



SPEC® CFP2006 Result

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Fujitsu

SPECfp®2006 = **75.5**

PRIMERGY RX100 S8, Intel Xeon E3-1270 v3, 3.50 GHz

SPECfp_base2006 = **74.2**

CPU2006 license: 19

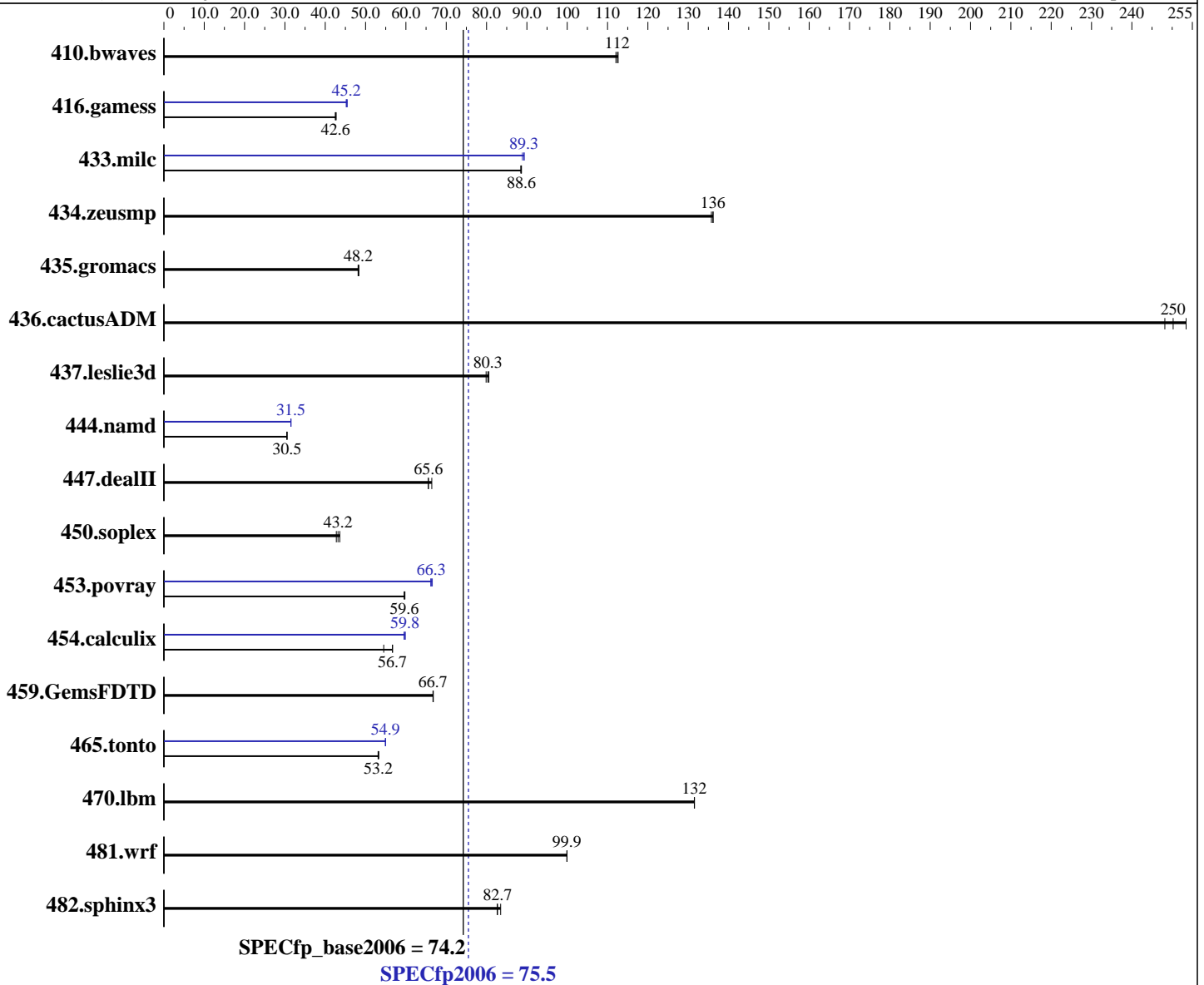
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Sep-2013

