SPEC® CFP2006 Result

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Fujitsu

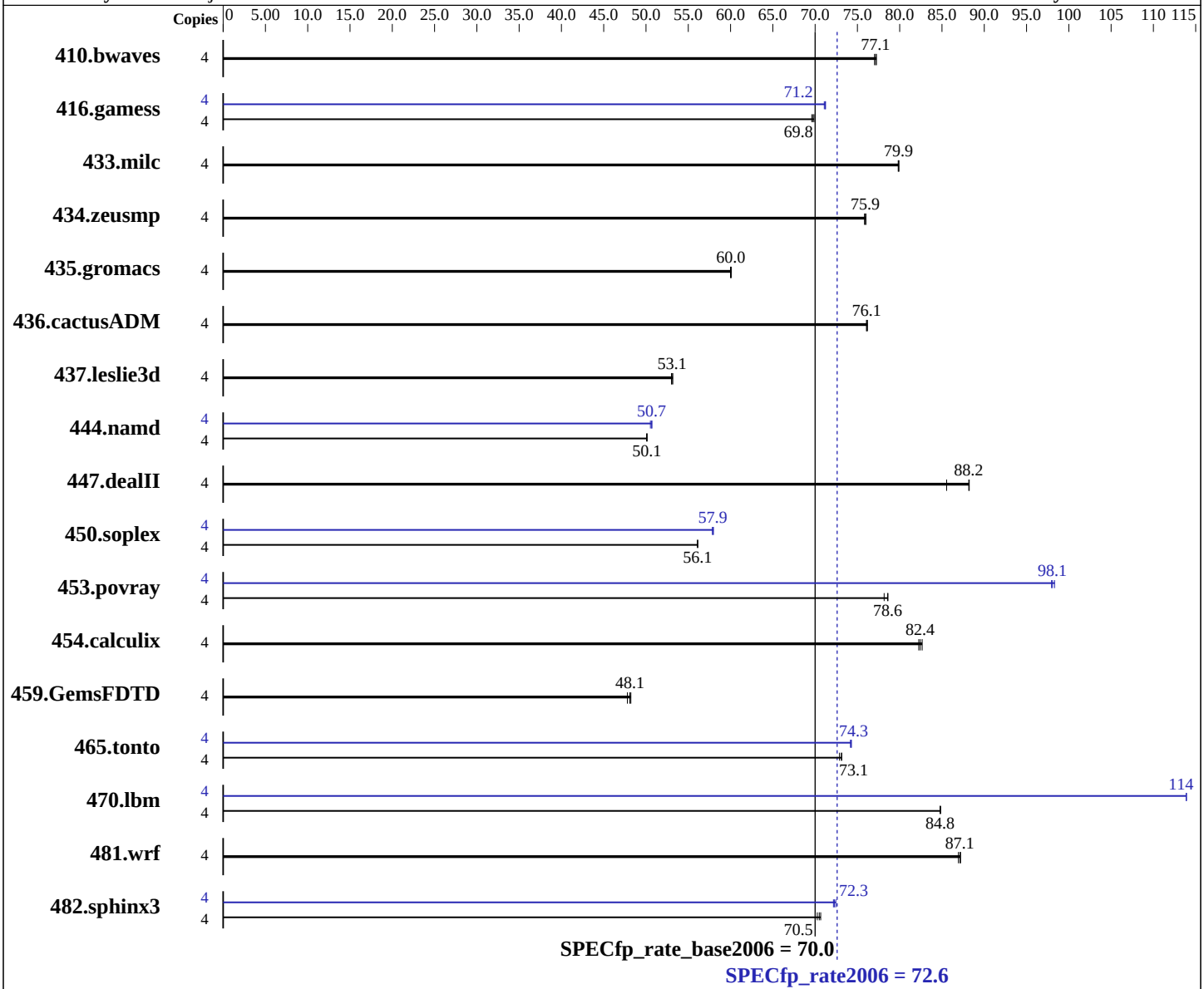
PRIMERGY RX300 S6, Intel Xeon E5606, 2.13 GHz

