SPEC® CFP2006 Result

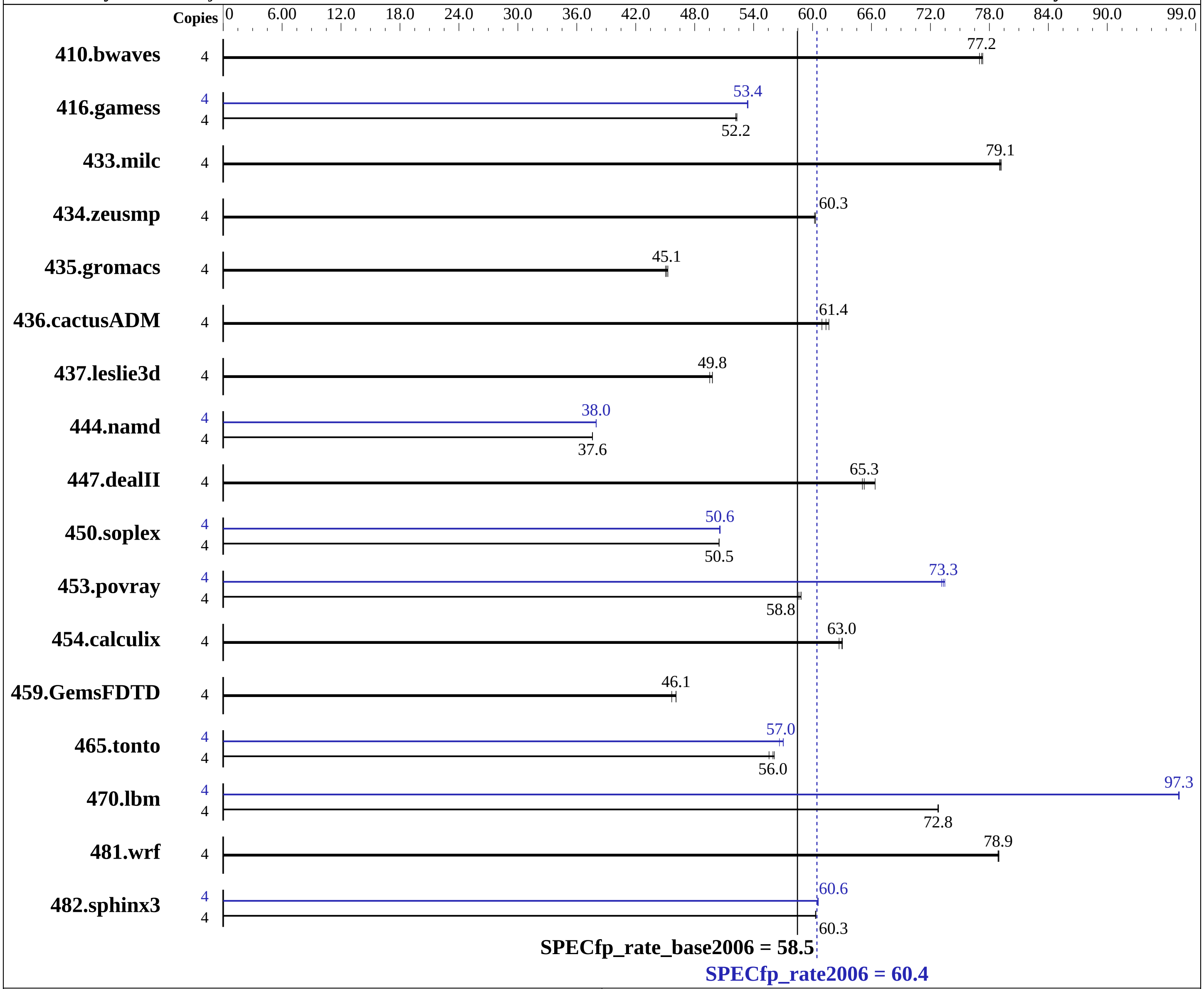
Fujitsu

PRIMERGY TX300 S6, Intel Xeon E5603, 1.60 GHz

SPECfp®_rate2006 = 60.4

SPECfp_rate_base2006 = 58.5

CPU2006 license:	19	**Test date:**	Jan-2011
Test sponsor:	Fujitsu	**Hardware Availability:**	Feb-2011
Tested by:	Fujitsu	**Software Availability:**	Nov-2010



Hardware

CPU Name:	Intel Xeon E5603
CPU Characteristics:	
CPU MHz:	1600
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:	4 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:	Microquill SmartHeap V9.01

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	703	77.3	**704**	**77.2**	4	706	77.0	703	77.3	**704**	**77.2**
416.gamess	4	1497	52.3	1500	52.2	**1500**	**52.2**	4	1466	53.4	1468	53.4	**1466**	**53.4**
433.milc	4	464	79.2	465	79.0	**464**	**79.1**	4	464	79.2	465	79.0	**464**	**79.1**
434.zeusmp	4	604	60.3	605	60.2	**604**	**60.3**	4	604	60.3	605	60.2	**604**	**60.3**
435.gromacs	4	631	45.3	634	45.0	**633**	**45.1**	4	631	45.3	634	45.0	**633**	**45.1**
436.cactusADM	4	784	61.0	775	61.7	**779**	**61.4**	4	784	61.0	775	61.7	**779**	**61.4**
437.leslie3d	4	**755**	**49.8**	759	49.5	755	49.8	4	**755**	**49.8**	759	49.5	755	49.8
444.namd	4	853	37.6	853	37.6	**853**	**37.6**	4	**845**	**38.0**	845	38.0	845	38.0
447.dealII	4	**701**	**65.3**	703	65.1	689	66.4	4	**701**	**65.3**	703	65.1	689	66.4
450.soplex	4	661	50.5	661	50.5	**661**	**50.5**	4	660	50.5	**660**	**50.6**	659	50.6
453.povray	4	363	58.6	362	58.8	**362**	**58.8**	4	**290**	**73.3**	291	73.1	290	73.5
454.calculix	4	526	62.7	**524**	**63.0**	523	63.0	4	526	62.7	**524**	**63.0**	523	63.0
459.GemsFDTD	4	**921**	**46.1**	920	46.1	929	45.7	4	**921**	**46.1**	920	46.1	929	45.7
465.tonto	4	701	56.1	708	55.6	**703**	**56.0**	4	**690**	**57.0**	690	57.0	695	56.6
470.lbm	4	755	72.8	755	72.8	**755**	**72.8**	4	565	97.3	**565**	**97.3**	565	97.2
481.wrf	4	566	79.0	566	78.9	**566**	**78.9**	4	566	79.0	566	78.9	**566**	**78.9**
482.sphinx3	4	**1293**	**60.3**	1293	60.3	1292	60.3	4	**1287**	**60.6**	1287	60.6	1288	60.5

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 TX300 S6. The PRIMERGY TX300 S6
and the PRIMERGY RX300 S6 are electronically equivalent.

For information about Fujitsu please visit: http://www.fujitsu.com
Binaries were compiled on RHEL5.5 with binutils-2.17.50.0.6-14.el5
```

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`

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

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