SPEC® CINT2006 Result

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Hewlett-Packard Company

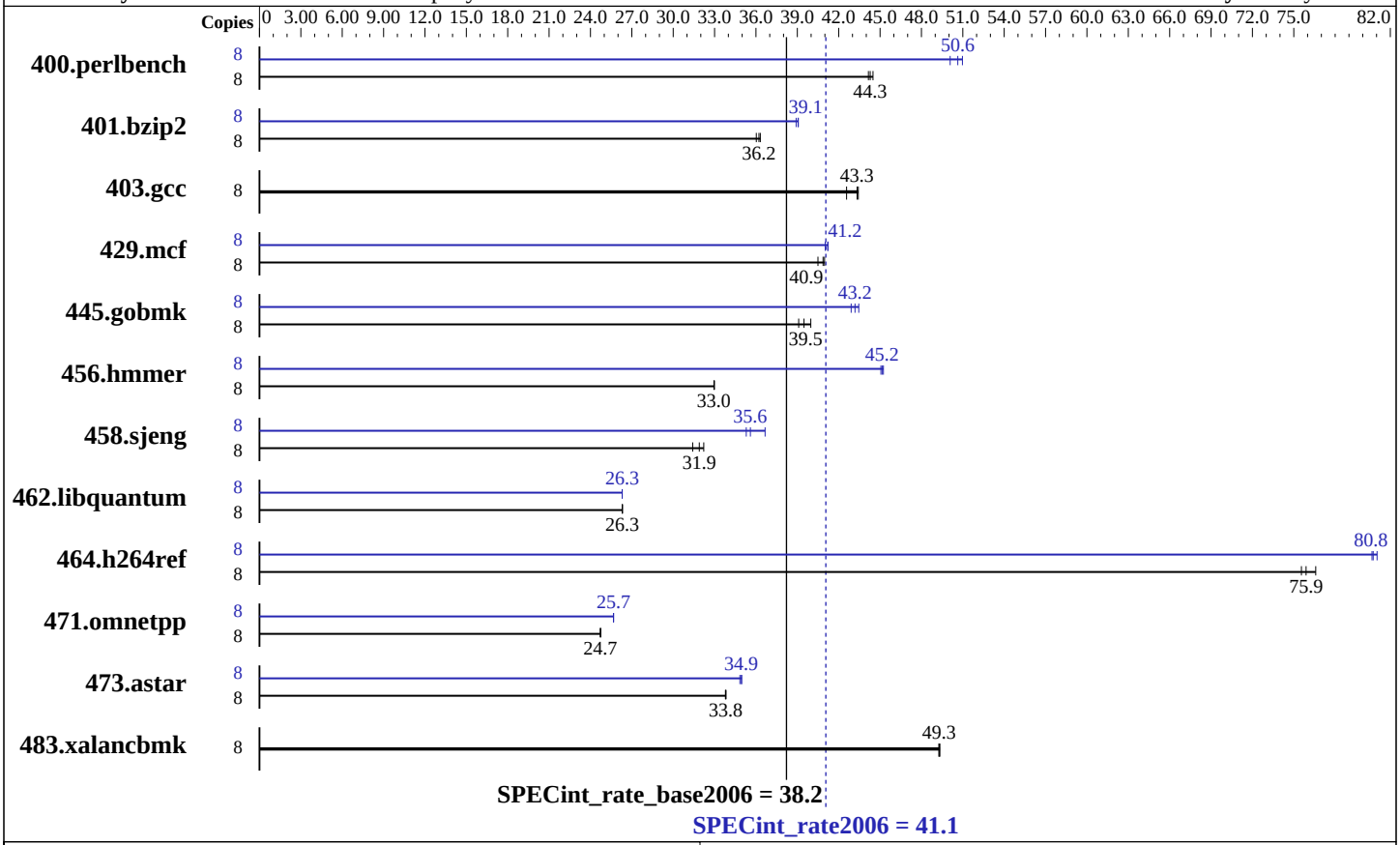
ProLiant DL580 G4
(3.2 GHz, Intel Xeon processor 7130M)

