**SPEC® CFP2006 Result**

**Fujitsu**

PRIMERGY BX620 S6, Intel Xeon E5630, 2.53 GHz

<table>
<thead>
<tr>
<th>SPECfps®_rate2006</th>
<th>90.0</th>
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<tr>
<td>SPECfps_rate Base2006</td>
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</table>

**CPU2006 license:** 19
**Test sponsor:** Fujitsu
**Tested by:** Fujitsu

**Test date:** Sep-2010
**Hardware Availability:** Jul-2010
**Software Availability:** Jan-2010

| copied | 5.00 | 15.0 | 25.0 | 35.0 | 45.0 | 55.0 | 65.0 | 75.0 | 85.0 | 95.0 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 410.bwaves | 8 | 8 | 87.0 | 84.3 | 86.8 |
| 416.gamess | 8 | | | | |
| 433.milc | 8 | | | | |
| 434.zeusmp | 8 | | | | |
| 435.gromacs | 8 | 82.3 | 83.6 | 102 |
| 436.cactusADM | 8 | | | | |
| 437.leslie3d | 4 | 61.0 | 57.6 | 80.6 | 78.8 |
| 444.namd | 8 | | | | |
| 447.dealII | 8 | | | | |
| 450.soplex | 4 | 72.2 | 68.3 | | |
| 453.povray | 8 | | | | |
| 454.calculix | 8 | | | | |
| 459.GemsFDTD | 4 | 56.5 | 54.0 | 108 | 99.9 |
| 465.tonto | 8 | | | | |
| 470.lbm | 4 | 56.4 | 53.7 | 105 | 99.5 |
| 481.wrf | 8 | | | | |
| 482.sphinx3 | 8 | | | | |

**Hardware**

- **CPU Name:** Intel Xeon E5630
- **CPU Characteristics:** Intel Turbo Boost Technology up to 2.80 GHz
- **CPU MHZ:** 2533
- **FPU:** Integrated
- **CPU(s) enabled:** 4 cores, 1 chip, 4 cores/chip, 2 threads/core
- **CPU(s) orderable:** 1, 2 chips
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 256 KB I+D on chip per core

**Software**

- **Operating System:** SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
- **Compiler:** Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1
- **Auto Parallel:** No
- **File System:** ext3
- **System State:** Run level 3 (multi-user)
SPEC CFP2006 Result

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L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (6 x 8 GB 2Rx4 PC3L-10600R, ECC, running at 1067 MHz and CL7)
Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM
Other Hardware: --

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

<table>
<thead>
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<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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</table>

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

Submit Notes

The config file option 'submit' was used.

numactl was used to bind copies to the cores

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

Platform Notes

BIOS configuration:
Data Reuse Optimization = Disable
Performance/Power Setting = Traditional
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SPECfp_rate2006 = 90.0
SPECfp_rate_base2006 = 86.8

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Sep-2010
Hardware Availability: Jul-2010
Software Availability: Jan-2010

General Notes
For information about Fujitsu please visit: http://www.fujitsu.com
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

Base Compiler Invocation

C benchmarks:
   icc  -m64

C++ benchmarks:
   icpc  -m64

Fortran benchmarks:
   ifort  -m64

Benchmarks using both Fortran and C:
   icc  -m64 ifort  -m64

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 -nofor_main
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
   -xSSE4.2 -ipo -O3 -no-prec-div -static

C++ benchmarks:
   -xSSE4.2 -ipo -O3 -no-prec-div -static

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Base Optimization Flags (Continued)

Fortran benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:
-xSSE4.2 -ipo -O3 -no-prec-div -static

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):
icpc -m64

450.soplex: icpc -m32

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

Peak Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.games: -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
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
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Tested by: Fujitsu
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Software Availability: Jan-2010

Peak Optimization Flags

C benchmarks:
- 433.milc: -xsse4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2) -03 (pass 2)
  -no-prec-div (pass 2) -static (pass 2) -prof-use (pass 2)
  -fno-alias -opt-prefetch
- 470.lbm: -xsse4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2) -03 (pass 2)
  -no-prec-div (pass 2) -static (pass 2) -prof-use (pass 2)
  -opt-malloc-options=3 -ansi-alias -auto-ilp32
- 482.sphinx3: -xsse4.2 -ipo -03 -no-prec-div -static -unroll2

C++ benchmarks:
- 444.namd: -xsse4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2) -03 (pass 2)
  -no-prec-div (pass 2) -static (pass 2) -prof-use (pass 2)
  -fno-alias -auto-ilp32
- 447.dealII: basepeak = yes
- 450.soplex: -xsse4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2) -03 (pass 2)
  -no-prec-div (pass 2) -static (pass 2) -prof-use (pass 2)
  -opt-malloc-options=3
- 453.povray: -xsse4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2) -03 (pass 2)
  -no-prec-div (pass 2) -static (pass 2) -prof-use (pass 2)
  -unroll4 -ansi-alias

Fortran benchmarks:
- 410.bwaves: -xsse4.2 -ipo -03 -no-prec-div -static -opt-prefetch
- 416.gamess: basepeak = yes
- 434.zeusmp: basepeak = yes
- 437.leslie3d: -xsse4.2 -ipo -03 -no-prec-div -static
- 459.GemsFDTD: -xsse4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2) -03 (pass 2)
  -no-prec-div (pass 2) -static (pass 2) -prof-use (pass 2)
  -unroll2 -Ob0
- 465.tonto: -xsse4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2) -03 (pass 2)
  -no-prec-div (pass 2) -static (pass 2) -prof-use (pass 2)
  -unroll4 -auto -inline-calloc -opt-malloc-options=3

 Benchmarks using both Fortran and C:
- 435.gromacs: -xsse4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2) -03 (pass 2)
  -no-prec-div (pass 2) -static (pass 2) -prof-use (pass 2)
  -opt-prefetch -auto-ilp32

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Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes
454.calculix: basepeak = yes
481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

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

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

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