



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = **73.0**

PRIMERGY TX140 S2, Intel Xeon E3-1230 v3, 3.30 GHz

SPECfp_base2006 = **71.7**

CPU2006 license: 19

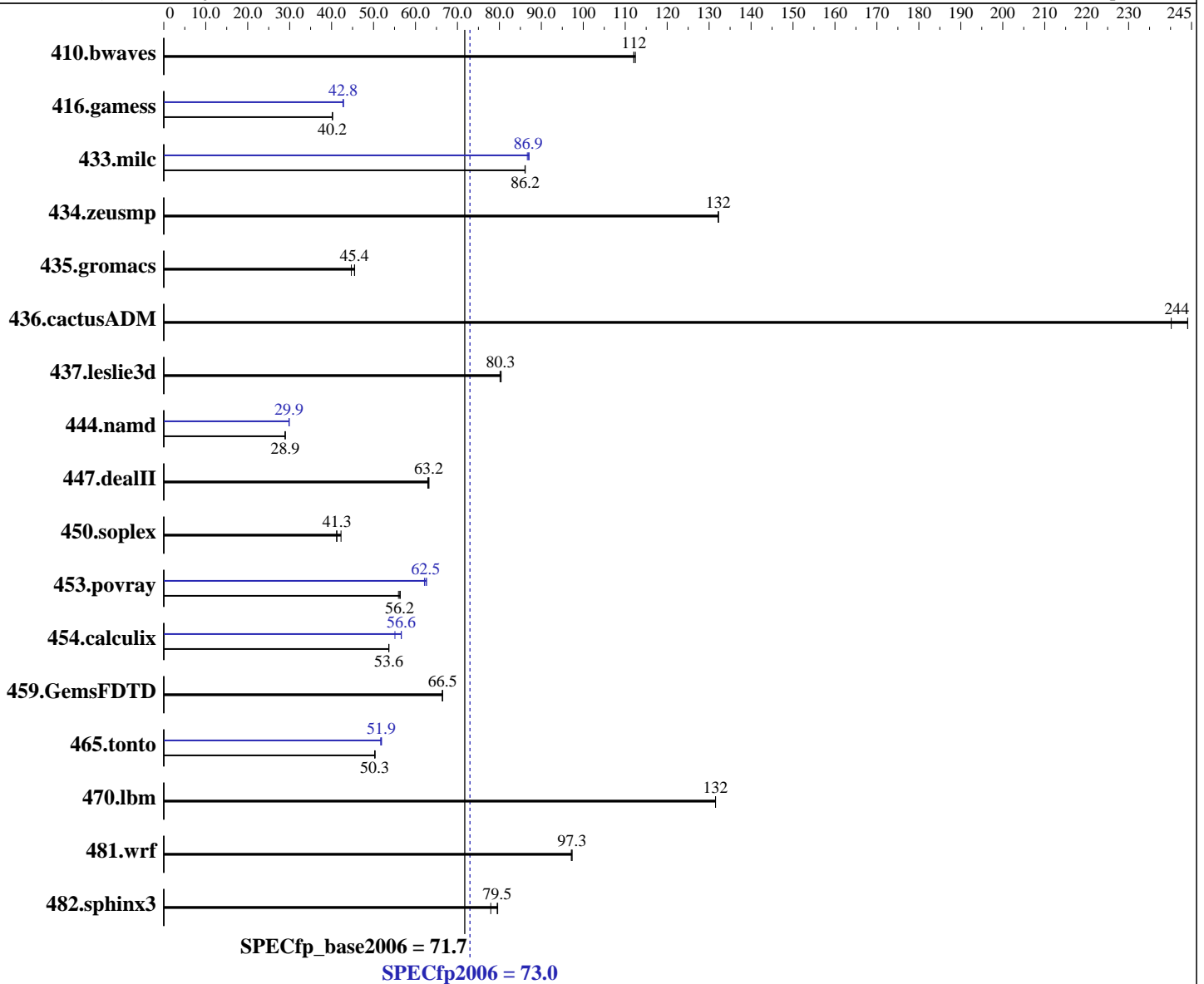
Test date: Sep-2013

Test sponsor: Fujitsu

Hardware Availability: Sep-2013

Tested by: Fujitsu

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E3-1230 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
 CPU MHz: 3300
 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	<u>121</u>	<u>112</u>	121	112	<u>121</u>	<u>112</u>	121	112	121	112
416.gamess	487	40.2	<u>487</u>	<u>40.2</u>	487	40.2	457	42.8	458	42.7	<u>458</u>	<u>42.8</u>
433.milc	107	86.2	<u>107</u>	<u>86.2</u>	107	86.1	<u>106</u>	<u>86.9</u>	106	86.7	105	87.1
434.zeusmp	68.8	132	<u>68.8</u>	<u>132</u>	68.8	132	68.8	132	<u>68.8</u>	<u>132</u>	68.8	132
435.gromacs	157	45.5	160	44.7	<u>157</u>	<u>45.4</u>	157	45.5	160	44.7	<u>157</u>	<u>45.4</u>
436.cactusADM	<u>49.0</u>	<u>244</u>	49.0	244	49.8	240	<u>49.0</u>	<u>244</u>	49.0	244	49.8	240
437.leslie3d	<u>117</u>	<u>80.3</u>	117	80.4	117	80.2	<u>117</u>	<u>80.3</u>	117	80.4	117	80.2
444.namd	<u>277</u>	<u>28.9</u>	277	28.9	277	28.9	<u>269</u>	<u>29.9</u>	268	29.9	269	29.9
447.dealII	182	62.9	<u>181</u>	<u>63.2</u>	181	63.2	182	62.9	<u>181</u>	<u>63.2</u>	181	63.2
450.soplex	197	42.2	203	41.2	<u>202</u>	<u>41.3</u>	197	42.2	203	41.2	<u>202</u>	<u>41.3</u>
453.povray	95.1	55.9	<u>94.6</u>	<u>56.2</u>	94.4	56.4	<u>85.2</u>	<u>62.5</u>	84.9	62.7	85.6	62.1
454.calculix	<u>154</u>	<u>53.6</u>	154	53.6	154	53.6	146	56.6	<u>146</u>	<u>56.6</u>	150	55.1
459.GemsFDTD	160	66.4	160	66.5	<u>160</u>	<u>66.5</u>	160	66.4	160	66.5	<u>160</u>	<u>66.5</u>
465.tonto	195	50.4	<u>196</u>	<u>50.3</u>	196	50.3	190	51.9	190	51.7	<u>190</u>	<u>51.9</u>
470.lbm	104	132	104	132	<u>104</u>	<u>132</u>	104	132	104	132	<u>104</u>	<u>132</u>
481.wrf	<u>115</u>	<u>97.3</u>	115	97.3	115	97.1	<u>115</u>	<u>97.3</u>	115	97.3	115	97.1
482.sphinx3	245	79.6	250	77.9	<u>245</u>	<u>79.5</u>	245	79.6	250	77.9	<u>245</u>	<u>79.5</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"

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

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