SPECint®_rate2006 = 41.1

SPECint_rate_base2006 = 38.2

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

Test date: Jul-2007
Hardware Availability: Aug-2006
Software Availability: May-2007



Hardware

CPU Name:	Intel Xeon 7130M
CPU Characteristics:	3.2 GHz, 800 MHz system bus
CPU MHz:	3200
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip, 2 threads/core
CPU(s) orderable:	1,2,4 chips
Primary Cache:	12 K micro-ops I + 16 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core
L3 Cache:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	32 GB (16x2 GB PC2-3200R)
Disk Subsystem:	1x72 GB 15 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 IA32/EM64T applications, Version 10.0 Build 20070426 Package ID: l_cc_p_10.0.023
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 8.1 libraries

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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	1770	44.2	1757	44.5	**1765**	**44.3**	8	**1544**	**50.6**	1533	51.0	1561	50.1
401.bzip2	8	2126	36.3	**2132**	**36.2**	2143	36.0	8	**1977**	**39.1**	1984	38.9	1976	39.1
403.gcc	8	1483	43.4	**1486**	**43.3**	1513	42.6	8	1483	43.4	**1486**	**43.3**	1513	42.6
429.mcf	8	1802	40.5	1781	41.0	**1785**	**40.9**	8	1770	41.2	1778	41.0	**1770**	**41.2**
445.gobmk	8	2099	40.0	**2125**	**39.5**	2146	39.1	8	1931	43.5	**1943**	**43.2**	1956	42.9
456.hmmer	8	2262	33.0	2265	33.0	**2265**	**33.0**	8	1656	45.1	1650	45.2	**1653**	**45.2**
458.sjeng	8	**3035**	**31.9**	3005	32.2	3081	31.4	8	2640	36.7	**2719**	**35.6**	2742	35.3
462.libquantum	8	**6300**	**26.3**	6300	26.3	6299	26.3	8	6302	26.3	**6302**	**26.3**	6303	26.3
464.h264ref	8	2343	75.6	**2333**	**75.9**	2312	76.6	8	2195	80.7	**2192**	**80.8**	2185	81.0
471.omnetpp	8	**2022**	**24.7**	2023	24.7	2021	24.7	8	1948	25.7	**1948**	**25.7**	1947	25.7
473.astar	8	1662	33.8	**1661**	**33.8**	1660	33.8	8	1612	34.8	1606	35.0	**1607**	**34.9**
483.xalancbmk	8	1119	49.3	1120	49.3	**1120**	**49.3**	8	1119	49.3	1120	49.3	**1120**	**49.3**

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

Platform Notes

BIOS configuration:
 Power Regulator Disabled
 Adjacent Sector Prefetch Enabled
 Hardware Prefetcher Enabled
 Hyper-Threading Technology Enabled

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX

Continued on next page

Base Portability Flags (Continued)

483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xP -ipo -O3 -static -no-prec-div

C++ benchmarks:
-xP -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/cpu2006.1.0/SmartHeap_8.1/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/cce/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/include

456.hmmer: /opt/intel/cce/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/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) `-xP -ipo -O3 -no-prec-div -ansi-alias -prefetch`

401.bzip2: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xP -ipo -O3 -no-prec-div`

403.gcc: `basepeak = yes`

429.mcf: `-xP -ipo -O3 -static -no-prec-div -prefetch -L/cpu2006.1.0/SmartHeap_8.1/lib -lsmartheap`

445.gobmk: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xP -O2 -ipo -no-prec_div -ansi-alias`

456.hmmer: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xP -ipo -O3 -static -no-prec-div -unroll2 -ansi-alias`

458.sjeng: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xP -ipo -O3 -static -no-prec-div -unroll4`

462.libquantum: `Same as 458.sjeng`

464.h264ref: `Same as 456.hmmer`

C++ benchmarks:

471.omnetpp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xP -O3 -ipo -no-prec_div -ansi-alias -Wl,-z,muldefs -L/cpu2006.1.0/SmartHeap_8.1/lib -lsmartheap`

473.astar: `Same as 471.omnetpp`

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-ic10-flags.20090714.03.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/hp-ic10-flags.20090714.03.xml`

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