



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]_rate2006 = 64.2

PRIMERGY RX100 S7, Intel Xeon E3-1220L, 2.20 GHz

SPECfp_rate_base2006 = 62.8

CPU2006 license: 19

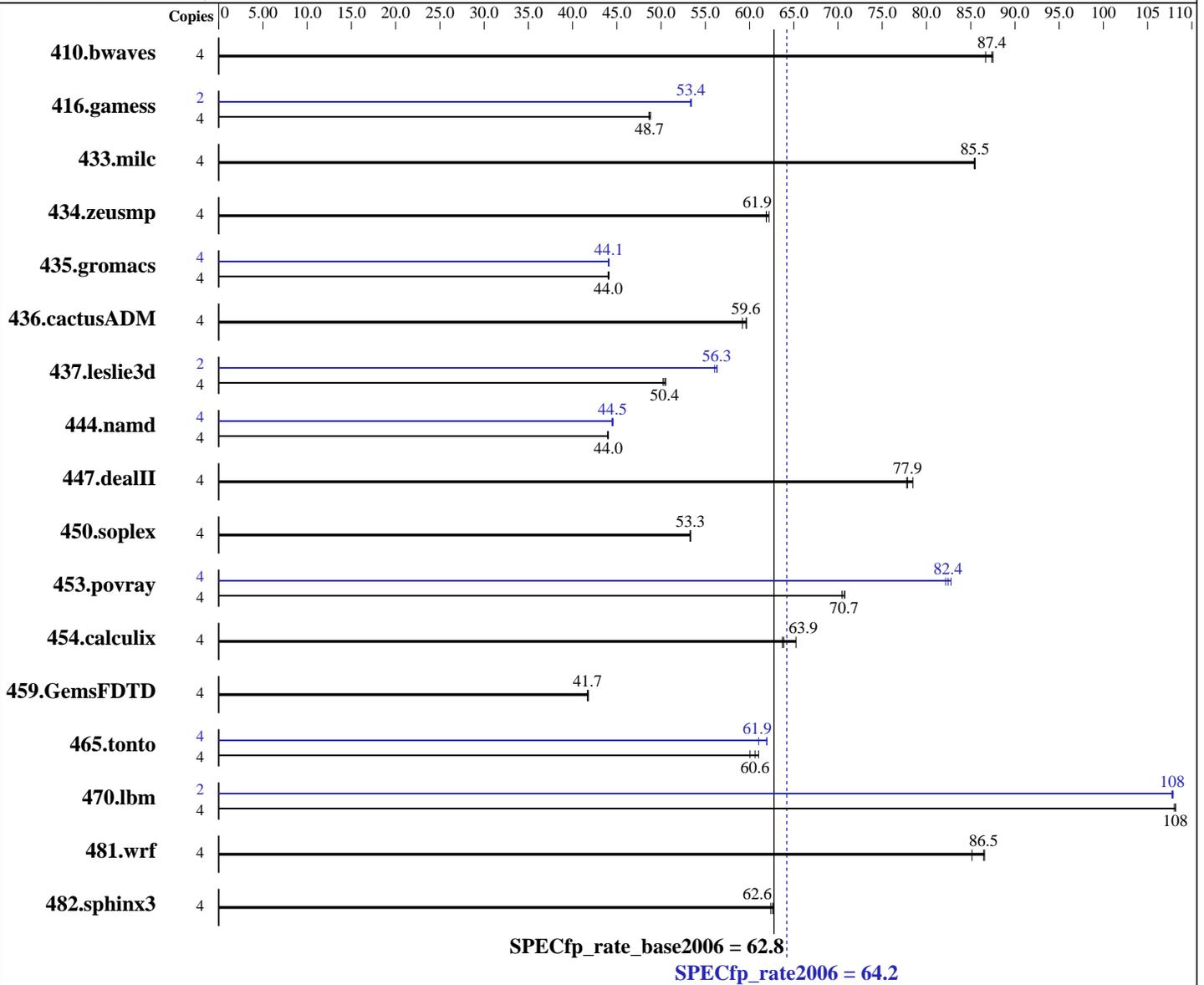
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: May-2011

Hardware Availability: Jun-2011

Software Availability: Jan-2011



Hardware

CPU Name: Intel Xeon E3-1220L
 CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz
 CPU MHz: 2200
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 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: SUSE Linux Enterprise Server 11 (x86_64) SP1, Kernel 2.6.32.12-0.7-default
 Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0.1.116 Build 20101116
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

