



SPEC® CINT2006 Result

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Hewlett-Packard Company

SPECint®_rate2006 = 98.3

ProLiant DL585 G2 (AMD Opteron 8220 SE)

SPECint_rate_base2006 = 87.2

CPU2006 license: 3

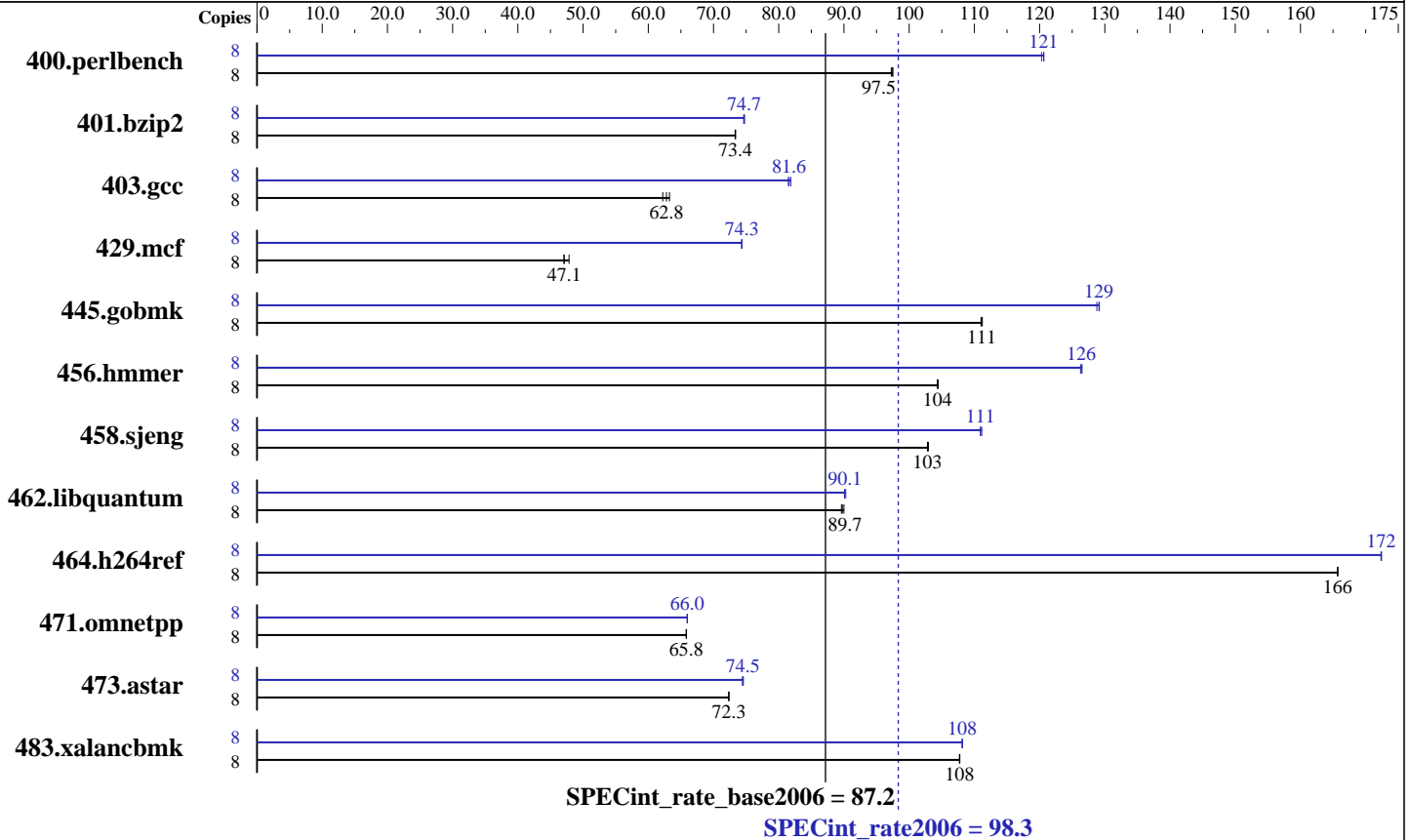
Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Mar-2007

Hardware Availability: Sep-2006

Software Availability: Sep-2006



Hardware

CPU Name: AMD Opteron 8220 SE
 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 (16x2GB, PC2-5300P CL5)
 Disk Subsystem: 2x72 GB 10 K SAS
 Other Hardware: None

Software

Operating System: SuSE Linux Enterprise Server 9 (x86-64) SP3
 SuSE 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	804	97.3	802	97.5	802	97.5	8	650	120	648	121	648	121
401.bzip2	8	1052	73.4	1052	73.4	1053	73.3	8	1033	74.8	1034	74.7	1034	74.6
403.gcc	8	1018	63.3	1026	62.8	1035	62.2	8	789	81.6	787	81.9	790	81.5
429.mcf	8	1525	47.8	1550	47.1	1548	47.1	8	981	74.3	981	74.3	982	74.3
445.gobmk	8	755	111	755	111	756	111	8	652	129	650	129	650	129
456.hammer	8	715	104	715	104	715	104	8	591	126	590	126	590	127
458.sjeng	8	941	103	942	103	940	103	8	872	111	871	111	873	111
462.libquantum	8	1850	89.6	1842	90.0	1847	89.7	8	1839	90.1	1840	90.1	1836	90.3
464.h264ref	8	1068	166	1069	166	1069	166	8	1027	172	1027	172	1027	172
471.omnetpp	8	759	65.9	760	65.8	759	65.8	8	758	66.0	758	66.0	758	66.0
473.astar	8	776	72.3	776	72.4	776	72.3	8	754	74.5	753	74.6	754	74.5
483.xalancbmk	8	512	108	512	108	512	108	8	510	108	510	108	511	108

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.hmmr: -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.hmmr: -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.hmmcr: -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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