SPEC® CINT2006 Result

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Hewlett-Packard Company

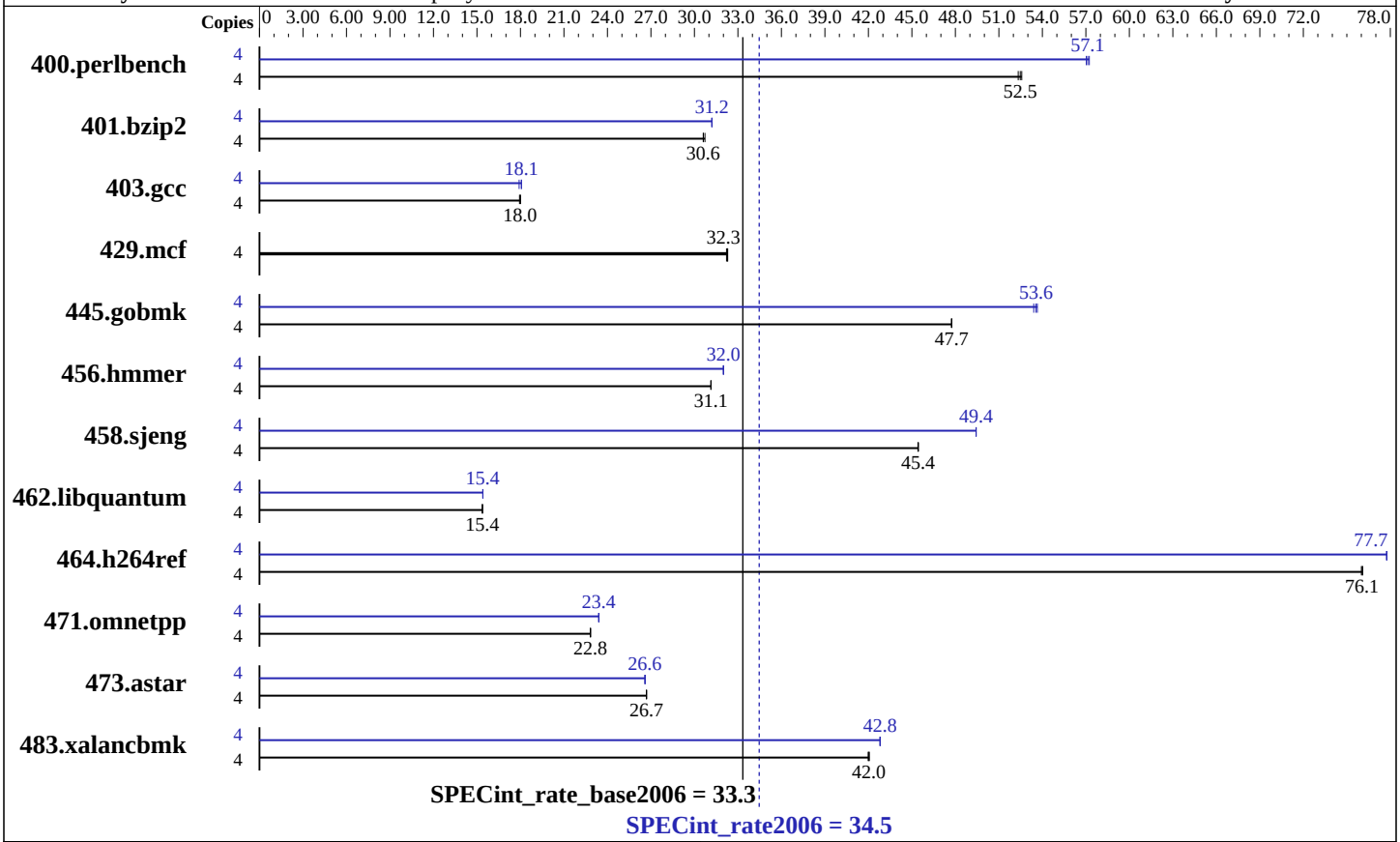
ProLiant BL20p G4
(1.86 GHz, Intel Xeon processor E5320)

SPECint®_rate2006 = 34.5

SPECint_rate_base2006 = 33.3

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

Test date: Feb-2007
Hardware Availability: Jan-2007
Software Availability: Nov-2006