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L3 Cache: 3 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx8 PC3-10600E-9, ECC)
Disk Subsystem: 1 x SATA, 300 GB, 7200 RPM
Other Hardware: --

Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	627	86.7	<u>622</u>	<u>87.4</u>	621	87.5	4	627	86.7	<u>622</u>	<u>87.4</u>	621	87.5
416.gamess	4	1605	48.8	<u>1609</u>	<u>48.7</u>	1611	48.6	2	<u>733</u>	<u>53.4</u>	733	53.4	734	53.3
433.milc	4	430	85.4	<u>430</u>	<u>85.5</u>	429	85.5	4	430	85.4	<u>430</u>	<u>85.5</u>	429	85.5
434.zeusmp	4	588	61.9	<u>588</u>	<u>61.9</u>	585	62.2	4	588	61.9	<u>588</u>	<u>61.9</u>	585	62.2
435.gromacs	4	647	44.1	649	44.0	<u>649</u>	<u>44.0</u>	4	647	44.1	649	44.0	<u>648</u>	<u>44.1</u>
436.cactusADM	4	801	59.7	<u>802</u>	<u>59.6</u>	807	59.2	4	801	59.7	<u>802</u>	<u>59.6</u>	807	59.2
437.leslie3d	4	744	50.5	<u>746</u>	<u>50.4</u>	749	50.2	2	334	56.3	<u>334</u>	<u>56.3</u>	335	56.0
444.namd	4	<u>729</u>	<u>44.0</u>	730	43.9	728	44.0	4	<u>721</u>	<u>44.5</u>	720	44.6	722	44.5
447.dealII	4	588	77.8	583	78.5	<u>588</u>	<u>77.9</u>	4	588	77.8	583	78.5	<u>588</u>	<u>77.9</u>
450.soplex	4	625	53.4	626	53.3	<u>626</u>	<u>53.3</u>	4	625	53.4	626	53.3	<u>626</u>	<u>53.3</u>
453.povray	4	302	70.5	301	70.8	<u>301</u>	<u>70.7</u>	4	<u>258</u>	<u>82.4</u>	257	82.8	259	82.2
454.calculix	4	506	65.2	518	63.7	<u>517</u>	<u>63.9</u>	4	506	65.2	518	63.7	<u>517</u>	<u>63.9</u>
459.GemsFDTD	4	<u>1018</u>	<u>41.7</u>	1016	41.8	1019	41.7	4	<u>1018</u>	<u>41.7</u>	1016	41.8	1019	41.7
465.tonto	4	645	61.0	655	60.1	<u>649</u>	<u>60.6</u>	4	<u>635</u>	<u>61.9</u>	635	62.0	645	61.0
470.lbm	4	509	108	<u>508</u>	<u>108</u>	508	108	2	255	108	<u>255</u>	<u>108</u>	255	108
481.wrf	4	516	86.6	<u>517</u>	<u>86.5</u>	525	85.1	4	516	86.6	<u>517</u>	<u>86.5</u>	525	85.1
482.sphinx3	4	1243	62.7	<u>1245</u>	<u>62.6</u>	1249	62.4	4	1243	62.7	<u>1245</u>	<u>62.6</u>	1249	62.4

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The config file option 'submit' was used.
numactl was used to bind copies to the cores

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
Large pages were not enabled for this run

General Notes

For information about Fujitsu please visit: <http://www.fujitsu.com>
Binaries were compiled on RHEL5.5



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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.lelie3d: -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:
-xAVX -ipo -O3 -no-prec-div -static -ansi-alias

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -static -ansi-alias

Fortran benchmarks:
-xAVX -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:
-xAVX -ipo -O3 -no-prec-div -static -ansi-alias



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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: basepeak = yes

470.lbm: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3
-ansi-alias -opt-prefetch -auto-ilp32

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -xAVX(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: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

410.bwaves: basepeak = yes

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Peak Optimization Flags (Continued)

416.gamess: -xAVX(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- -static

434.zeusmp: basepeak = yes

437.leslie3d: -xAVX -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto
-inline-calloc -opt-malloc-options=3
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

435.gromacs: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
-static -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-ic12.0-linux64-revB.20110316.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20110705.00.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.20110316.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20110705.00.xml>

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

Tested with SPEC CPU2006 v1.1.

Report generated on Wed Jul 23 21:45:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 5 July 2011.