SPEC® CFP2006 Result

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Fujitsu

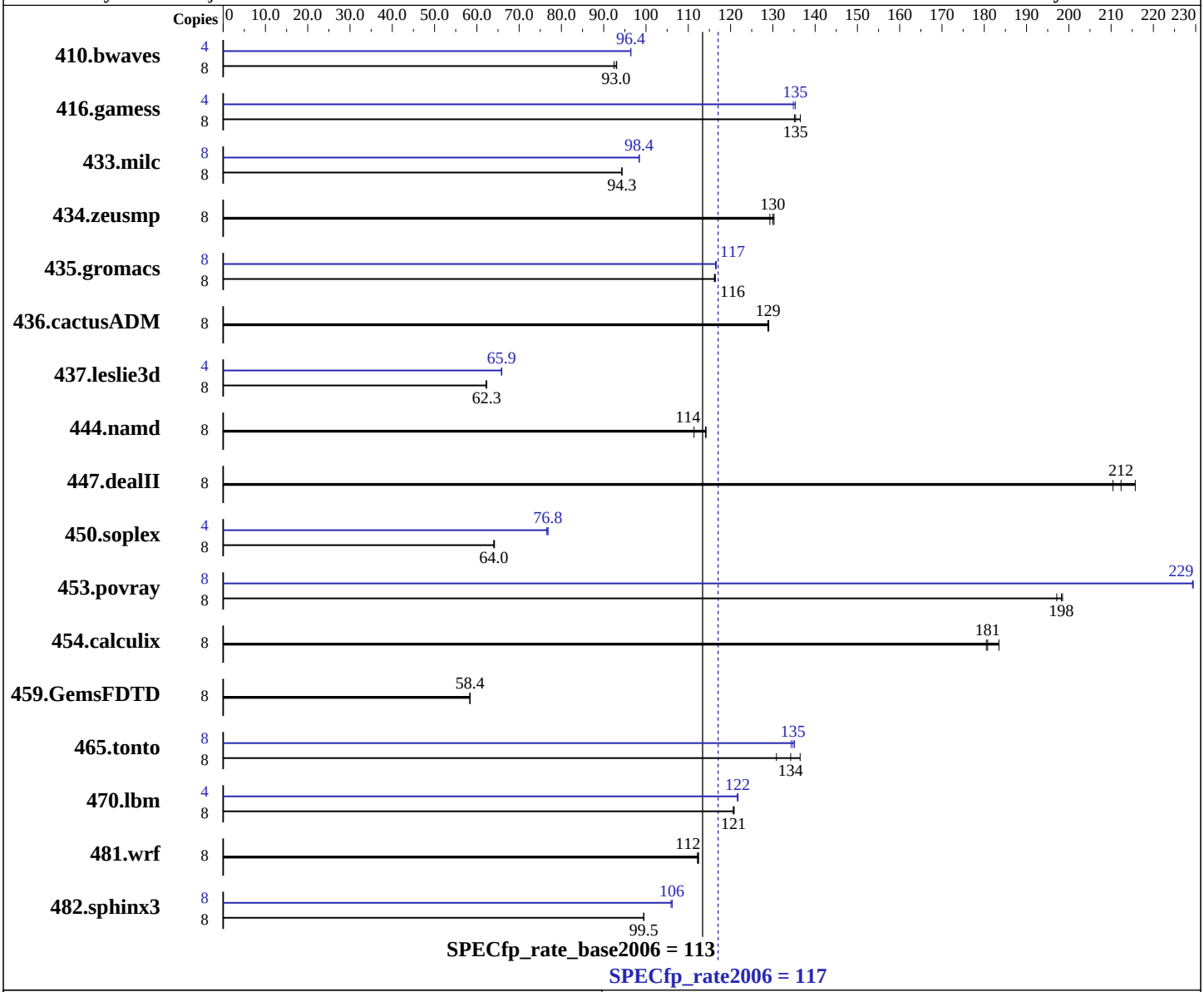
PRIMERGY RX100 S7, Intel Xeon E3-1230, 3.20 GHz

SPECfp®_rate2006 = 117

SPECfp_rate_base2006 = 113

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

Test date: Apr-2011
Hardware Availability: Jun-2011
Software Availability: Jan-2011



Hardware

CPU Name:	Intel Xeon E3-1230
CPU Characteristics:	Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz:	3200
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 chip
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 12.0.1.116 Build 20101116
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: 8 GB (2 x 4 GB 2Rx8 PC3-10600E-9, ECC)
Disk Subsystem: 1 x SATA, 300 GB, 7200 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	8	1176	92.4	1168	93.1	**1169**	**93.0**	4	**564**	**96.4**	564	96.4	564	96.4
416.gamess	8	**1157**	**135**	1148	137	1159	135	4	579	135	581	135	**579**	**135**
433.milc	8	779	94.3	779	94.3	**779**	**94.3**	8	746	98.4	**746**	**98.4**	746	98.4
434.zeusmp	8	559	130	**560**	**130**	563	129	8	559	130	**560**	**130**	563	129
435.gromacs	8	**491**	**116**	492	116	491	116	8	490	117	491	116	**490**	**117**
436.cactusADM	8	741	129	**742**	**129**	742	129	8	741	129	**742**	**129**	742	129
437.leslie3d	8	**1207**	**62.3**	1210	62.1	1206	62.3	4	570	65.9	571	65.8	**571**	**65.9**
444.namd	8	**562**	**114**	562	114	576	111	8	**562**	**114**	562	114	576	111
447.dealII	8	424	216	435	210	**431**	**212**	8	424	216	435	210	**431**	**212**
450.soplex	8	**1042**	**64.0**	1040	64.2	1042	64.0	4	**434**	**76.8**	434	76.8	436	76.5
453.povray	8	216	197	214	199	**215**	**198**	8	186	229	185	229	**186**	**229**
454.calculix	8	366	180	**365**	**181**	360	183	8	366	180	**365**	**181**	360	183
459.GemsFDTD	8	1454	58.4	1455	58.3	**1454**	**58.4**	8	1454	58.4	1455	58.3	**1454**	**58.4**
465.tonto	8	**587**	**134**	602	131	577	136	8	586	134	583	135	**584**	**135**
470.lbm	8	909	121	**911**	**121**	911	121	4	**452**	**122**	451	122	452	122
481.wrf	8	795	112	**796**	**112**	797	112	8	795	112	**796**	**112**	797	112
482.sphinx3	8	1567	99.5	**1567**	**99.5**	1568	99.5	8	**1469**	**106**	1472	106	1468	106

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
Large pages were not enabled for this run
```

General Notes

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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:
-xAVX -ipo -O3 -no-prec-div -static -ansi-alias

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -static -ansi-alias

Fortran benchmarks:
-xAVX -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:
-xAVX -ipo -O3 -no-prec-div -static -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: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32

470.lbm: -xAVX(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

Continued on next page

Peak Optimization Flags (Continued)

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: basepeak = yes

450.soplex: -xAVX(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
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

410.bwaves: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static

416.gamess: -xAVX(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- -static

434.zeusmp: basepeak = yes

437.leslie3d: -xAVX -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: -xAVX(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
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

435.gromacs: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
-static -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.20110316.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Intel-Linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.20110316.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Intel-Linux64.xml

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

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