



SPEC® CINT2006 Result

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IBM Corporation

SPECint®2006 = 13.2

IBM System x3455 (AMD Opteron 2222 SE)

SPECint_base2006 = 11.8

CPU2006 license: 11

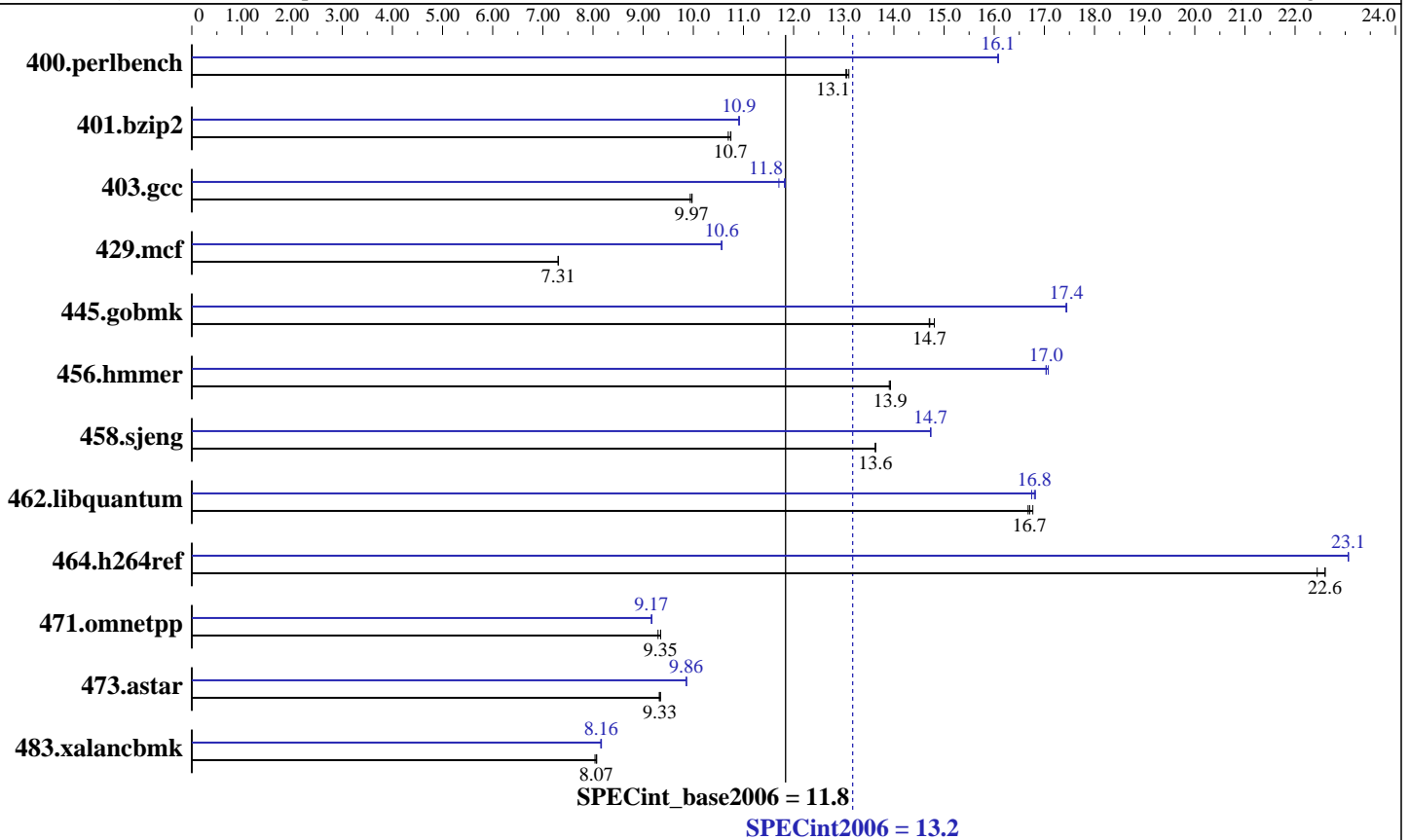
Test date: Feb-2007

Test sponsor: IBM Corporation

Hardware Availability: Apr-2007

Tested by: IBM Corporation

Software Availability: Aug-2006



Hardware

CPU Name: AMD Opteron 2222 SE
 CPU Characteristics:
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1, 2 chips
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per core
 L3 Cache: None
 Other Cache: None
 Memory: 16 GB (8 x 2GB DDR2-5300 ECC)
 Disk Subsystem: 1 x 80 GB SATA, 7200 RPM
 Other Hardware: None

