



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = 107

PRIMERGY RX2530 M1, Intel Xeon E5-2650 v3, 2.3 GHz

SPECfp_base2006 = 103

CPU2006 license: 19

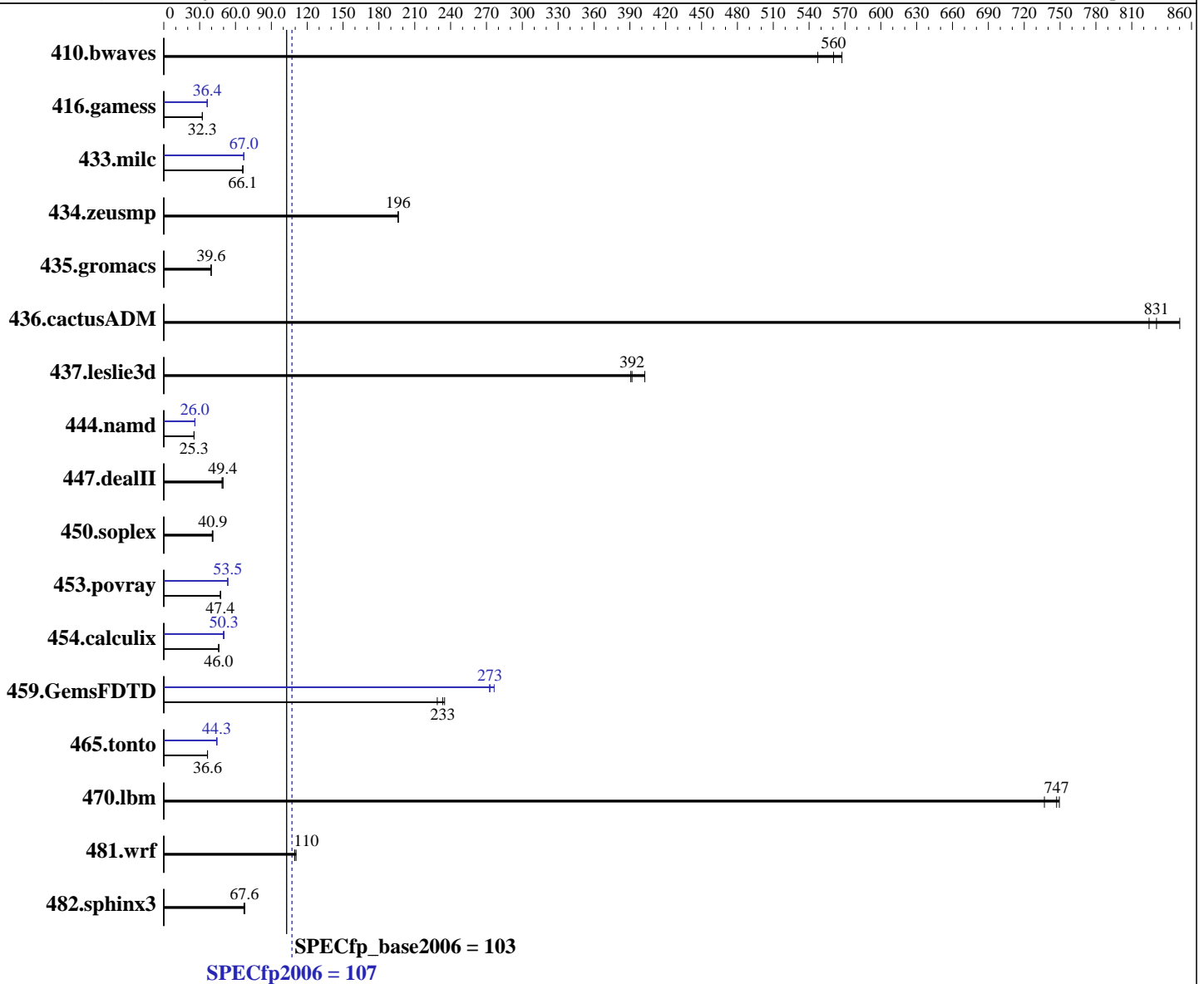
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Feb-2015

