SPEC® CFP2006 Result

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Fujitsu

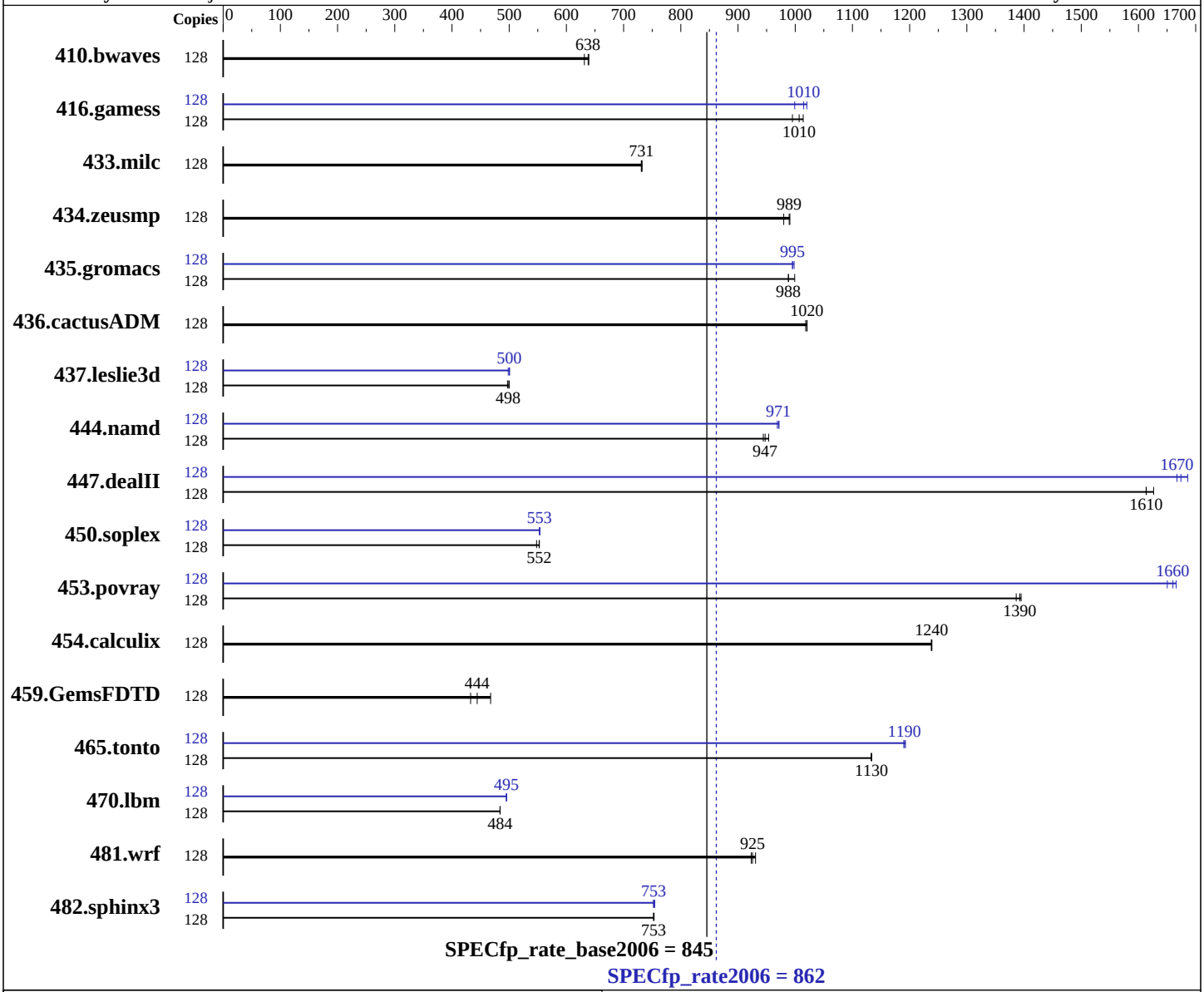
PRIMERGY RX900 S1, Intel Xeon X7550, 2.00 GHz

