



SPEC® CINT2006 Result

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ACTION S.A.

SPECint®_rate2006 = 74.8

ACTINA SOLAR 442 S3 (Intel Xeon E7220, 2.93 GHz)

SPECint_rate_base2006 = 62.6

CPU2006 license: 3388

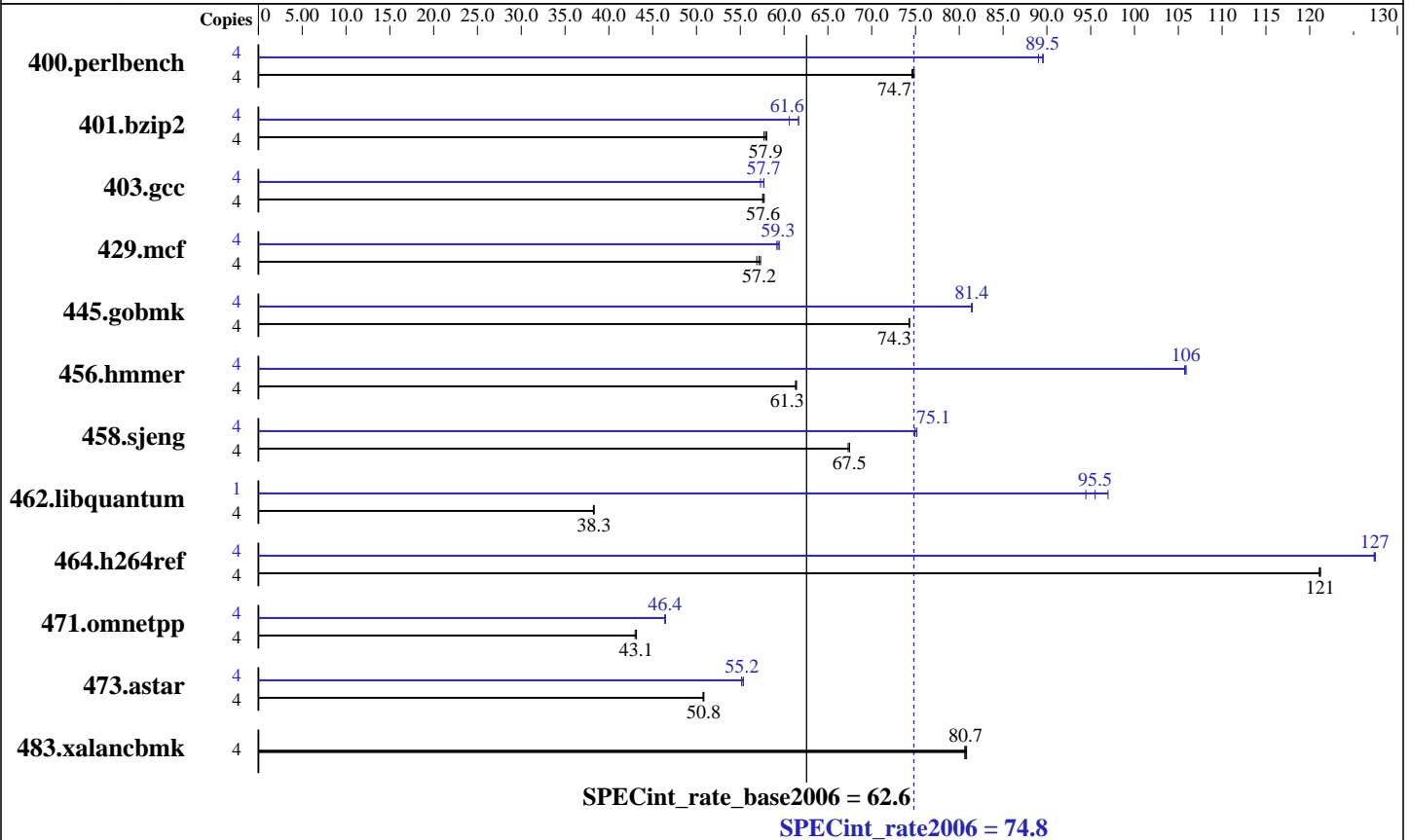
Test date: Aug-2008

Test sponsor: ACTION S.A.

Hardware Availability: Dec-2007

Tested by: ACTION S.A.

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon E7220
 CPU Characteristics: 1066 MHz bus
 CPU MHz: 2933
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 2,4 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 4 MB I+D on chip per core
 L3 Cache: None
 Other Cache: None
 Memory: 16 GB (8x 2 GB PC2-5300 ECC FBDIMM)
 Disk Subsystem: 1x 250 GB SATA, 7200RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Multi-user, run level 3
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V8.1 Binutils 2.17.50.0.15



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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	524	74.6	<u>523</u>	<u>74.7</u>	522	74.9	4	<u>437</u>	<u>89.5</u>	436	89.6	439	89.0
401.bzip2	4	669	57.7	665	58.0	<u>667</u>	<u>57.9</u>	4	637	60.6	<u>626</u>	<u>61.6</u>	626	61.7
403.gcc	4	558	57.7	<u>559</u>	<u>57.6</u>	559	57.6	4	558	57.7	562	57.3	<u>558</u>	<u>57.7</u>
429.mcf	4	<u>638</u>	<u>57.2</u>	636	57.3	641	56.9	4	<u>615</u>	<u>59.3</u>	614	59.5	616	59.2
445.gobmk	4	<u>565</u>	<u>74.3</u>	565	74.3	565	74.3	4	<u>515</u>	<u>81.4</u>	515	81.4	515	81.5
456.hammer	4	609	61.3	608	61.4	<u>608</u>	<u>61.3</u>	4	352	106	353	106	<u>353</u>	<u>106</u>
458.sjeng	4	<u>717</u>	<u>67.5</u>	719	67.3	717	67.5	4	646	74.9	<u>644</u>	<u>75.1</u>	644	75.2
462.libquantum	4	<u>2164</u>	<u>38.3</u>	2168	38.2	2163	38.3	1	214	97.0	219	94.4	<u>217</u>	<u>95.5</u>
464.h264ref	4	730	121	731	121	<u>730</u>	<u>121</u>	4	694	127	<u>695</u>	<u>127</u>	695	127
471.omnetpp	4	581	43.0	<u>580</u>	<u>43.1</u>	579	43.2	4	539	46.4	538	46.5	<u>539</u>	<u>46.4</u>
473.astar	4	552	50.8	553	50.7	<u>553</u>	<u>50.8</u>	4	507	55.4	509	55.2	<u>509</u>	<u>55.2</u>
483.xalancbmk	4	341	80.8	<u>342</u>	<u>80.7</u>	342	80.6	4	341	80.8	<u>342</u>	<u>80.7</u>	342	80.6

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

General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hammer, for peak, are compiled in 64-bit mode.
Taskset command was used to bind processes to CPUs.

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:
-fast -inline-calloc -opt-malloc-options=3

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Base Optimization Flags (Continued)

C++ benchmarks:

```
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/spec/users/rahul/cpu2006.1.0/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/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include
```

```
456.hmmer: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include
```

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) -fast -ansi-alias
-prefetch
```

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Peak Optimization Flags (Continued)

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

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

456.hmmr: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch
-opt-streaming-stores always -vec-guard-write
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=block
-Wl,-z,muldefs
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine
-Wl,-z,muldefs
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap

483.xalancbmk: basepeak = yes

Peak Other Flags

Same as Base Other Flags

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-int-linux64-revC.20090714.00.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-int-linux64-revC.20090714.00.xml>



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