SPECfp®_rate2006 = 72.6

SPECfp_rate_base2006 = 70.0

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

Test date: Dec-2010
Hardware Availability: Feb-2011
Software Availability: Nov-2010



Hardware

CPU Name:	Intel Xeon E5606
CPU Characteristics:	
CPU MHz:	2133
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
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

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Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64) with SP1, Kernel 2.6.32.12-0.7-default
Compiler:	Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0.0.082 Build 20101006
Auto Parallel:	No
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit

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L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 24 GB (6 x 4 GB 2Rx4 PC3-10600R-9, ECC, running at 1067 MHz and CL7)
Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM
Other Hardware: --

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	706	77.0	704	77.3	**705**	**77.1**	4	706	77.0	704	77.3	**705**	**77.1**
416.gamess	4	**1123**	**69.8**	1121	69.9	1125	69.6	4	**1100**	**71.2**	1099	71.2	1102	71.1
433.milc	4	460	79.8	**460**	**79.9**	460	79.9	4	460	79.8	**460**	**79.9**	460	79.9
434.zeusmp	4	480	75.8	**479**	**75.9**	479	76.0	4	480	75.8	**479**	**75.9**	479	76.0
435.gromacs	4	**476**	**60.0**	475	60.1	476	60.0	4	**476**	**60.0**	475	60.1	476	60.0
436.cactusADM	4	**628**	**76.1**	627	76.2	628	76.1	4	**628**	**76.1**	627	76.2	628	76.1
437.leslie3d	4	**708**	**53.1**	709	53.0	707	53.2	4	**708**	**53.1**	709	53.0	707	53.2
444.namd	4	640	50.1	641	50.1	**640**	**50.1**	4	635	50.5	633	50.7	**633**	**50.7**
447.dealII	4	**519**	**88.2**	519	88.2	535	85.6	4	**519**	**88.2**	519	88.2	535	85.6
450.soplex	4	**595**	**56.1**	595	56.1	595	56.1	4	577	57.8	575	58.0	**576**	**57.9**
453.povray	4	**271**	**78.6**	272	78.2	271	78.6	4	216	98.3	**217**	**98.1**	217	98.0
454.calculix	4	399	82.7	401	82.3	**400**	**82.4**	4	399	82.7	401	82.3	**400**	**82.4**
459.GemsFDTD	4	880	48.2	888	47.8	**882**	**48.1**	4	880	48.2	888	47.8	**882**	**48.1**
465.tonto	4	538	73.1	**538**	**73.1**	540	72.9	4	**530**	**74.3**	530	74.3	531	74.2
470.lbm	4	**648**	**84.8**	648	84.8	648	84.8	4	**483**	**114**	482	114	483	114
481.wrf	4	512	87.2	**513**	**87.1**	514	86.9	4	512	87.2	**513**	**87.1**	514	86.9
482.sphinx3	4	1110	70.3	**1106**	**70.5**	1103	70.7	4	1080	72.2	**1078**	**72.3**	1076	72.4

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
Hugepages were not configured on the system
```

Platform Notes

```
BIOS configuration:
Data Reuse Optimization = Disable
```

General Notes

```
This result was measured on the PRIMERGY RX300 S6. The PRIMERGY RX300 S6
and the PRIMERGY TX300 S6 are electronically equivalent.

For information about Fujitsu please visit: http://www.fujitsu.com
Binaries were compiled on SLES 10 SP1 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
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:
```
-xSSE4.2 -ipo -O3 -no-prec-div -ansi-alias
```

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Base Optimization Flags (Continued)

C++ benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -ansi-alias`

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

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

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.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`
470.lbm: `-DSPEC_CPU_LP64`
481.wrf: `-DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3 -ansi-alias -opt-prefetch -auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(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) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2 -inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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Peak Optimization Flags (Continued)

481.wrf: `basepeak = yes`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110222.00.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110222.00.xml`

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

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