



SPEC® CFP2006 Result

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Fujitsu

SPECfp®2006 = 40.9

PRIMERGY TX140 S1p, Intel Pentium G640, 2.80 GHz

SPECfp_base2006 = 40.2

CPU2006 license: 19

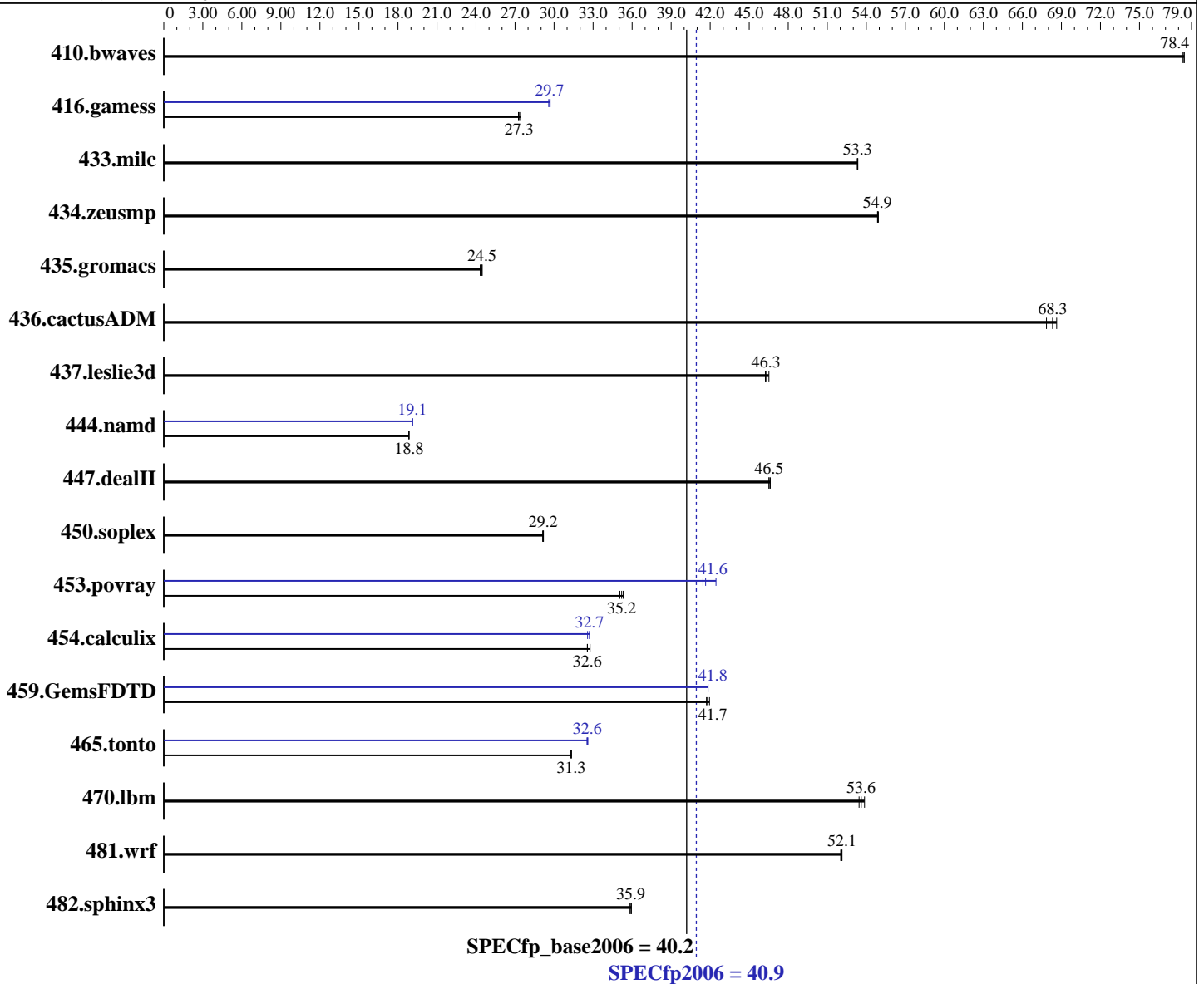
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: May-2012

Hardware Availability: Jun-2012

Software Availability: Feb-2012



Hardware

CPU Name: Intel Pentium G640
 CPU Characteristics:
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 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: Red Hat Enterprise Linux Server release 6.2 (Santiago)
 2.6.32-220.el6.x86_64
 Compiler: C/C++: Version 12.1.0.293 of Intel C++ Studio XE for Linux;
 Fortran: Version 12.1.0.293 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4

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L3 Cache: 3 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 GB (2 x 4 GB 2Rx8 PC3-12800E-11, ECC, running at 1067 MHz and CL7)
 Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
 Other Hardware: None

System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	173	78.3	173	78.4	173	78.4	173	78.3	173	78.4	173	78.4
416.gamess	717	27.3	714	27.4	718	27.3	660	29.7	659	29.7	662	29.6
433.milc	172	53.3	172	53.3	172	53.3	172	53.3	172	53.3	172	53.3
434.zeusmp	166	54.9	166	54.9	166	54.9	166	54.9	166	54.9	166	54.9
435.gromacs	292	24.5	294	24.3	292	24.5	292	24.5	294	24.3	292	24.5
436.cactusADM	175	68.3	174	68.6	176	67.8	175	68.3	174	68.6	176	67.8
437.leslie3d	203	46.3	203	46.2	202	46.5	203	46.3	203	46.2	202	46.5
444.namd	426	18.8	426	18.8	426	18.8	419	19.1	420	19.1	420	19.1
447.dealII	245	46.6	246	46.5	246	46.5	245	46.6	246	46.5	246	46.5
450.soplex	286	29.2	286	29.2	286	29.1	286	29.2	286	29.2	286	29.1
453.povray	151	35.2	152	35.1	151	35.3	128	41.6	128	41.4	125	42.4
454.calculix	252	32.8	253	32.6	253	32.6	252	32.7	253	32.6	252	32.7
459.GemsFDTD	254	41.7	254	41.7	253	41.9	254	41.8	254	41.8	254	41.8
465.tonto	314	31.3	314	31.3	315	31.3	302	32.6	303	32.5	302	32.6
470.lbm	256	53.6	255	53.9	257	53.4	256	53.6	255	53.9	257	53.4
481.wrf	215	52.0	214	52.1	214	52.1	215	52.0	214	52.1	214	52.1
482.sphinx3	542	35.9	544	35.8	543	35.9	542	35.9	544	35.8	543	35.9

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

Platform Notes

BIOS configuration:
 Intel HT Technology = Disable



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General Notes

Environment variables set by runspec before the start of the run:

KMP_AFFINITY = "granularity=fine,scatter"

LD_LIBRARY_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64"

OMP_NUM_THREADS = "2"

Binaries compiled on a system with 1x E3-1270v2 CPU + 32 GB

memory using RHEL6.2

For information about Fujitsu please visit: <http://www.fujitsu.com>

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.deallI: -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



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Base Optimization Flags

C benchmarks:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias`

C++ benchmarks:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias`

Fortran benchmarks:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch`

Benchmarks using both Fortran and C:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias`

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: basepeak = yes`

`482.sphinx3: basepeak = yes`

C++ benchmarks:

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Peak Optimization Flags (Continued)

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.dealIII: basepeak = yes

450.soplex: basepeak = yes

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- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -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 -opt-prefetch -parallel

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) -inline-calloc
-opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

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-ic12.1-official-linux64.20111122.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.xml>



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

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 08:42:05 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 19 June 2012.