SPEC® CINT2006 Result

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ACTION S.A.

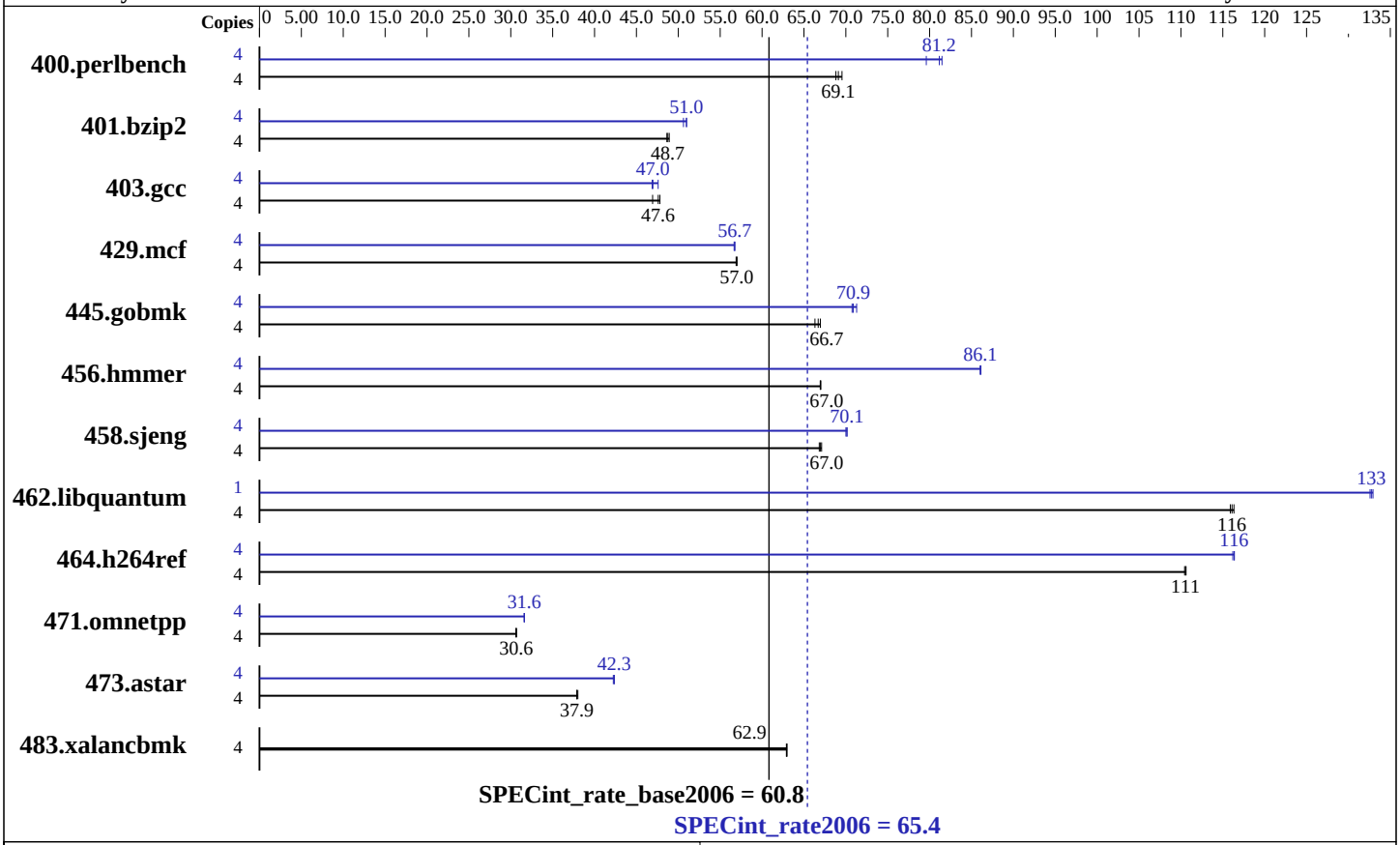
ACTINA SOLAR 202 X2 (Intel Xeon E5420, 2.5 GHz)

SPECint®_rate2006 = 65.4

SPECint_rate_base2006 = 60.8

CPU2006 license: 9008
Test sponsor: ACTION S.A.
Tested by: ACTION S.A.

