | 1393 | 26.4 | 1392 | 26.4 |
| 434.zeusmp | 4 | 692 | 52.6 | 722 | 50.4 | 690 | 52.7 | 4 | 707 | 51.5 | 716 | 50.9 | 692 | 52.6 |
| 435.gromacs | 4 | 396 | 72.1 | 399 | 71.6 | 397 | 71.9 | 4 | 395 | 72.4 | 397 | 72.0 | 394 | 72.6 |
| 436.cactusADM | 4 | 871 | 54.9 | 869 | 55.0 | 870 | 55.0 | 1 | 165 | 72.2 | 164 | 72.8 | 165 | 72.5 |
| 437.leslie3d | 4 | 1640 | 22.9 | 1650 | 22.8 | 1645 | 22.9 | 4 | 1647 | 22.8 | 1645 | 22.9 | 1647 | 22.8 |
| 444.namd | 4 | 537 | 59.7 | 538 | 59.7 | 538 | 59.7 | 4 | 534 | 60.0 | 534 | 60.1 | 534 | 60.1 |
| 447.dealII | 4 | 505 | 90.7 | 504 | 90.8 | 502 | 91.1 | 4 | 472 | 96.9 | 471 | 97.2 | 478 | 95.7 |
| 450.soplex | 4 | 1074 | 31.1 | 1073 | 31.1 | 1077 | 31.0 | 4 | 979 | 34.1 | 982 | 34.0 | 980 | 34.0 |
| 453.povray | 4 | 228 | 93.4 | 230 | 92.6 | 229 | 93.1 | 4 | 195 | 109 | 194 | 109 | 192 | 111 |
| 454.calculix | 4 | 547 | 60.3 | 545 | 60.6 | 548 | 60.2 | 4 | 383 | 86.3 | 378 | 87.2 | 383 | 86.2 |
| 459.GemsFDTD | 4 | 1863 | 22.8 | 1863 | 22.8 | 1862 | 22.8 | 4 | 1875 | 22.6 | 1870 | 22.7 | 1870 | 22.7 |
| 465.tonto | 4 | 573 | 68.8 | 575 | 68.4 | 581 | 67.7 | 4 | 553 | 71.1 | 555 | 70.9 | 556 | 70.9 |
| 470.lbm | 4 | 2720 | 20.2 | 2719 | 20.2 | 2720 | 20.2 | 2 | 902 | 30.5 | 905 | 30.4 | 906 | 30.3 |
| 481.wrf | 4 | 1070 | 41.7 | 1069 | 41.8 | 1070 | 41.8 | 4 | 1069 | 41.8 | 1071 | 41.7 | 1076 | 41.5 |
| 482.sphinx3 | 4 | 1470 | 53.0 | 1485 | 52.5 | 1492 | 52.2 | 4 | 1367 | 57.0 | 1380 | 56.5 | 1393 | 55.9 |

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

Operating System Notes

'OMP_NUM_THREADS' set to number of cores (default)
 'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

General Notes

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

All binaries were built with 64-bit Intel compiler except:
 437.leslie3d, 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.

BIOS configuration:

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General Notes (Continued)

Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

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

C++ benchmarks:
-fast

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Base Optimization Flags (Continued)

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

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Peak Portability Flags (Continued)

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

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:

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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 -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.20090713.02.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.20090713.02.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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