Hardware Availability: Feb-2015

Software Availability: Sep-2014



Hardware

CPU Name: Intel Xeon E5-2650 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 20 cores, 2 chips, 10 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 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 7.0 (Maipo)
 Kernel 3.10.0-123.8.1.el7.x86_64
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux;
 Fortran: Version 15.0.0.090 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: xfs

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L3 Cache: 25 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
 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	<u>24.2</u>	<u>560</u>	24.8	547	23.9	567	<u>24.2</u>	<u>560</u>	24.8	547	23.9	567
416.gamess	608	32.2	605	32.3	<u>606</u>	<u>32.3</u>	539	36.3	538	36.4	<u>538</u>	<u>36.4</u>
433.milc	<u>139</u>	<u>66.1</u>	139	66.2	139	66.1	137	67.0	<u>137</u>	<u>67.0</u>	137	66.9
434.zeusmp	46.4	196	46.4	196	<u>46.4</u>	<u>196</u>	46.4	196	46.4	196	<u>46.4</u>	<u>196</u>
435.gromacs	180	39.6	<u>180</u>	<u>39.6</u>	180	39.7	180	39.6	<u>180</u>	<u>39.6</u>	180	39.7
436.cactusADM	<u>14.4</u>	<u>831</u>	14.1	850	14.5	824	<u>14.4</u>	<u>831</u>	14.1	850	14.5	824
437.leslie3d	23.4	403	24.1	391	<u>24.0</u>	<u>392</u>	23.4	403	24.1	391	<u>24.0</u>	<u>392</u>
444.namd	316	25.4	<u>317</u>	<u>25.3</u>	317	25.3	308	26.0	308	26.0	<u>308</u>	<u>26.0</u>
447.dealII	231	49.5	<u>231</u>	<u>49.4</u>	235	48.7	231	49.5	<u>231</u>	<u>49.4</u>	235	48.7
450.soplex	<u>204</u>	<u>40.9</u>	206	40.5	203	41.0	<u>204</u>	<u>40.9</u>	206	40.5	203	41.0
453.povray	112	47.4	<u>112</u>	<u>47.4</u>	112	47.6	99.5	53.5	<u>99.4</u>	<u>53.5</u>	99.4	53.5
454.calculix	180	45.9	179	46.0	<u>179</u>	<u>46.0</u>	<u>164</u>	<u>50.3</u>	164	50.4	165	49.8
459.GemsFDTD	<u>45.5</u>	<u>233</u>	45.2	235	46.4	229	38.9	273	<u>38.9</u>	<u>273</u>	38.4	276
465.tonto	<u>269</u>	<u>36.6</u>	269	36.6	269	36.5	222	44.2	221	44.5	<u>222</u>	<u>44.3</u>
470.lbm	18.6	737	<u>18.4</u>	<u>747</u>	18.3	749	18.6	737	<u>18.4</u>	<u>747</u>	18.3	749
481.wrf	101	111	<u>102</u>	<u>110</u>	102	110	101	111	<u>102</u>	<u>110</u>	102	110
482.sphinx3	291	67.0	<u>288</u>	<u>67.6</u>	288	67.7	291	67.0	<u>288</u>	<u>67.6</u>	288	67.7

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"

Platform Notes

BIOS configuration:
 Energy Performance = Performance
 Utilization Profile = Unbalanced
 QPI snoop mode: Home Snoop
 COD Enable = Disabled, Early Snoop = Disabled
 CPU C1E Support = Disabled



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General Notes

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

KMP_AFFINITY = "granularity=fine,compact,1,0"

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

OMP_NUM_THREADS = "20"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0

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.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



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Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

Fortran benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xCORE-AVX2 -ipo -O3 -no-prec-div -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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-auto-ilp32 -ansi-alias

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

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Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xCORE-AVX2(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: basepeak = yes

453.povray: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2 -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-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.html>



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

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.xml>

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

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