SPEC® CINT2006 Result

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Hewlett-Packard Company

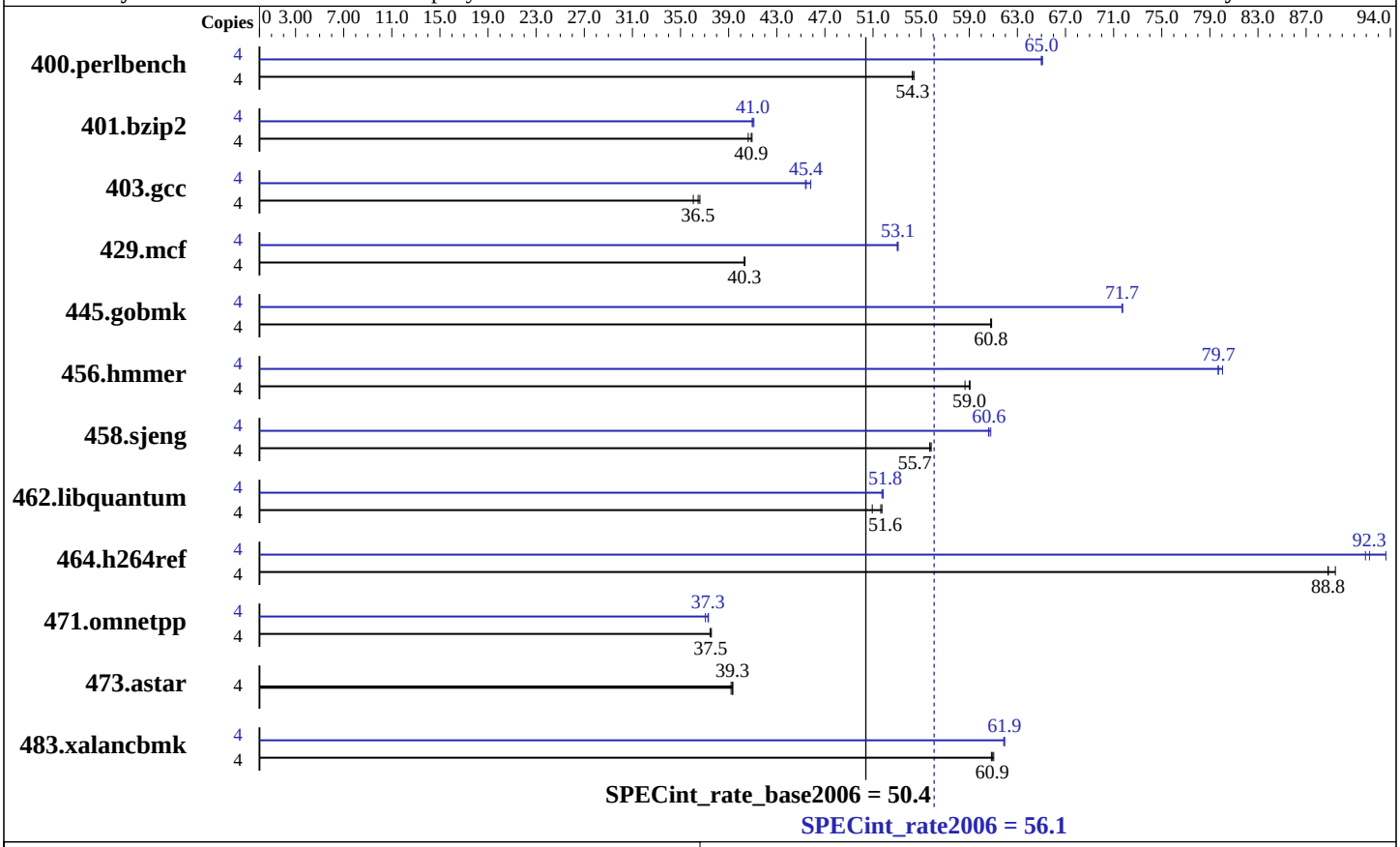
Proliant DL585 G2 (AMD Opteron 8222 SE)

SPECint®_rate2006 = 56.1

SPECint_rate_base2006 = 50.4

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Apr-2007
Hardware Availability: May-2007
Software Availability: Mar-2007



Hardware

CPU Name:	AMD Opteron 8222 SE
CPU Characteristics:	
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 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:	16 GB (8x2 GB, PC2-5300P CL5)
Disk Subsystem:	72 GB 10 K SAS
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) SuSE kernel 2.6.16.21-0.8-smp
Compiler:	QLogic PathScale Compiler Suite, Release 3.0
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	4	**720**	**54.3**	720	54.3	718	54.4	4	601	65.0	**601**	**65.0**	600	65.1
401.bzip2	4	943	40.9	**944**	**40.9**	950	40.6	4	943	41.0	939	41.1	**941**	**41.0**
403.gcc	4	879	36.6	**883**	**36.5**	893	36.1	4	703	45.8	709	45.4	**709**	**45.4**
429.mcf	4	904	40.4	905	40.3	**905**	**40.3**	4	**687**	**53.1**	687	53.1	688	53.0
445.gobmk	4	689	60.9	**690**	**60.8**	690	60.8	4	585	71.7	**585**	**71.7**	585	71.7
456.hmmer	4	636	58.6	**632**	**59.0**	632	59.1	4	**468**	**79.7**	468	79.7	466	80.1
458.sjeng	4	**868**	**55.7**	867	55.8	869	55.7	4	**798**	**60.6**	796	60.8	799	60.6
462.libquantum	4	1627	50.9	**1605**	**51.6**	1602	51.7	4	1602	51.7	1599	51.8	**1599**	**51.8**
464.h264ref	4	**996**	**88.8**	990	89.4	997	88.8	4	963	91.9	945	93.6	**959**	**92.3**
471.omnetpp	4	666	37.6	**667**	**37.5**	667	37.5	4	670	37.3	675	37.1	**671**	**37.3**
473.astar	4	714	39.3	**714**	**39.3**	716	39.2	4	714	39.3	**714**	**39.3**	716	39.2
483.xalancbmk	4	452	61.0	**453**	**60.9**	454	60.8	4	**446**	**61.9**	446	61.9	446	61.9

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

Platform Notes

```
Node interleaving is disabled
taskset utility used to bind CPU(s) to processes
ulimit -s unlimited set
```

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`

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Base Portability Flags (Continued)

483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-Ofast -OPT:malloc_alg=1

C++ benchmarks:
-Ofast -m32 -L/cpu2006/amd514K8.lib/32 -lsmartheap

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.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: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast -LNO:opt=0

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

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Peak Optimization Flags (Continued)

429.mcf: `-m32 -O3 -ipa -L/cpu2006/amd514K8.lib/32 -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.hmmer: `-O2 -OPT:alias=disjoint -OPT:malloc_alg=1 -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 -CG:gcm=off -m32 -L/cpu2006/amd514K8.lib/32 -lsmartheap`

473.astar: `basepeak = yes`

483.xalancbmk: `-Ofast -m32 -OPT:unroll_times_max=8 -L/cpu2006/amd514K8.lib/32 -lsmartheap`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.16.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.16.xml`

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