



SPEC® CINT2006 Result

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IBM Corporation

SPECint®2006 = 23.3

IBM BladeCenter HS12 (Intel Xeon X3353)

SPECint_base2006 = 19.4

CPU2006 license: 11

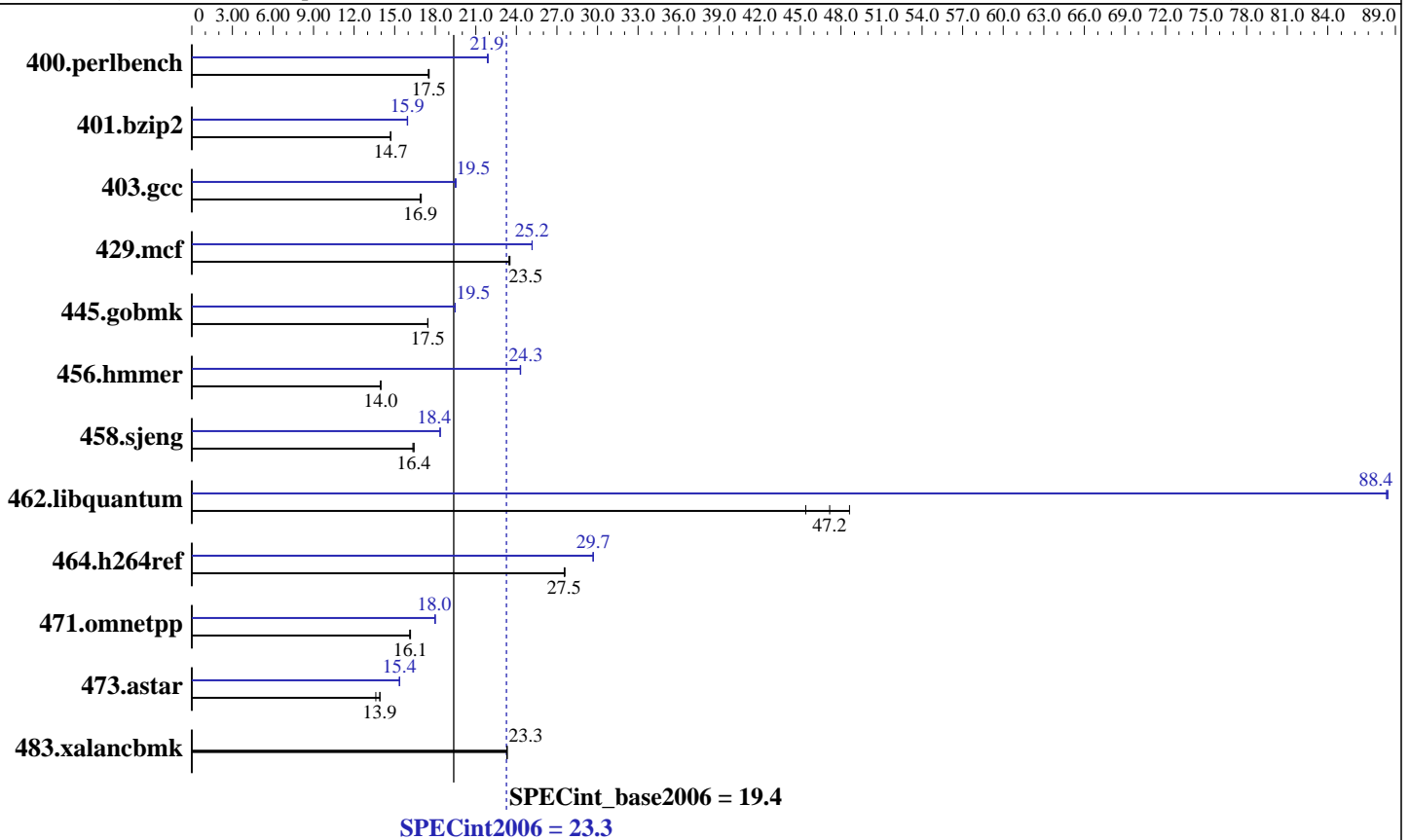
Test date: May-2008

Test sponsor: IBM Corporation

Hardware Availability: May-2008

Tested by: IBM Corporation

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X3353
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 2667
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 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: 8 GB (4 x 2 GB DDR2-5300 ECC)
 Disk Subsystem: 1 x 73 GB SAS, 10000 RPM
 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 8.1 Binutils 2.17.50.0.15



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<u>557</u>	<u>17.5</u>	557	17.6	559	17.5	447	21.9	446	21.9	<u>446</u>	<u>21.9</u>
401.bzip2	656	14.7	<u>656</u>	<u>14.7</u>	657	14.7	<u>605</u>	<u>15.9</u>	606	15.9	605	16.0
403.gcc	477	16.9	474	17.0	<u>476</u>	<u>16.9</u>	412	19.5	<u>413</u>	<u>19.5</u>	413	19.5
429.mcf	389	23.5	<u>388</u>	<u>23.5</u>	388	23.5	362	25.2	363	25.2	<u>362</u>	<u>25.2</u>
445.gobmk	601	17.5	<u>601</u>	<u>17.5</u>	601	17.5	<u>539</u>	<u>19.5</u>	539	19.5	539	19.5
456.hmmmer	<u>668</u>	<u>14.0</u>	669	14.0	667	14.0	384	24.3	<u>384</u>	<u>24.3</u>	384	24.3
458.sjeng	736	16.4	740	16.3	<u>737</u>	<u>16.4</u>	659	18.4	659	18.4	<u>659</u>	<u>18.4</u>
462.libquantum	456	45.4	<u>439</u>	<u>47.2</u>	426	48.6	234	88.5	<u>234</u>	<u>88.4</u>	235	88.3
464.h264ref	<u>804</u>	<u>27.5</u>	804	27.5	802	27.6	<u>746</u>	<u>29.7</u>	745	29.7	746	29.7
471.omnetpp	388	16.1	<u>387</u>	<u>16.1</u>	386	16.2	<u>347</u>	<u>18.0</u>	348	18.0	347	18.0
473.astar	<u>505</u>	<u>13.9</u>	504	13.9	516	13.6	457	15.4	<u>457</u>	<u>15.4</u>	457	15.4
483.xalancbmk	296	23.3	<u>296</u>	<u>23.3</u>	296	23.3	296	23.3	<u>296</u>	<u>23.3</u>	296	23.3

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.hmmmer, for peak, are compiled in 64-bit mode
Hardware Sector Prefetch Enabled and Adjacent Sector Prefetch Enabled
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to null

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



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Base Optimization Flags

C benchmarks:

-fast -vec-guard-write -parallel -par-runtime-control

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:

Continued on next page



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Peak Optimization Flags (Continued)

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias
-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

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
-auto-ilp32

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

C benchmarks:

403.gcc: -Dalloca=_alloca



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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.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.xml>

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

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