



SPEC® CINT2006 Result

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IBM Corporation

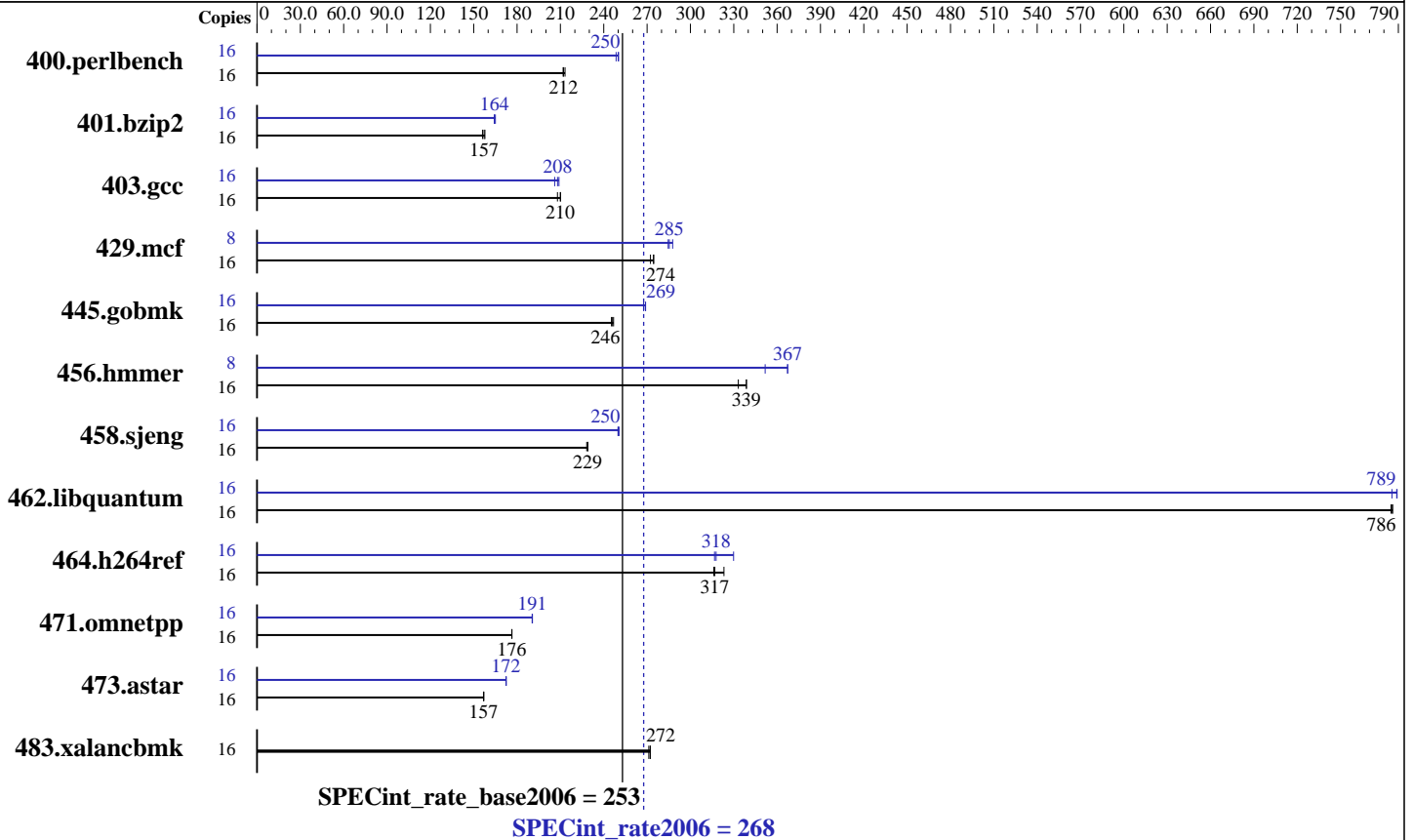
SPECint®_rate2006 = 268

IBM BladeCenter HS22V (Intel Xeon X5570)

SPECint_rate_base2006 = 253

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jan-2010
Hardware Availability: Mar-2010
Software Availability: Jan-2010



Hardware

CPU Name: Intel Xeon X5570
 CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz
 CPU MHz: 2933
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 24 GB (6 x 4 GB PC3-10600R)
 Disk Subsystem: 2 x 50 GB SATA, SSD
 Other Hardware: None

Software

Operating System: SuSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
 Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1
 Build 20091130 Package ID: l_cproc_p_11.1.064
 Auto Parallel: No
 File System: ext3
 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	16	733	213	<u>737</u>	<u>212</u>	738	212	16	625	250	<u>625</u>	<u>250</u>	629	249
401.bzip2	16	989	156	979	158	<u>983</u>	<u>157</u>	16	<u>939</u>	<u>164</u>	936	165	940	164
403.gcc	16	619	208	613	210	<u>614</u>	<u>210</u>	16	<u>619</u>	<u>208</u>	625	206	616	209
429.mcf	16	<u>532</u>	<u>274</u>	531	275	536	272	8	256	285	254	288	<u>256</u>	<u>285</u>
445.gobmk	16	680	247	684	245	<u>682</u>	<u>246</u>	16	624	269	<u>624</u>	<u>269</u>	627	268
456.hammer	16	<u>441</u>	<u>339</u>	441	339	448	333	8	203	367	212	352	<u>203</u>	<u>367</u>
458.sjeng	16	848	228	845	229	<u>846</u>	<u>229</u>	16	<u>774</u>	<u>250</u>	775	250	773	251
462.libquantum	16	422	785	422	786	<u>422</u>	<u>786</u>	16	<u>420</u>	<u>789</u>	420	789	422	786
464.h264ref	16	1096	323	<u>1117</u>	<u>317</u>	1120	316	16	1073	330	<u>1114</u>	<u>318</u>	1118	317
471.omnetpp	16	567	176	<u>567</u>	<u>176</u>	567	176	16	525	190	<u>525</u>	<u>191</u>	524	191
473.astar	16	715	157	<u>716</u>	<u>157</u>	717	157	16	<u>651</u>	<u>172</u>	651	172	652	172
483.xalancbmk	16	406	272	<u>406</u>	<u>272</u>	407	271	16	406	272	<u>406</u>	<u>272</u>	407	271

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.
numactl was used to bind copies to the cores

Platform Notes

Operating Modes: Performance Mode enabled in BIOS

General Notes

'ulimit -s unlimited' was used to set the stack size to unlimited prior to run

Base Compiler Invocation

C benchmarks:
icc -m32

C++ benchmarks:
icpc -m32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32

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Base Portability Flags (Continued)

462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

462.libquantum: icc -m64

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64

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Peak Portability Flags (Continued)

458.sjeng: -DSPEC_CPU_LP64
 462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
 473.astar: -DSPEC_CPU_LP64
 483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

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

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
 -prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

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

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
 -ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
 -prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
 -opt-prefetch

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

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
 -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
 -L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmarheap

473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
 -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs
 -L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmarheap64

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Peak Optimization Flags (Continued)

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-ic11.1-linux64-revE.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.xml>

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

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