Software

Operating System: SLES9 SP3 for AMD64/EM64T
 Compiler: QLogic PathScale Compiler Suite 2.5
 Auto Parallel: No
 File System: ext3
 System State: Multi-user, run level 3
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: None



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	748	13.1	746	13.1	749	13.0	608	16.1	607	16.1	608	16.1
401.bzip2	902	10.7	898	10.7	898	10.7	884	10.9	885	10.9	884	10.9
403.gcc	808	9.97	807	9.98	810	9.94	681	11.8	680	11.8	688	11.7
429.mcf	1248	7.31	1248	7.31	1248	7.31	863	10.6	864	10.6	863	10.6
445.gobmk	713	14.7	708	14.8	713	14.7	601	17.4	601	17.4	602	17.4
456.hmmer	670	13.9	670	13.9	671	13.9	548	17.0	546	17.1	548	17.0
458.sjeng	887	13.6	888	13.6	888	13.6	821	14.7	821	14.7	821	14.7
462.libquantum	1236	16.8	1243	16.7	1240	16.7	1233	16.8	1232	16.8	1237	16.7
464.h264ref	979	22.6	979	22.6	986	22.4	960	23.1	959	23.1	960	23.1
471.omnetpp	668	9.35	669	9.35	672	9.30	682	9.17	682	9.17	681	9.17
473.astar	751	9.35	753	9.32	752	9.33	712	9.86	712	9.86	712	9.86
483.xalancbmk	855	8.07	855	8.07	858	8.04	845	8.17	846	8.16	845	8.16

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

Operating System Notes

taskset utility used to bind CPU(s) to processes

Base Compiler Invocation

C benchmarks:
pathcc

C++ benchmarks:
pathCC

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX



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Base Optimization Flags

C benchmarks:
-march=auto -Ofast

C++ benchmarks:
-march=auto -Ofast -m32

Base Other Flags

C benchmarks:
-IPA:max_jobs=2

C++ benchmarks:
-IPA:max_jobs=2

Peak Compiler Invocation

C benchmarks:
pathcc

C++ benchmarks:
pathCC

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:
400.perlbench: -march=auto -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -Ofast

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Peak Optimization Flags (Continued)

401.bzip2: -march=auto -O3 -LNO:ou_prod_max=10 -OPT:Ofast
-OPT:alias=disjoint

403.gcc: -march=auto -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -m32 -O3 -OPT:Ofast

429.mcf: -march=auto -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -m32 -O2 -ipa

445.gobmk: -march=auto -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -O3 -OPT:alias=disjoint -LNO:simd=0
-LNO:minvariant=off -WOPT:retype_expr=on

456.hmmr: -march=auto -O2 -OPT:alias=disjoint -WOPT:aggstr=0
-CG:cflow=0

458.sjeng: -march=auto -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -O3 -IPA:plimit=50000
-IPA:pu_reorder=2

462.libquantum: -march=auto -O3 -ipa -CG:local_fwd_sched=on
-IPA:space=1000

464.h264ref: -march=auto -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -O3 -IPA:plimit=20000
-OPT:alias=disjoint -LNO:prefetch=0

C++ benchmarks:

471.omnetpp: -march=auto -Ofast -IPA:pu_reorder=2 -CG:gcm=off -m32

473.astar: -march=auto -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -Ofast

483.xalancbmk: -march=auto -Ofast -m32 -OPT:unroll_times_max=8

Peak Other Flags

C benchmarks:

-IPA:max_jobs=2

C++ benchmarks:

-IPA:max_jobs=2

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.29.html



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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.29.xml

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