SPEC® CINT2006 Result

Hewlett-Packard Company

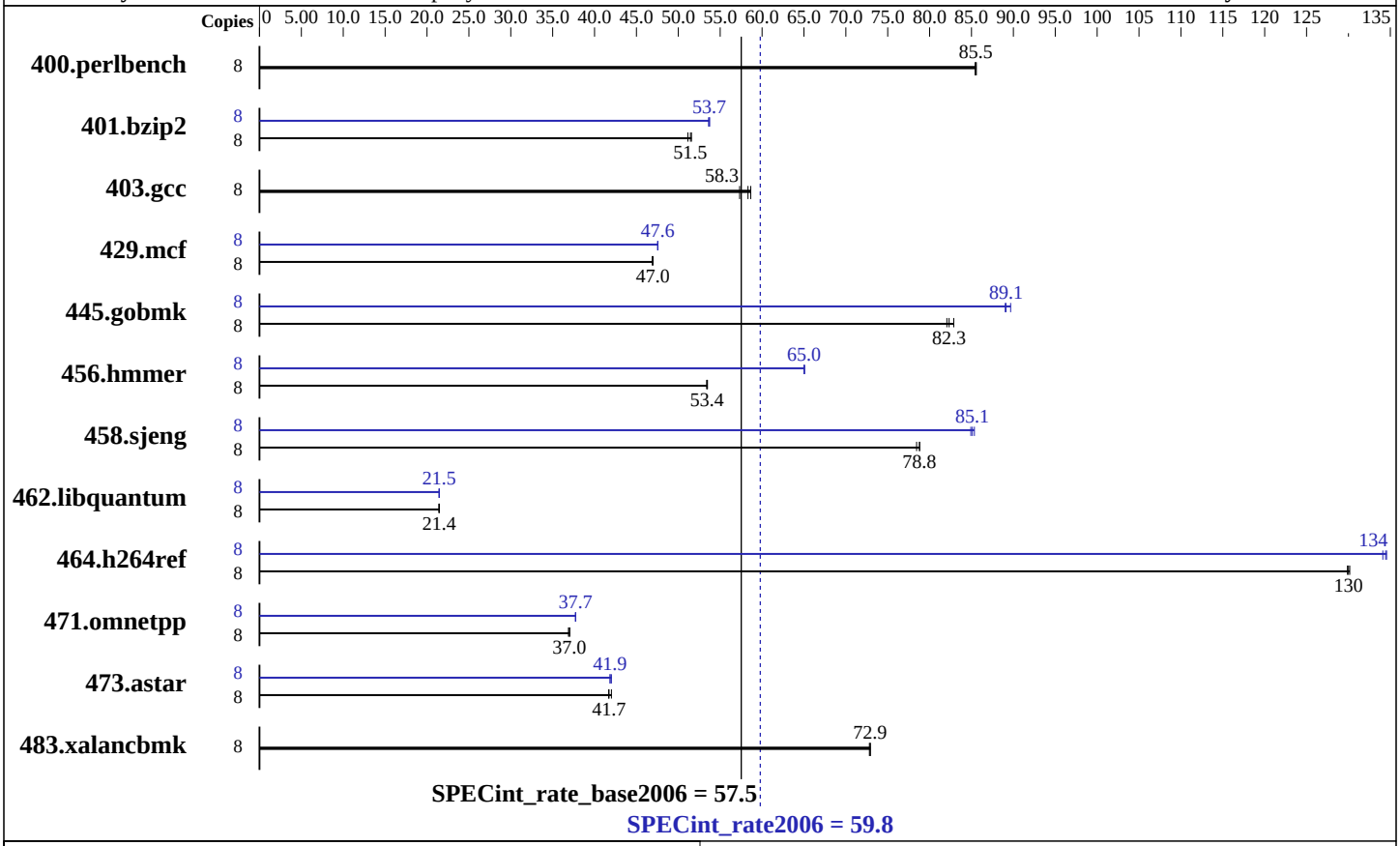
ProLiant ML350 G5
(1.60 GHz, Intel Xeon processor E5310)

SPECint®_rate2006 = 59.8

SPECint_rate_base2006 = 57.5

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

Test date: Jun-2007
Hardware Availability: Jan-2007
Software Availability: Mar-2007