Test date: Dec-2008
Hardware Availability: Sep-2008
Software Availability: Nov-2008



Hardware

CPU Name:	Intel Xeon E5420
CPU Characteristics:	1333 MHz System Bus
CPU MHz:	2500
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8x 2 GB, PC2-5300, CL 5-5-5, FB ECC)
Disk Subsystem:	500 GB SATA, 7200 RPM
Other Hardware:	None

Software

Operating System:	SuSe Linux Enterprise Server 10 (x86_64) with SP2, kernel 2.6.16.60-0.21-smp
Compiler:	Intel C++ Compiler 11.0 for Linux Build 20080930 Package ID: l_cproc_p_11.0.066
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	562	69.5	**566**	**69.1**	568	68.8	4	491	79.6	480	81.5	**482**	**81.2**
401.bzip2	4	789	48.9	794	48.6	**792**	**48.7**	4	757	51.0	**758**	**51.0**	763	50.6
403.gcc	4	674	47.8	686	46.9	**676**	**47.6**	4	687	46.9	677	47.6	**686**	**47.0**
429.mcf	4	**640**	**57.0**	641	56.9	640	57.0	4	644	56.7	**643**	**56.7**	643	56.8
445.gobmk	4	**629**	**66.7**	627	67.0	633	66.3	4	593	70.7	589	71.3	**592**	**70.9**
456.hmmer	4	557	67.0	**557**	**67.0**	557	66.9	4	434	86.0	433	86.1	**434**	**86.1**
458.sjeng	4	724	66.8	**723**	**67.0**	721	67.1	4	**690**	**70.1**	690	70.1	691	70.0
462.libquantum	4	712	116	715	116	**714**	**116**	1	156	133	156	133	**156**	**133**
464.h264ref	4	**801**	**111**	800	111	802	110	4	**761**	**116**	761	116	762	116
471.omnetpp	4	815	30.7	**816**	**30.6**	817	30.6	4	790	31.6	**791**	**31.6**	791	31.6
473.astar	4	741	37.9	**741**	**37.9**	739	38.0	4	663	42.4	**663**	**42.3**	665	42.2
483.xalancbmk	4	**439**	**62.9**	438	63.0	439	62.9	4	**439**	**62.9**	438	63.0	439	62.9

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.
```

Platform Notes

```
This result is measured on ACTINA SOLAR 200 X2.
Note that the ACTINA SOLAR 202 X2 and  ACTINA SOLAR 200 X2
are electrically equivalent.
```

General Notes

```
 'taskset' was used to bind processes to cores except
 for 462.libquantum peak
 'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
 OMP_NUM_THREADS set to number of processors
 KMP_AFFINITY set to "physical,0"
 KMP_STACKSIZE set to 64M
```

Base Compiler Invocation

C benchmarks:

```
icc
```

C++ benchmarks:

```
icpc
```

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:
-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/spec/cpu2006.1.1/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/Compiler/11.0/066/bin/intel64/icc

456.hmmer: /opt/intel/Compiler/11.0/066/bin/intel64/icc

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -ansi-alias -opt-prefetch`

401.bzip2: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias`

403.gcc: `-xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc -opt-malloc-options=3`

429.mcf: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`

445.gobmk: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -O2 -ipo -no-prec-div -ansi-alias`

456.hmmer: `-xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias`

458.sjeng: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -unroll4`

462.libquantum: `-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-malloc-options=3 -parallel -par-runtime-control -opt-prefetch`

464.h264ref: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias`

C++ benchmarks:

471.omnetpp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap`

473.astar: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap`

483.xalancbmk: `basepeak = yes`

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.00.xml

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Tested with SPEC CPU2006 v1.1.
Report generated on Tue Jul 22 22:48:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 6 January 2009.