SPEC® CINT2006 Result

Hewlett-Packard Company

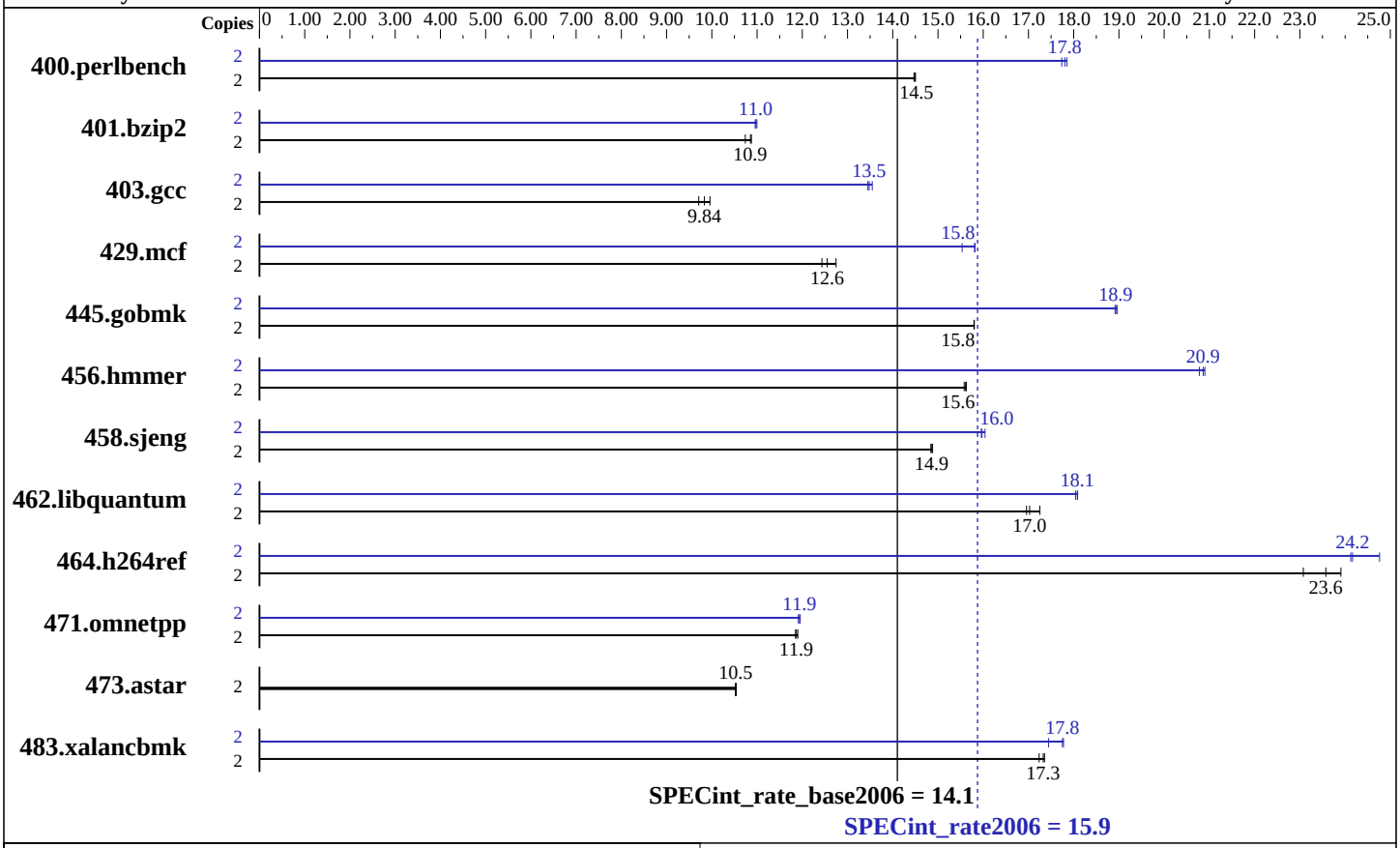
HP BladeSystem bc2500 Blade PC
(1.6GHz AMD Athlon 64 X2 3000+)

SPECint®_rate2006 = 15.9

SPECint_rate_base2006 = 14.1

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

Test date: Dec-2007
Hardware Availability: Jun-2007
Software Availability: Mar-2008



Hardware

CPU Name:	AMD Athlon 64 X2 3000+
CPU Characteristics:	
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	512 KB I+D on chip per core
L3 Cache:	None
Other Cache:	None
Memory:	4 GB (2x2GB, DDR2-667 CL5 ECC Reg Dual Rank)
Disk Subsystem:	1x80 GB SATA, 5400 RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler:	QLogic PathScale Compiler Suite, Release 3.0
Auto Parallel:	No
File System:	ext3
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	2	1347	14.5	**1349**	**14.5**	1350	14.5	2	1102	17.7	1095	17.9	**1097**	**17.8**
401.bzip2	2	1797	10.7	**1778**	**10.9**	1775	10.9	2	1761	11.0	1755	11.0	**1759**	**11.0**
403.gcc	2	1658	9.71	1617	9.96	**1637**	**9.84**	2	1197	13.4	1188	13.5	**1194**	**13.5**
429.mcf	2	1467	12.4	1431	12.7	**1453**	**12.6**	2	1174	15.5	1153	15.8	**1154**	**15.8**
445.gobmk	2	1328	15.8	**1328**	**15.8**	1328	15.8	2	1109	18.9	**1108**	**18.9**	1107	19.0
456.hmmer	2	1194	15.6	1198	15.6	**1195**	**15.6**	2	**894**	**20.9**	898	20.8	893	20.9
458.sjeng	2	1631	14.8	1626	14.9	**1628**	**14.9**	2	1516	16.0	1509	16.0	**1515**	**16.0**
462.libquantum	2	2444	17.0	2402	17.3	**2434**	**17.0**	2	**2292**	**18.1**	2297	18.0	2291	18.1
464.h264ref	2	1851	23.9	1918	23.1	**1878**	**23.6**	2	1787	24.8	1835	24.1	**1832**	**24.2**
471.omnetpp	2	1050	11.9	**1053**	**11.9**	1055	11.9	2	1049	11.9	1046	12.0	**1047**	**11.9**
473.astar	2	1332	10.5	1334	10.5	**1333**	**10.5**	2	1332	10.5	1334	10.5	**1333**	**10.5**
483.xalancbmk	2	801	17.2	795	17.4	**796**	**17.3**	2	776	17.8	791	17.4	**777**	**17.8**

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

General Notes

```
taskset utility used to bind cores 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`

Base Optimization Flags

C benchmarks:
```
-Ofast -OPT:malloc_alg=1
```

C++ benchmarks:
```
-Ofast -m32 -L/cpu2006/mpaton/1.0/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`

429.mcf: `-m32 -O3 -ipa -L/cpu2006/mpaton/1.0/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`

Continued on next page

Peak Optimization Flags (Continued)

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/mpaton/1.0/amd514K8.lib/32 -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -Ofast -m32 -OPT:unroll_times_max=8
-L/cpu2006/mpaton/1.0/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.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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