



SPEC® CINT2006 Result

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Fujitsu

SPECint®2006 = 64.5

PRIMERGY RX2530 M1, Intel Xeon E5-2637 v3, 3.5 GHz

SPECint_base2006 = 61.3

CPU2006 license: 19

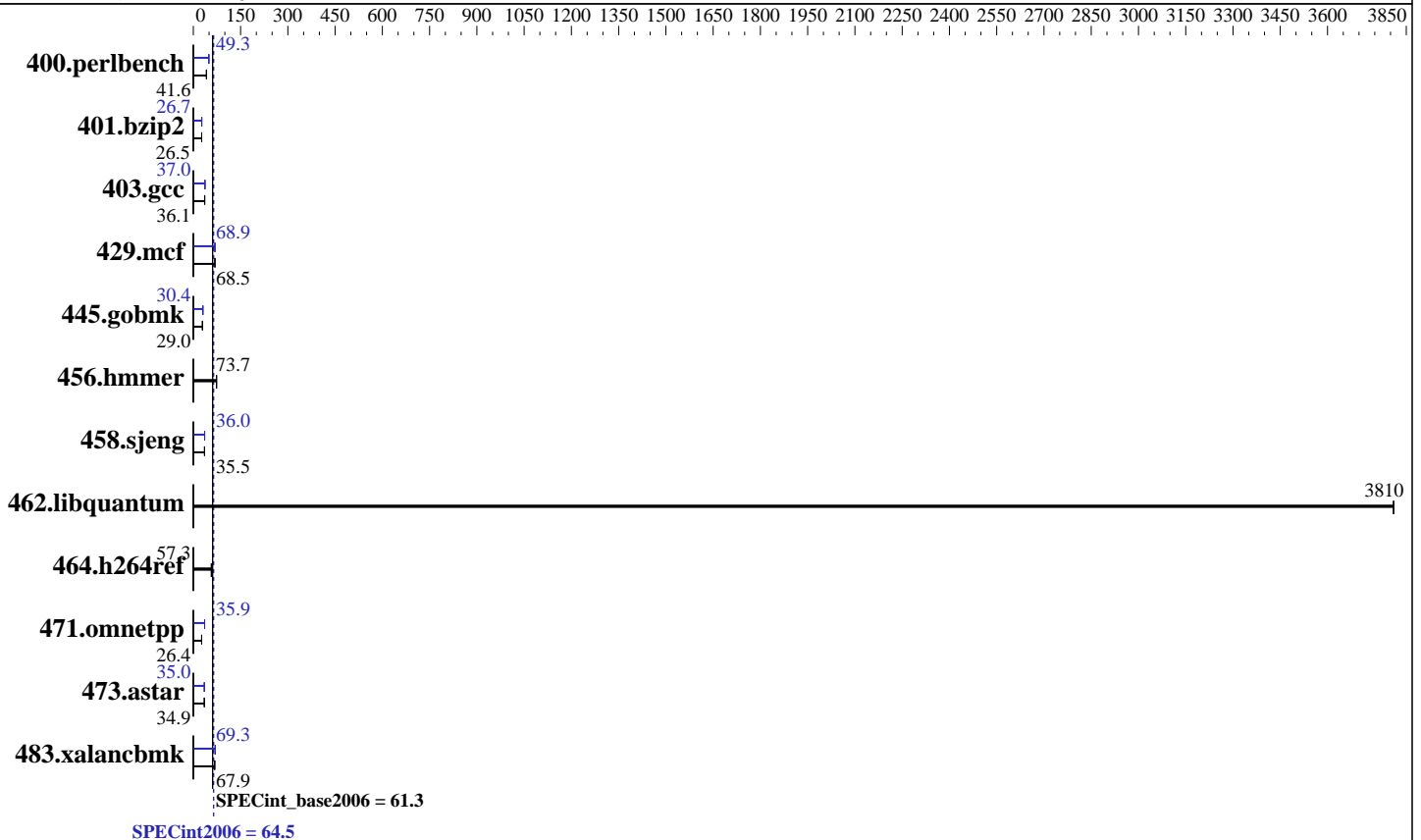
Test date: Mar-2015

Test sponsor: Fujitsu

Hardware Availability: Feb-2015

Tested by: Fujitsu

Software Availability: Nov-2013



Hardware

CPU Name: Intel Xeon E5-2637 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
 CPU MHz: 3500
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 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
 L3 Cache: 15 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

Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)
 2.6.32-431.23.3.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.0



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	235	41.6	<u>235</u>	<u>41.6</u>	234	41.7	198	49.3	<u>198</u>	<u>49.3</u>	198	49.4
401.bzip2	365	26.5	<u>364</u>	<u>26.5</u>	364	26.5	361	26.7	360	26.8	<u>361</u>	<u>26.7</u>
403.gcc	<u>223</u>	<u>36.1</u>	223	36.2	223	36.1	217	37.0	218	36.9	<u>218</u>	<u>37.0</u>
429.mcf	134	68.2	<u>133</u>	<u>68.5</u>	133	68.8	<u>132</u>	<u>68.9</u>	134	67.9	132	68.9
445.gobmk	362	29.0	<u>362</u>	<u>29.0</u>	363	28.9	<u>345</u>	<u>30.4</u>	345	30.4	346	30.3
456.hammer	126	73.8	<u>127</u>	<u>73.7</u>	127	73.6	126	73.8	<u>127</u>	<u>73.7</u>	127	73.6
458.sjeng	341	35.5	340	35.6	<u>340</u>	<u>35.5</u>	<u>337</u>	<u>36.0</u>	336	36.0	337	35.9
462.libquantum	5.44	3810	<u>5.44</u>	<u>3810</u>	5.44	3810	5.44	3810	<u>5.44</u>	<u>3810</u>	5.44	3810
464.h264ref	386	57.3	<u>386</u>	<u>57.3</u>	387	57.2	386	57.3	<u>386</u>	<u>57.3</u>	387	57.2
471.omnetpp	<u>237</u>	<u>26.4</u>	235	26.5	238	26.3	175	35.8	174	36.0	<u>174</u>	<u>35.9</u>
473.astar	202	34.8	200	35.1	<u>201</u>	<u>34.9</u>	<u>200</u>	<u>35.0</u>	202	34.8	200	35.0
483.xalancbmk	102	67.9	<u>102</u>	<u>67.9</u>	102	67.8	99.1	69.6	<u>99.5</u>	<u>69.3</u>	99.7	69.2

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.

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: Early Snoop
COD Enable = Disabled, Early Snoop = Enabled
CPU ClE Support = Disabled

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 = "8"

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

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General Notes (Continued)

runspec command invoked through numactl i.e.:
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

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalanbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



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Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

400.perlbench: icc -m32

445.gobmk: icc -m32

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -ansi-alias
401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32
-opt-prefetch -ansi-alias
403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32
429.mcf: -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel
-opt-prefetch -auto-p32
445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias

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Peak Optimization Flags (Continued)

456.hmmcr: basepeak = yes

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-ra-region-strategy=block -ansi-alias
-Wl,-z,muldefs -L/sh -lsmartheap

473.astar: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-auto-p32 -Wl,-z,muldefs -L/sh -lsmartheap64

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

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-revB.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-ic14.0-official-linux64-revB.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.

Tested with SPEC CPU2006 v1.2.
Report generated on Tue May 19 18:13:48 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 19 May 2015.