



SPEC® CINT2006 Result

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IBM Corporation

SPECint®_rate2006 = 50.7

IBM System x3550 (Intel Xeon 5140)

SPECint_rate_base2006 = 46.9

CPU2006 license: 11

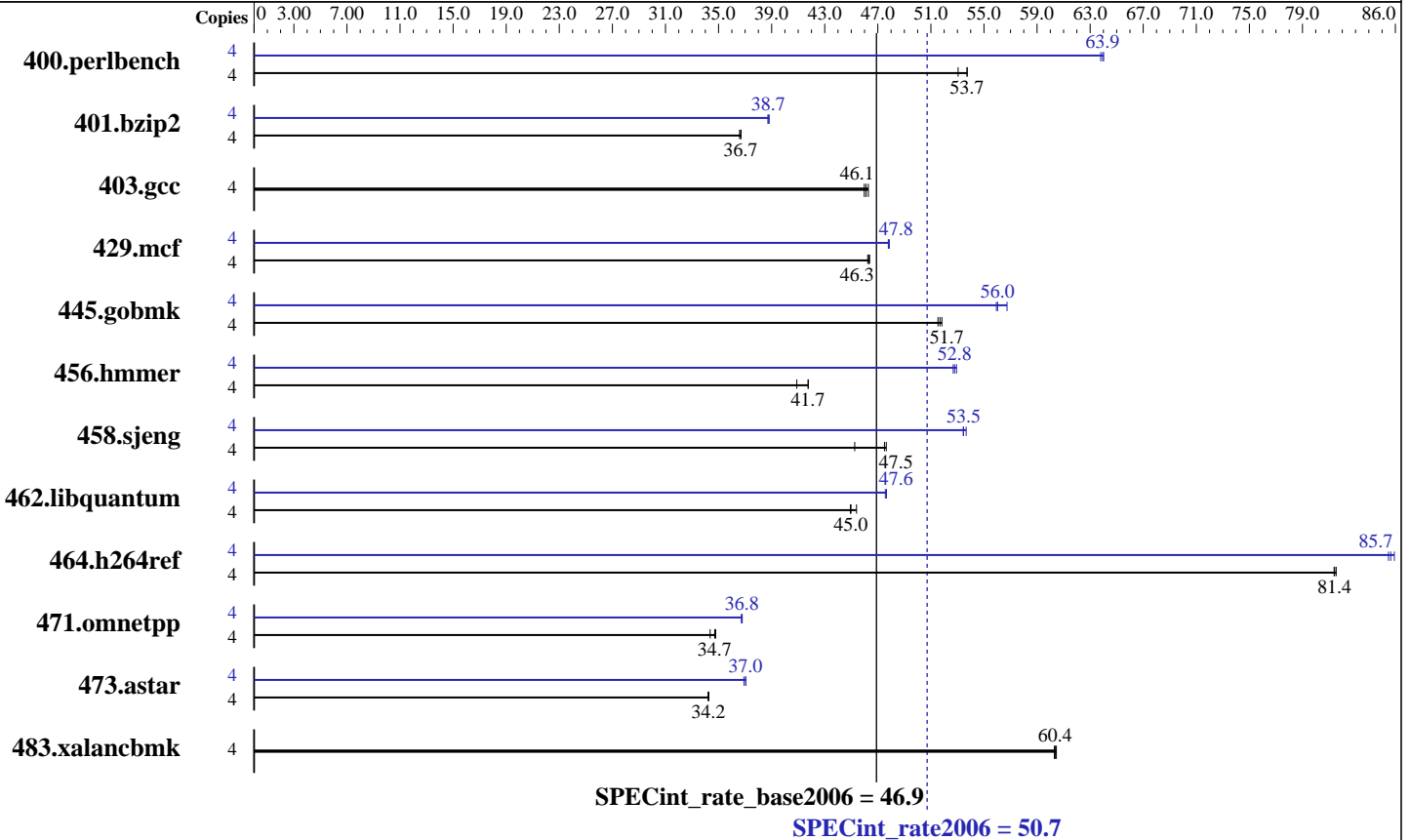
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Jul-2007

Hardware Availability: Jul-2006

Software Availability: Jul-2007



Hardware

CPU Name: Intel Xeon 5140
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 2333
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 4 MB I+D on chip per chip
 L3 Cache: None
 Other Cache: None
 Memory: 16 GB (8 x 2GB DDR2-5300F ECC)
 Disk Subsystem: 1 x 36 GB SAS, 15000 RPM
 Other Hardware: None

Software

Operating System: SLES 10 (x86_64), 2.6.16.21-0.8-smp
 Compiler: Intel C++ Compiler for Linux version 10.0
 Build 20070426 Package ID: 1_cc_p_10.0.023
 Auto Parallel: No
 File System: ReiserFS
 System State: Multi-user, run level 3
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap 8.1



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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	737	53.1	<u>727</u>	<u>53.7</u>	727	53.7	4	613	63.8	<u>611</u>	<u>63.9</u>	610	64.0
401.bzip2	4	1052	36.7	1055	36.6	<u>1053</u>	<u>36.7</u>	4	994	38.8	997	38.7	<u>996</u>	<u>38.7</u>
403.gcc	4	700	46.0	696	46.3	<u>698</u>	<u>46.1</u>	4	700	46.0	696	46.3	<u>698</u>	<u>46.1</u>
429.mcf	4	<u>788</u>	<u>46.3</u>	789	46.2	786	46.4	4	763	47.8	<u>763</u>	<u>47.8</u>	762	47.9
445.gobmk	4	810	51.8	814	51.5	<u>812</u>	<u>51.7</u>	4	740	56.7	<u>749</u>	<u>56.0</u>	750	55.9
456.hammer	4	894	41.8	913	40.9	<u>894</u>	<u>41.7</u>	4	<u>707</u>	<u>52.8</u>	708	52.7	705	52.9
458.sjeng	4	<u>1019</u>	<u>47.5</u>	1069	45.3	1016	47.6	4	902	53.7	<u>905</u>	<u>53.5</u>	906	53.4
462.libquantum	4	1845	44.9	1826	45.4	<u>1843</u>	<u>45.0</u>	4	1739	47.6	<u>1740</u>	<u>47.6</u>	1742	47.6
464.h264ref	4	<u>1087</u>	<u>81.4</u>	1088	81.4	1086	81.5	4	1036	85.5	1030	85.9	<u>1033</u>	<u>85.7</u>
471.omnetpp	4	719	34.8	727	34.4	<u>720</u>	<u>34.7</u>	4	680	36.8	<u>680</u>	<u>36.8</u>	681	36.7
473.astar	4	<u>820</u>	<u>34.2</u>	821	34.2	819	34.3	4	761	36.9	<u>758</u>	<u>37.0</u>	758	37.1
483.xalancbmk	4	<u>457</u>	<u>60.4</u>	458	60.3	457	60.5	4	<u>457</u>	<u>60.4</u>	458	60.3	457	60.5

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

General Notes

taskset utility used to bind CPU(s) to processes

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

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Base Optimization Flags (Continued)

C++ benchmarks:

```
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/spec/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/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/include
```

```
456.hmmer: /opt/intel/cce/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/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

403.gcc: basepeak = yes

429.mcf: -fast -prefetch

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

456.hmmer: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias

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

462.libquantum: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -Ob0
-prefetch -opt-streaming-stores always

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec_div -ansi-alias -Wl,-z,muldefs
-L/spec/cpu2006.1.0/lib -lsmartheap

473.astar: Same as 471.omnetpp

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-ic10-ia32-intel64-linux-flags.20090714.44.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.44.xml>



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