SPEC® CINT2006 Result

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Hewlett-Packard Company

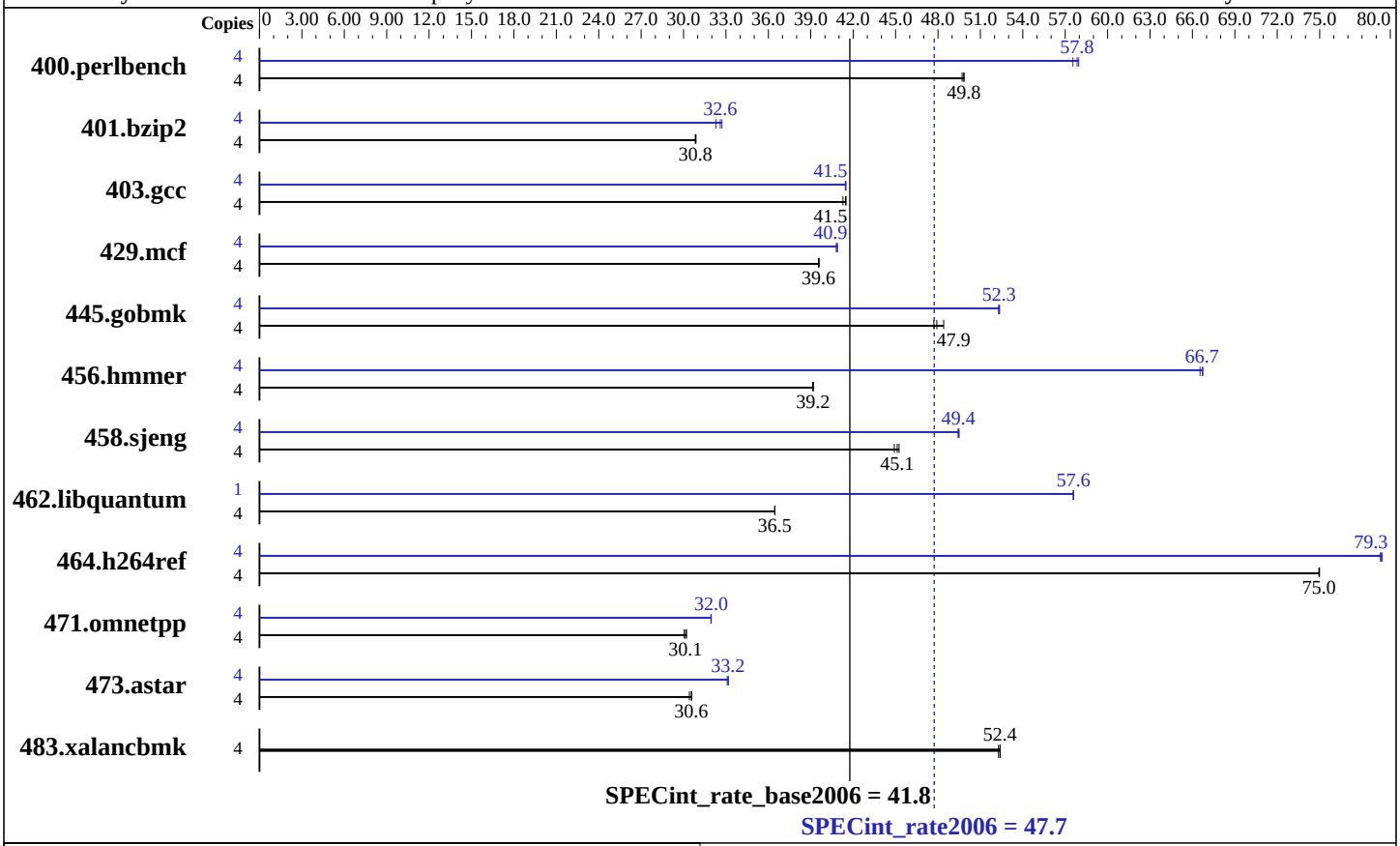
ProLiant DL380 G5
(1.86 GHz, Intel Xeon processor 5120)

SPECint®_rate2006 = 47.7

SPECint_rate_base2006 = 41.8

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

Test date: Oct-2007
Hardware Availability: Jun-2006
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon 5120
CPU Characteristics:	1.86 GHz, 4 MB L2 shared, 1066 MHz system bus
CPU MHz:	1866
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1 or 2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	8 GB (8x1 GB PC2-5300F CL5)
Disk Subsystem:	1x72 GB 10 K SAS
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) SP1 kernel 2.6.16.46-0.12-smp
Compiler:	Intel C++ Compiler for Linux32 and Linux64 version 10.1, Build 20070725
Auto Parallel:	Yes
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 binutils-2.17.50

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	**784**	**49.8**	786	49.7	784	49.8	4	**676**	**57.8**	679	57.5	674	58.0
401.bzip2	4	**1251**	**30.8**	1252	30.8	1250	30.9	4	1195	32.3	1180	32.7	**1184**	**32.6**
403.gcc	4	780	41.3	**777**	**41.5**	776	41.5	4	**776**	**41.5**	777	41.4	776	41.5
429.mcf	4	**922**	**39.6**	922	39.6	921	39.6	4	892	40.9	894	40.8	**893**	**40.9**
445.gobmk	4	867	48.4	879	47.7	**876**	**47.9**	4	**802**	**52.3**	801	52.4	803	52.3
456.hmmer	4	**953**	**39.2**	953	39.1	952	39.2	4	**560**	**66.7**	561	66.5	559	66.7
458.sjeng	4	1070	45.2	1078	44.9	**1073**	**45.1**	4	**979**	**49.4**	979	49.4	978	49.5
462.libquantum	4	2274	36.4	**2273**	**36.5**	2273	36.5	1	**360**	**57.6**	360	57.6	360	57.6
464.h264ref	4	1180	75.0	1181	75.0	**1181**	**75.0**	4	**1116**	**79.3**	1116	79.3	1114	79.4
471.omnetpp	4	827	30.2	832	30.0	**829**	**30.1**	4	783	31.9	**782**	**32.0**	782	32.0
473.astar	4	**919**	**30.6**	923	30.4	918	30.6	4	**847**	**33.2**	849	33.1	847	33.2
483.xalancbmk	4	527	52.4	528	52.3	**527**	**52.4**	4	527	52.4	528	52.3	**527**	**52.4**

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to 64M
```

Platform Notes

```
BIOS configuration:
  Power Regulator set to Static High Performance Mode
  Adjacent Sector Prefetch Disabled
```

Base Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`

Continued on next page

Base Portability Flags (Continued)

462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-fast -inline-calloc -opt-malloc-options=3

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include

456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -ansi-alias -prefetch`

401.bzip2: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch`

403.gcc: `-fast -inline-calloc -opt-malloc-options=3`

429.mcf: `-fast -prefetch`

445.gobmk: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O2 -ipo -no-prec-div -ansi-alias`

456.hmmer: `-fast -unroll2 -ansi-alias -opt-multi-version-aggressive`

458.sjeng: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4`

462.libquantum: `-fast -unroll4 -Ob0 -prefetch -opt-streaming-stores always -vec-guard-write -opt-malloc-options=3 -parallel -par-runtime-control`

464.h264ref: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -ansi-alias`

C++ benchmarks:

471.omnetpp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap`

473.astar: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs -L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap`

483.xalancbmk: `basepeak = yes`

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-Intel-ic10.1-linux-flags.20090714.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/HP-Intel-ic10.1-linux-flags.20090714.xml

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