



SPEC® CINT2006 Result

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IBM Corporation

SPECint®2006 = 26.2

IBM System x 3350 (Intel Xeon X3370)

SPECint_base2006 = 22.0

CPU2006 license: 11

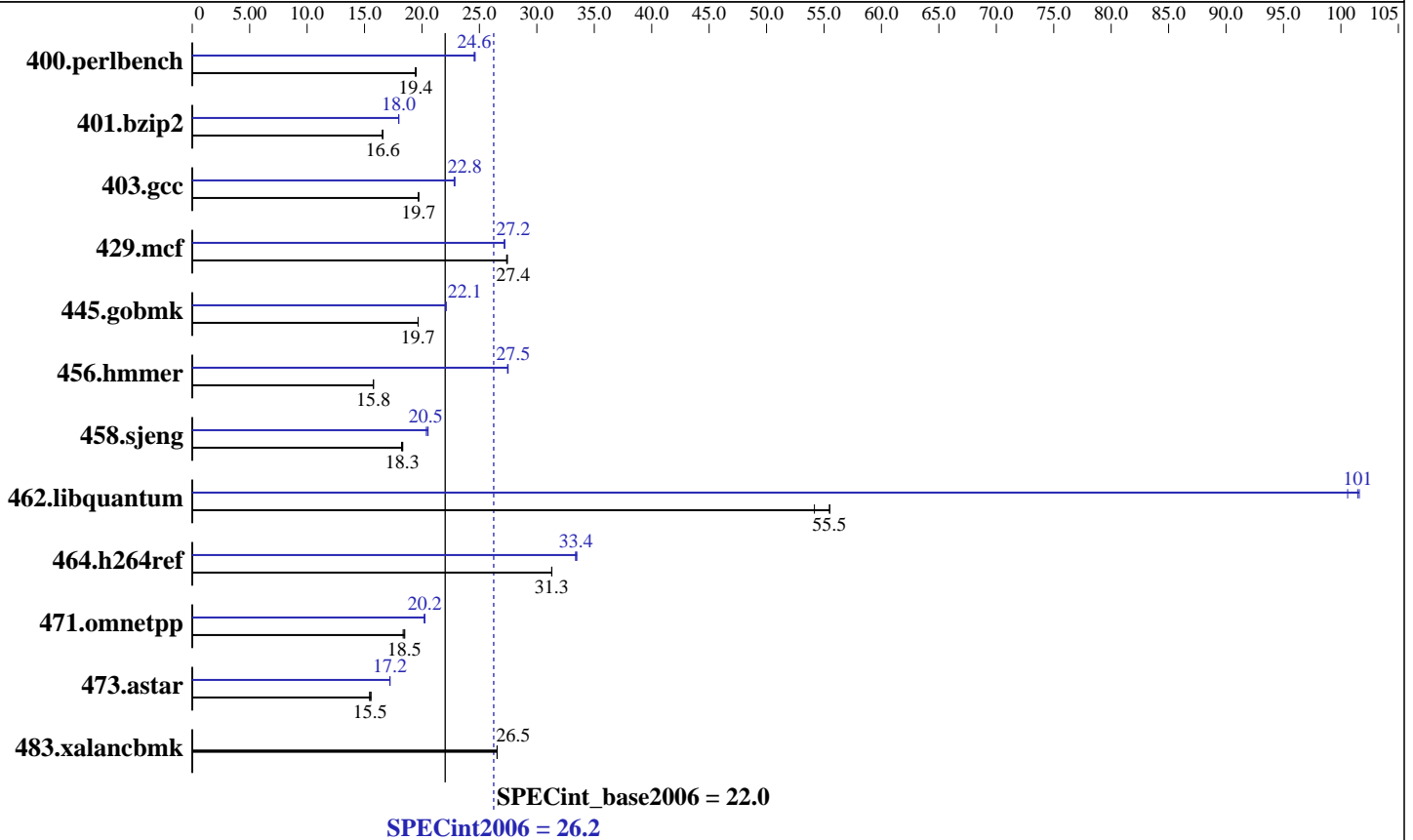
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Aug-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X3370
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 3000
 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 DDR2-6400E ECC)
 Disk Subsystem: 1 x 160 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: Run level 3 (Full multiuser with network)
 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	501	19.5	503	19.4	503	19.4	398	24.6	398	24.6	397	24.6
401.bzip2	582	16.6	582	16.6	583	16.6	537	18.0	537	18.0	536	18.0
403.gcc	408	19.7	409	19.7	409	19.7	353	22.8	352	22.9	353	22.8
429.mcf	332	27.4	333	27.4	333	27.4	335	27.2	335	27.2	336	27.2
445.gobmk	534	19.7	533	19.7	534	19.7	475	22.1	475	22.1	475	22.1
456.hmmmer	592	15.8	592	15.8	591	15.8	340	27.5	340	27.5	339	27.5
458.sjeng	661	18.3	660	18.3	664	18.2	594	20.4	589	20.5	591	20.5
462.libquantum	383	54.2	374	55.5	373	55.5	204	102	204	101	206	101
464.h264ref	707	31.3	707	31.3	707	31.3	661	33.5	662	33.4	663	33.4
471.omnetpp	338	18.5	339	18.5	340	18.4	309	20.2	309	20.2	309	20.3
473.astar	453	15.5	451	15.6	455	15.4	408	17.2	408	17.2	408	17.2
483.xalancbmk	260	26.5	260	26.5	260	26.5	260	26.5	260	26.5	260	26.5

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 -lsmarheap

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.hmmer: -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

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.20080513.01.html>



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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.20080513.01.xml>

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