Hardware

CPU Name:	Intel Xeon E5310
CPU Characteristics:	1.60 GHz, 2x4 MB L2 shared, 1066 MHz system bus
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 4 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (4x4 GB PC2-5300F CL5)
Disk Subsystem:	4x36 GB 10 K SAS
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) kernel 2.6.16.21-0.8-smp
Compiler:	Intel C++ Compiler for Intel EM64T-based applications, Version 9.1 Build , Package ID: l_cc_c_9.1.049
Auto Parallel:	No
File System:	ext2
System State:	Multi-user run level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap Library 8.1

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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	915	85.4	913	85.6	**914**	**85.5**	8	915	85.4	913	85.6	**914**	**85.5**
401.bzip2	8	1510	51.1	1497	51.6	**1500**	**51.5**	8	1440	53.6	1437	53.7	**1437**	**53.7**
403.gcc	8	1098	58.6	**1104**	**58.3**	1124	57.3	8	1098	58.6	**1104**	**58.3**	1124	57.3
429.mcf	8	1553	47.0	1556	46.9	**1553**	**47.0**	8	1534	47.6	1535	47.5	**1534**	**47.6**
445.gobmk	8	1012	82.9	**1019**	**82.3**	1023	82.1	8	936	89.7	943	89.0	**942**	**89.1**
456.hmmer	8	1398	53.4	1396	53.5	**1397**	**53.4**	8	**1148**	**65.0**	1147	65.1	1148	65.0
458.sjeng	8	**1229**	**78.8**	1234	78.4	1228	78.8	8	1140	84.9	**1137**	**85.1**	1134	85.3
462.libquantum	8	7718	21.5	**7728**	**21.4**	7739	21.4	8	7730	21.4	7723	21.5	**7726**	**21.5**
464.h264ref	8	**1362**	**130**	1360	130	1363	130	8	**1317**	**134**	1316	135	1320	134
471.omnetpp	8	1350	37.0	**1352**	**37.0**	1356	36.9	8	**1325**	**37.7**	1325	37.7	1325	37.7
473.astar	8	**1346**	**41.7**	1347	41.7	1337	42.0	8	1337	42.0	1342	41.8	**1341**	**41.9**
483.xalancbmk	8	758	72.8	**757**	**72.9**	757	72.9	8	758	72.8	**757**	**72.9**	757	72.9

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

Platform Notes

```
Power Regulator set to Static High Performance Mode in BIOS.
Adjacent Sector Prefetch Disabled in BIOS.
taskset utility used to bind CPU(s) to processes
ulimit -s unlimited set
```

Base Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_X64`
401.bzip2: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
```
-fast
```

C++ benchmarks:
```
-xP -O3 -ipo -no-prec-div
-L/root/compiler/smartheap/SmartHeap_8.1/lib -lsmartheap
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc
```

401.bzip2:
```
/opt/intel/cce/9.1.049/bin/icc
-I/opt/intel/cce/9.1.049/include
-L/opt/intel/cce/9.1.049/lib
```

456.hmmer:
```
/opt/intel/cce/9.1.049/bin/icc
-I/opt/intel/cce/9.1.049/include
-L/opt/intel/cce/9.1.049/lib
```

462.libquantum:
```
/opt/intel/cce/9.1.049/bin/icc
-I/opt/intel/cce/9.1.049/include
-L/opt/intel/cce/9.1.049/lib
```

C++ benchmarks:
```
icpc
```

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_X64`
401.bzip2: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

400.perlbench: `basepeak = yes`

401.bzip2: `-fast -auto_ilp32`

403.gcc: `basepeak = yes`

Continued on next page

Peak Optimization Flags (Continued)

429.mcf: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast -auto_ilp32`

445.gobmk: `Same as 429.mcf`

456.hmmer: `Same as 429.mcf`

458.sjeng: `Same as 429.mcf`

462.libquantum: `Same as 429.mcf`

464.h264ref: `Same as 429.mcf`

C++ benchmarks:

471.omnetpp: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-xP -O3 -ipo -no-prec-div -fast -auto_ilp32 -L/root/compiler/smartheap/SmartHeap_8.1/lib -lsmartheap`

473.astar: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast -auto_ilp32 -L/root/compiler/smartheap/SmartHeap_8.1/lib -lsmartheap`

483.xalancbmk: `basepeak = yes`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/hp-ic91-flags.20090715.00.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/hp-ic91-flags.20090715.00.xml`

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

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