Hardware

CPU Name:	Intel Xeon E5320
CPU Characteristics:	1.86 GHz, 2x4 MB L2 shared, 1066 MHz system bus
CPU MHz:	1860
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 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 (8x2 GB PC2-5300F CL5)
Disk Subsystem:	2x72 GB 10k SAS
Other Hardware:	None

Software

Operating System:	Windows Server 2003 Enterprise x64 Edition SP1
Compiler:	Intel C++ Compiler for 32-bit applications, Version 9.1, Build 20061103Z Package ID: W_CC_C_9.1.033 Microsoft Visual Studio .NET 2003 (v7.1.3088, for libraries)
Auto Parallel:	No
File System:	NTFS
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	MicroQuill SmartHeap Library 8.0

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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	743	52.6	**745**	**52.5**	747	52.3	4	685	57.0	683	57.2	**684**	**57.1**
401.bzip2	4	1256	30.7	**1261**	**30.6**	1261	30.6	4	**1237**	**31.2**	1237	31.2	1237	31.2
403.gcc	4	**1791**	**18.0**	1795	17.9	1788	18.0	4	**1782**	**18.1**	1798	17.9	1782	18.1
429.mcf	4	1130	32.3	**1130**	**32.3**	1132	32.2	4	1130	32.3	**1130**	**32.3**	1132	32.2
445.gobmk	4	879	47.7	**879**	**47.7**	879	47.7	4	**783**	**53.6**	786	53.4	782	53.7
456.hmmer	4	1198	31.1	1198	31.1	**1198**	**31.1**	4	**1166**	**32.0**	1166	32.0	1166	32.0
458.sjeng	4	1065	45.5	1066	45.4	**1065**	**45.4**	4	**979**	**49.4**	979	49.4	979	49.4
462.libquantum	4	5392	15.4	**5392**	**15.4**	5387	15.4	4	**5378**	**15.4**	5377	15.4	5382	15.4
464.h264ref	4	1165	76.0	**1164**	**76.1**	1163	76.1	4	1138	77.8	1139	77.7	**1139**	**77.7**
471.omnetpp	4	1095	22.8	1095	22.8	**1095**	**22.8**	4	1069	23.4	**1068**	**23.4**	1068	23.4
473.astar	4	1052	26.7	1051	26.7	**1052**	**26.7**	4	**1056**	**26.6**	1056	26.6	1056	26.6
483.xalancbmk	4	657	42.0	656	42.1	**657**	**42.0**	4	645	42.8	**645**	**42.8**	645	42.8

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.
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc7.1 -Qc99
```

C++ benchmarks:

```
icl -Qvc7.1
```

Base Portability Flags

403.gcc: `-DSPEC_CPU_WIN32`
464.h264ref: `-DSPEC_CPU_NO_INTTYPES -DWIN32`

Base Optimization Flags

C benchmarks:

```
-fast /F512000000 shlw32m.lib           -link /FORCE:MULTIPLE
```

Continued on next page

Base Optimization Flags (Continued)

C++ benchmarks:
-fast -Qcxx_features /F512000000 shlw32m.lib
-link /FORCE:MULTIPLE

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks:
icl -Qvc7.1 -Qc99

C++ benchmarks:
icl -Qvc7.1

Peak Portability Flags

403.gcc: -DSPEC_CPU_WIN32
464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32

Peak Optimization Flags

C benchmarks:

400.perlbench: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F512000000
shlw32m.lib -link /FORCE:MULTIPLE

401.bzip2: Same as 400.perlbench

403.gcc: Same as 400.perlbench

429.mcf: basepeak = yes

445.gobmk: Same as 400.perlbench

456.hmmer: Same as 400.perlbench

458.sjeng: Same as 400.perlbench

Continued on next page

Peak Optimization Flags (Continued)

462.libquantum: Same as 400.perlbench

464.h264ref: Same as 400.perlbench

C++ benchmarks:
-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features
/F512000000 shlw32m.lib -link /FORCE:MULTIPLE

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/hp-ic91-flags.20090715.02.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/hp-ic91-flags.20090715.02.xml

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

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