Hardware Availability: Sep-2013

Software Availability: Sep-2013



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Hardware

CPU Name: Intel Xeon E3-1270 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
 CPU MHz: 3500
 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: Red Hat Enterprise Linux Server release 6.4 (Santiago)
 2.6.32-358.11.1.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux;
 Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4

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L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 32 GB (4 x 8 GB 2Rx8 PC3L-12800E-11, ECC)
 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	121	112	121	113	<u>121</u>	<u>112</u>	121	112	121	113	<u>121</u>	<u>112</u>
416.gamess	458	42.7	<u>460</u>	<u>42.6</u>	461	42.5	431	45.5	433	45.2	<u>433</u>	<u>45.2</u>
433.milc	104	88.5	104	88.6	<u>104</u>	<u>88.6</u>	103	88.9	<u>103</u>	<u>89.3</u>	103	89.3
434.zeusmp	66.8	136	<u>66.8</u>	<u>136</u>	67.0	136	66.8	136	<u>66.8</u>	<u>136</u>	67.0	136
435.gromacs	148	48.3	148	48.1	<u>148</u>	<u>48.2</u>	148	48.3	148	48.1	<u>148</u>	<u>48.2</u>
436.cactusADM	48.1	248	<u>47.8</u>	<u>250</u>	47.1	253	48.1	248	<u>47.8</u>	<u>250</u>	47.1	253
437.leslie3d	<u>117</u>	<u>80.3</u>	118	79.9	117	80.6	<u>117</u>	<u>80.3</u>	118	79.9	117	80.6
444.namd	263	30.5	263	30.5	<u>263</u>	<u>30.5</u>	255	31.5	<u>255</u>	<u>31.5</u>	255	31.5
447.dealII	<u>174</u>	<u>65.6</u>	174	65.6	172	66.4	<u>174</u>	<u>65.6</u>	174	65.6	172	66.4
450.soplex	191	43.6	195	42.7	<u>193</u>	<u>43.2</u>	191	43.6	195	42.7	<u>193</u>	<u>43.2</u>
453.povray	<u>89.2</u>	<u>59.6</u>	89.3	59.6	89.0	59.8	80.4	66.2	79.9	66.5	<u>80.2</u>	<u>66.3</u>
454.calculix	<u>146</u>	<u>56.7</u>	151	54.5	146	56.7	138	59.8	<u>138</u>	<u>59.8</u>	139	59.5
459.GemsFDTD	159	66.7	<u>159</u>	<u>66.7</u>	159	66.8	159	66.7	<u>159</u>	<u>66.7</u>	159	66.8
465.tonto	185	53.3	<u>185</u>	<u>53.2</u>	185	53.1	179	55.0	<u>179</u>	<u>54.9</u>	179	54.9
470.lbm	104	132	<u>104</u>	<u>132</u>	104	132	104	132	<u>104</u>	<u>132</u>	104	132
481.wrf	<u>112</u>	<u>99.9</u>	112	99.9	112	99.9	<u>112</u>	<u>99.9</u>	112	99.9	112	99.9
482.sphinx3	233	83.5	<u>236</u>	<u>82.7</u>	236	82.6	233	83.5	<u>236</u>	<u>82.7</u>	236	82.6

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"

General Notes

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

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

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

OMP_NUM_THREADS = "4"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

runspec command invoked through numactl i.e.:

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General Notes (Continued)

numactl --interleave=all runspec <etc>
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

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

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Base Optimization Flags (Continued)

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`

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`

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Peak Optimization Flags (Continued)

447.deallI: 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: basepeak = yes

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-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20130924.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20130924.xml>



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