



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = 104

PRIMERGY RX2530 M1, Intel Xeon E5-2683 v3, 2.0 GHz

SPECfp_base2006 = 99.4

CPU2006 license: 19

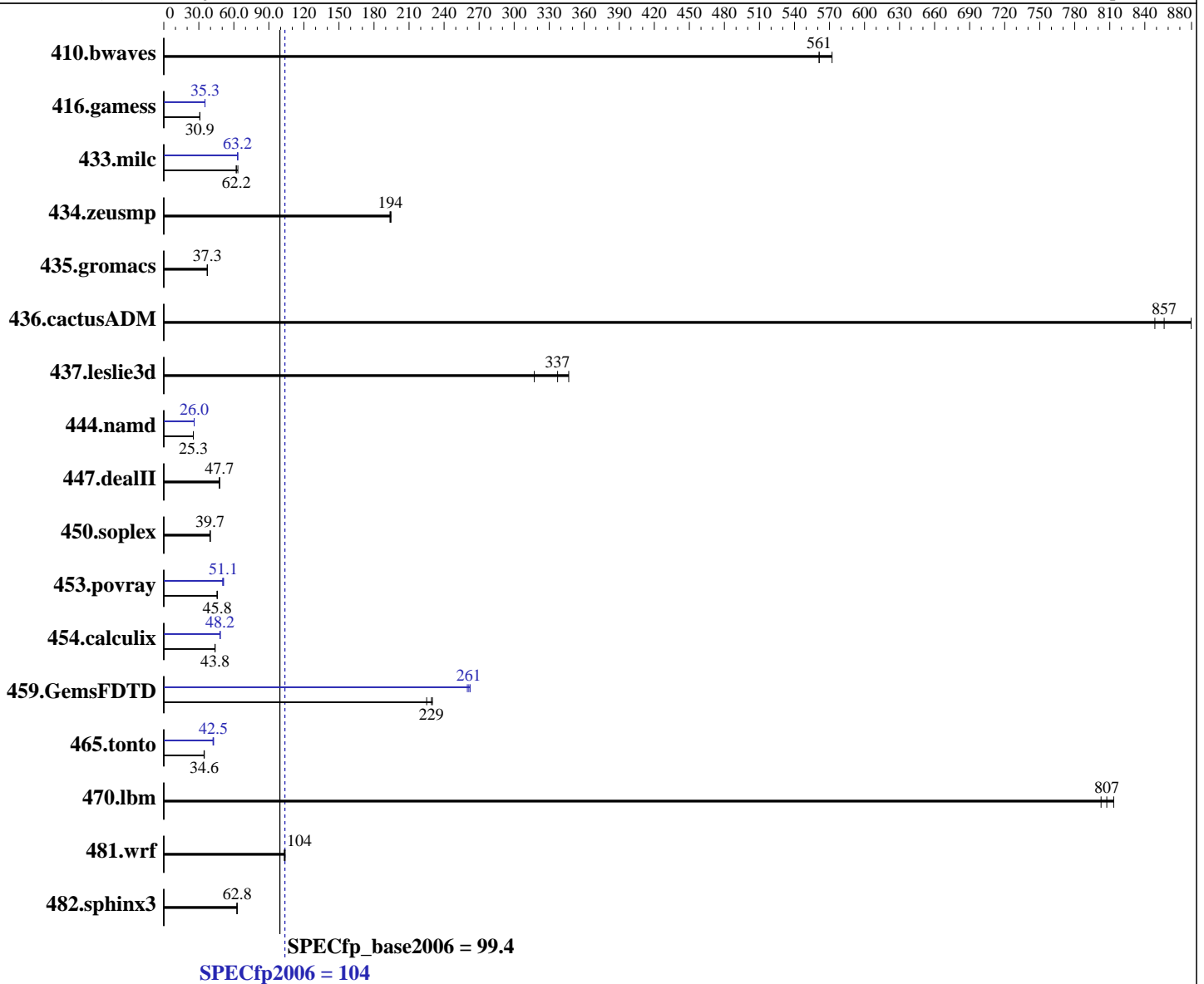
Test date: Mar-2015

Test sponsor: Fujitsu

Hardware Availability: Feb-2015

Tested by: Fujitsu

Software Availability: Sep-2014



Hardware

CPU Name: Intel Xeon E5-2683 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz
 CPU MHz: 2000
 FPU: Integrated
 CPU(s) enabled: 28 cores, 2 chips, 14 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: 35 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	23.7	572	24.2	561	<u>24.2</u>	<u>561</u>	23.7	572	24.2	561	<u>24.2</u>	<u>561</u>
416.gamess	633	31.0	<u>634</u>	<u>30.9</u>	635	30.8	556	35.2	<u>555</u>	<u>35.3</u>	555	35.3
433.milc	<u>148</u>	<u>62.2</u>	148	62.0	145	63.4	145	63.3	145	63.2	<u>145</u>	<u>63.2</u>
434.zeusmp	46.8	195	<u>46.9</u>	<u>194</u>	47.0	194	46.8	195	<u>46.9</u>	<u>194</u>	47.0	194
435.gromacs	<u>192</u>	<u>37.3</u>	191	37.3	192	37.2	<u>192</u>	<u>37.3</u>	191	37.3	192	37.2
436.cactusADM	13.6	880	<u>14.0</u>	<u>857</u>	14.1	849	13.6	880	<u>14.0</u>	<u>857</u>	14.1	849
437.leslie3d	27.1	347	29.6	317	<u>27.9</u>	<u>337</u>	27.1	347	29.6	317	<u>27.9</u>	<u>337</u>
444.namd	317	25.3	<u>317</u>	<u>25.3</u>	317	25.3	<u>308</u>	<u>26.0</u>	308	26.0	309	26.0
447.dealII	240	47.7	240	47.7	<u>240</u>	<u>47.7</u>	240	47.7	240	47.7	<u>240</u>	<u>47.7</u>
450.soplex	209	39.8	<u>210</u>	<u>39.7</u>	211	39.6	209	39.8	<u>210</u>	<u>39.7</u>	211	39.6
453.povray	117	45.6	116	45.8	<u>116</u>	<u>45.8</u>	<u>104</u>	<u>51.1</u>	104	51.1	106	50.4
454.calculix	188	44.0	188	43.8	<u>188</u>	<u>43.8</u>	171	48.3	<u>171</u>	<u>48.2</u>	171	48.2
459.GemsFDTD	<u>46.3</u>	<u>229</u>	46.1	230	47.1	225	<u>40.6</u>	<u>261</u>	40.4	262	40.8	260
465.tonto	286	34.4	<u>285</u>	<u>34.6</u>	284	34.7	<u>231</u>	<u>42.5</u>	234	42.1	231	42.6
470.lbm	<u>17.0</u>	<u>807</u>	16.9	813	17.1	803	<u>17.0</u>	<u>807</u>	16.9	813	17.1	803
481.wrf	<u>108</u>	<u>104</u>	108	103	107	104	<u>108</u>	<u>104</u>	108	103	107	104
482.sphinx3	312	62.5	310	62.9	<u>310</u>	<u>62.8</u>	312	62.5	310	62.9	<u>310</u>	<u>62.8</u>

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 = "28"

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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