



SPEC® CINT2006 Result

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Hewlett-Packard Company

SPECint®_rate2006 = 98.2

ProLiant BL45p G2 (Opteron 8220)

SPECint_rate_base2006 = 86.9

CPU2006 license: 3

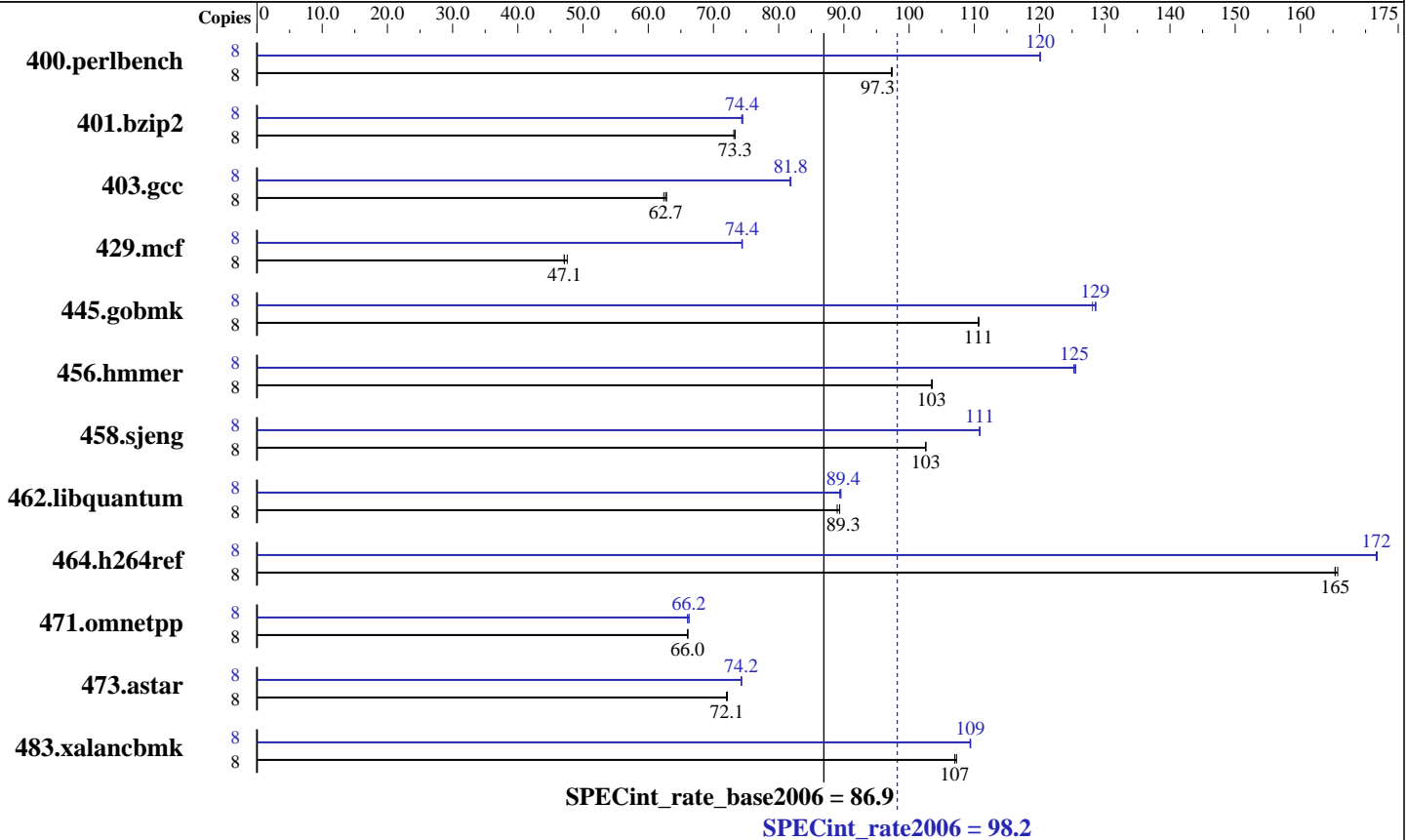
Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Mar-2007

Hardware Availability: Feb-2007

Software Availability: Sep-2006



Hardware

CPU Name: AMD Opteron 8220
 CPU Characteristics:
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip
 CPU(s) orderable: 2,4 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: 32 GB (16x2 GB, PC2-5300P CL5)
 Disk Subsystem: 2x72 GB 10 K SAS
 Other Hardware: None

Software

Operating System: SuSE Linux Enterprise Server 9 (x86_64) kernel 2.6.5-7.244-smp
 Compiler: QLogic PathScale Compiler Suite, Release 2.5
 Auto Parallel: No
 File System: ext2
 System State: Multi-user, run level 3
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap 8.0 32 bit Library for Linux



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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	8	802	97.4	803	97.3	804	97.3	8	651	120	651	120	651	120
401.bzip2	8	1053	73.3	1053	73.3	1056	73.1	8	1037	74.4	1037	74.5	1039	74.3
403.gcc	8	1032	62.4	1028	62.7	1025	62.8	8	787	81.8	788	81.8	787	81.9
429.mcf	8	1534	47.6	1547	47.1	1549	47.1	8	980	74.4	981	74.3	981	74.4
445.gobmk	8	758	111	759	111	758	111	8	652	129	653	129	655	128
456.hammer	8	721	103	721	104	722	103	8	595	125	596	125	595	126
458.sjeng	8	944	103	944	103	944	103	8	874	111	873	111	874	111
462.libquantum	8	1863	89.0	1855	89.4	1856	89.3	8	1855	89.4	1853	89.4	1851	89.6
464.h264ref	8	1068	166	1071	165	1071	165	8	1031	172	1031	172	1031	172
471.omnetpp	8	757	66.1	757	66.0	757	66.0	8	757	66.0	755	66.3	755	66.2
473.astar	8	780	72.0	779	72.1	779	72.1	8	756	74.2	757	74.2	756	74.3
483.xalancbmk	8	515	107	516	107	516	107	8	504	109	505	109	505	109

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

Platform Notes

Node interleaving is disabled

General Notes

taskset utility used to bind CPU(s) to processes
Binaries supplied by AMD

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

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Base Portability Flags (Continued)

456.hmmmer: -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

Base Optimization Flags

C benchmarks:
-Ofast

C++ benchmarks:
-Ofast -m32
-L/spec/mpaton/6v1.0/amd512K8.lib/microquill/lib -lsmartheap

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
445.gobmk: -DSPEC_CPU_LP64
456.hmmmer: -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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Peak Optimization Flags

C benchmarks:

400.perlbench: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast

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

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

429.mcf: -m32 -O2 -ipa
-L/spec/mpaton/6v1.0/amd512K8.lib/microquill/lib -lsmartheap

445.gobmk: -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.hmmmer: -O2 -OPT:alias=disjoint -WOPT:aggstr=0 -CG:cflow=0

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

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

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

C++ benchmarks:

471.omnetpp: -Ofast -IPA:pu_reorder=2 -CG:gcm=off -m32
-L/spec/mpaton/6v1.0/amd512K8.lib/microquill/lib -lsmartheap

473.astar: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast
-m32
-L/spec/mpaton/6v1.0/amd512K8.lib/microquill/lib -lsmartheap

483.xalancbmk: -Ofast -m32 -OPT:unroll_times_max=8
-L/spec/mpaton/6v1.0/amd512K8.lib/microquill/lib -lsmartheap

Peak Other Flags

C benchmarks:

-IPA:max_jobs=2

C++ benchmarks:

-IPA:max_jobs=2



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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.21.html

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.21.xml

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