SPECfp®_rate2006 = 862

SPECfp_rate_base2006 = 845

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

Test date: Aug-2010
Hardware Availability: Aug-2010
Software Availability: Feb-2010



Hardware

CPU Name:	Intel Xeon X7550
CPU Characteristics:	Intel Turbo Boost Technology up to 2.40 GHz
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	64 cores, 8 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	4,6,8 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), Kernel 2.6.27.19-5-default
Compiler:	Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20100203 Package ID: l_cproc_p_11.1.069
Auto Parallel:	No
File System:	ext2
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit

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L3 Cache: 18 MB I+D on chip per chip
Other Cache: None
Memory: 1 TB (128 x 8 GB DDR3-1066 DIMMs)
Disk Subsystem: 2 x 147 GB (SAS, 15000 RPM, RAID0)
Other Hardware: None

Peak Pointers: 64-bit
Other Software: N/A

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	128	**2727**	**638**	2721	639	2755	631	128	**2727**	**638**	2721	639	2755	631
416.gamess	128	**2489**	**1010**	2472	1010	2519	995	128	**2470**	**1010**	2509	999	2456	1020
433.milc	128	**1607**	**731**	1604	732	1607	731	128	**1607**	**731**	1604	732	1607	731
434.zeusmp	128	**1177**	**989**	1176	991	1189	980	128	**1177**	**989**	1176	991	1189	980
435.gromacs	128	925	988	915	999	**925**	**988**	128	**918**	**995**	916	998	918	995
436.cactusADM	128	1498	1020	1502	1020	**1499**	**1020**	128	1498	1020	1502	1020	**1499**	**1020**
437.leslie3d	128	2406	500	2421	497	**2416**	**498**	128	2415	498	2403	501	**2406**	**500**
444.namd	128	**1084**	**947**	1087	944	1077	954	128	**1058**	**971**	1056	972	1060	969
447.dealII	128	**907**	**1610**	900	1630	908	1610	128	878	1670	868	1690	**875**	**1670**
450.soplex	128	1948	548	**1933**	**552**	1931	553	128	1931	553	1928	554	**1930**	**553**
453.povray	128	**489**	**1390**	488	1390	491	1390	128	**410**	**1660**	413	1650	409	1670
454.calculix	128	852	1240	**853**	**1240**	853	1240	128	852	1240	**853**	**1240**	853	1240
459.GemsFDTD	128	**3058**	**444**	3140	433	2905	468	128	**3058**	**444**	3140	433	2905	468
465.tonto	128	**1111**	**1130**	1111	1130	1112	1130	128	1056	1190	1059	1190	**1058**	**1190**
470.lbm	128	3633	484	3634	484	**3634**	**484**	128	**3551**	**495**	3550	495	3552	495
481.wrf	128	**1545**	**925**	1536	931	1549	923	128	**1545**	**925**	1536	931	1549	923
482.sphinx3	128	3312	753	3316	752	**3315**	**753**	128	3317	752	**3314**	**753**	3307	754

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

```
The following command was used prior to run

   ulimit -s unlimited
   echo 1 > /proc/sys/vm/zone_reclaim_mode
```

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 -static

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

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:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

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

Peak Portability Flags

Same as Base Portability Flags

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) -static(pass 2) -prof-use(pass 2)
-opt-malloc-options=3 -ansi-alias -auto-ilp32

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

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-fno-alias -auto-ilp32

447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias -scalar-rep-

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

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Peak Optimization Flags (Continued)

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) -static(pass 2) -prof-use(pass 2) -unroll2 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static

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) -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) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -opt-prefetch -auto-ilp32

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
http://www.spec.org/cpu2006/flags/Fujitsu.RX900.ic11.1-linux64.20100901.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Fujitsu.RX900.ic11.1-linux64.20100901.xml

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 12:20:25 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 31 August 2010.