



SPEC® CFP2006 Result

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Fujitsu

SPECfp®2006 = 112

PRIMERGY RX2540 M1, Intel Xeon E5-2660 v3, 2.6 GHz

SPECfp_base2006 = 108

CPU2006 license: 19

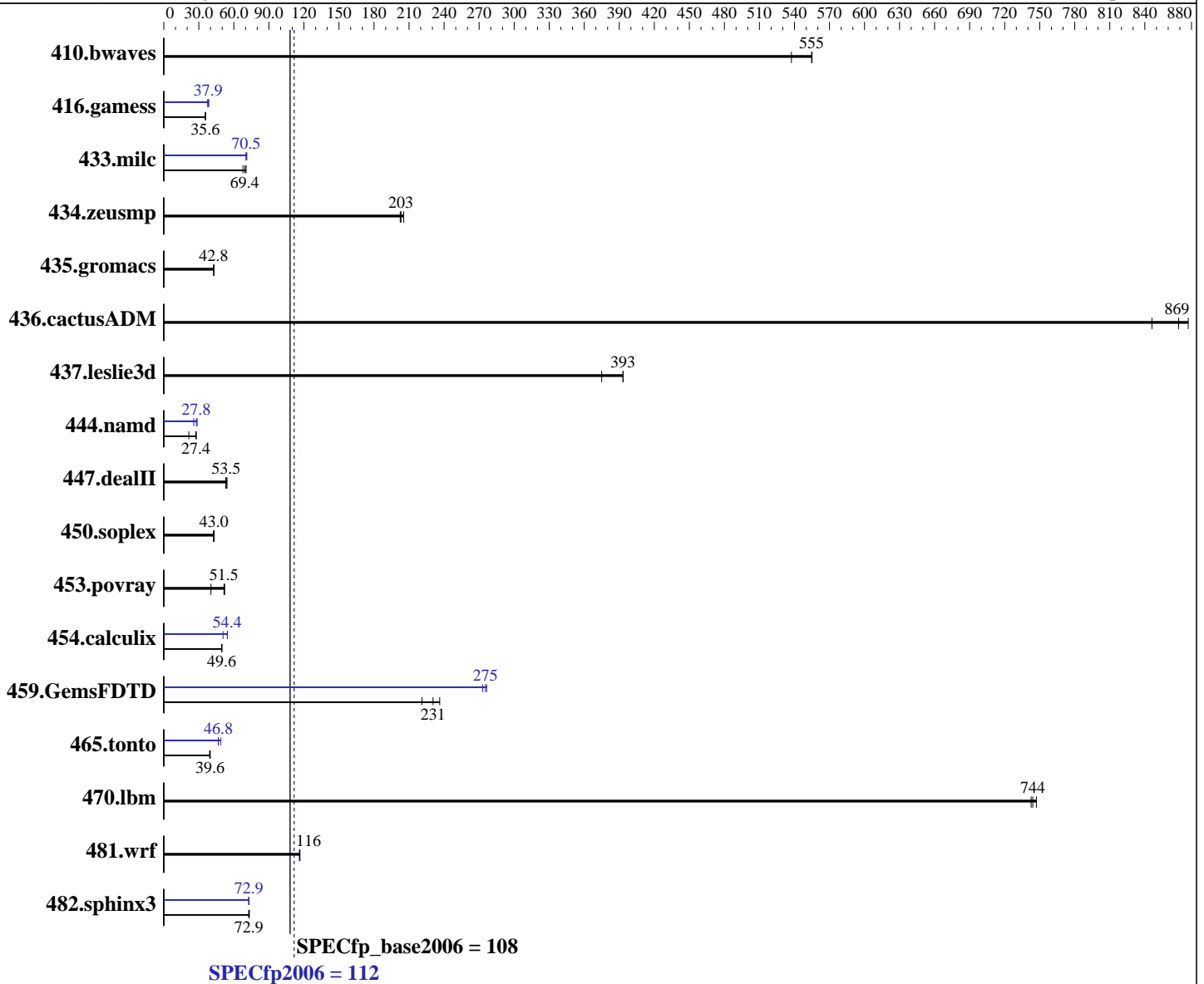
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014



Hardware

CPU Name: Intel Xeon E5-2660 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
 CPU MHz: 2600
 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	25.3	537	24.5	555	<u>24.5</u>	<u>555</u>	25.3	537	24.5	555	<u>24.5</u>	<u>555</u>
416.gamess	<u>550</u>	<u>35.6</u>	549	35.7	550	35.6	508	38.6	<u>516</u>	<u>37.9</u>	521	37.5
433.milc	135	67.8	130	70.5	<u>132</u>	<u>69.4</u>	130	70.3	129	71.2	<u>130</u>	<u>70.5</u>
434.zeusmp	<u>44.8</u>	<u>203</u>	44.3	205	44.9	202	<u>44.8</u>	<u>203</u>	44.3	205	44.9	202
435.gromacs	167	42.7	167	42.8	<u>167</u>	<u>42.8</u>	167	42.7	167	42.8	<u>167</u>	<u>42.8</u>
436.cactusADM	13.6	877	14.1	846	<u>13.8</u>	<u>869</u>	13.6	877	14.1	846	<u>13.8</u>	<u>869</u>
437.leslie3d	23.9	393	<u>23.9</u>	<u>393</u>	25.1	375	23.9	393	<u>23.9</u>	<u>393</u>	25.1	375
444.namd	<u>292</u>	<u>27.4</u>	288	27.8	374	21.4	<u>288</u>	<u>27.8</u>	313	25.7	281	28.6
447.dealII	211	54.1	<u>214</u>	<u>53.5</u>	216	53.1	211	54.1	<u>214</u>	<u>53.5</u>	216	53.1
450.soplex	196	42.5	193	43.1	<u>194</u>	<u>43.0</u>	196	42.5	193	43.1	<u>194</u>	<u>43.0</u>
453.povray	<u>103</u>	<u>51.5</u>	132	40.4	102	52.2	<u>103</u>	<u>51.5</u>	132	40.4	102	52.2
454.calculix	166	49.8	<u>166</u>	<u>49.6</u>	167	49.5	163	50.8	151	54.5	<u>152</u>	<u>54.4</u>
459.GemsFDTD	44.9	236	<u>46.0</u>	<u>231</u>	48.0	221	<u>38.5</u>	<u>275</u>	38.9	273	38.4	277
465.tonto	247	39.8	<u>249</u>	<u>39.6</u>	251	39.2	<u>210</u>	<u>46.8</u>	201	48.9	211	46.6
470.lbm	18.4	747	<u>18.5</u>	<u>744</u>	18.5	743	18.4	747	<u>18.5</u>	<u>744</u>	18.5	743
481.wrf	95.8	117	96.1	116	<u>96.0</u>	<u>116</u>	95.8	117	96.1	116	<u>96.0</u>	<u>116</u>
482.sphinx3	268	72.7	266	73.3	<u>267</u>	<u>72.9</u>	269	72.5	<u>267</u>	<u>72.9</u>	267	73.0

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: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel

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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.dealIII: `basepeak = yes`

450.soplex: `basepeak = yes`

453.povray: `basepeak = yes`

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>

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

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