SPEC® CINT2006 Result

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Hewlett-Packard Company

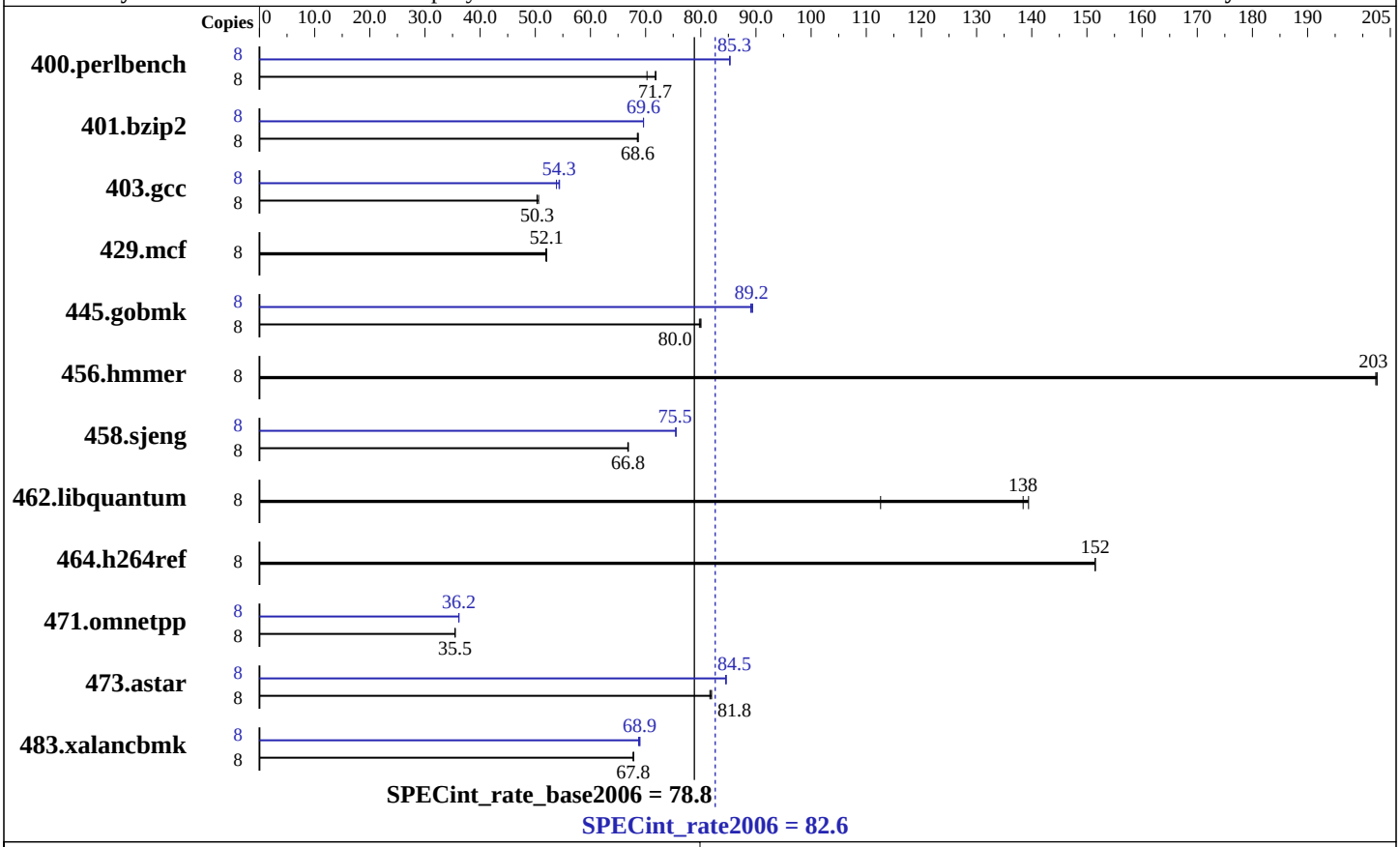
HP Integrity rx4640
(1.6GHz/24MB Dual-Core Intel Itanium 2)

SPECint®_rate2006 = 82.6

SPECint_rate_base2006 = 78.8

CPU2006 license: 03
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Oct-2006
Hardware Availability: Sep-2006
Software Availability: Nov-2006



Hardware

CPU Name:	Dual-Core Intel Itanium 2 9050
CPU Characteristics:	1.6GHz/24MB, 400MHz FSB
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	1-4 chips
Primary Cache:	16 KB I + 16 KB D on chip per core
Secondary Cache:	1 MB I + 256 KB D on chip per core
L3 Cache:	12 MB I+D on chip per core
Other Cache:	None
Memory:	32 GB (16x2GB DIMMs)
Disk Subsystem:	36GB 15K RPM SCSI
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux AS release 4 (Update 4)
Compiler:	Intel C++ Compiler for Itanium version 9.1 (Build 20060818)
Auto Parallel:	No
File System:	ext3
System State:	Multi-user
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other Software:	MicroQuill Smartheap 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	8	1113	70.2	**1089**	**71.7**	1088	71.9	8	917	85.2	916	85.3	**917**	**85.3**
401.bzip2	8	**1125**	**68.6**	1127	68.5	1124	68.7	8	1109	69.6	**1109**	**69.6**	1109	69.6
403.gcc	8	1280	50.3	1273	50.6	**1279**	**50.3**	8	1196	53.8	**1186**	**54.3**	1184	54.4
429.mcf	8	1405	51.9	1401	52.1	**1401**	**52.1**	8	1405	51.9	1401	52.1	**1401**	**52.1**
445.gobmk	8	1049	80.0	1052	79.7	**1049**	**80.0**	8	942	89.1	939	89.4	**941**	**89.2**
456.hmmer	8	**368**	**203**	368	203	369	202	8	**368**	**203**	368	203	369	202
458.sjeng	8	1450	66.8	1448	66.9	**1448**	**66.8**	8	1283	75.5	**1282**	**75.5**	1282	75.5
462.libquantum	8	**1197**	**138**	1189	139	1472	113	8	**1197**	**138**	1189	139	1472	113
464.h264ref	8	**1169**	**152**	1169	152	1169	151	8	**1169**	**152**	1169	152	1169	151
471.omnetpp	8	1410	35.5	**1410**	**35.5**	1410	35.5	8	1384	36.1	1383	36.2	**1383**	**36.2**
473.astar	8	685	82.0	688	81.7	**687**	**81.8**	8	664	84.6	**664**	**84.5**	664	84.5
483.xalancbmk	8	814	67.9	**814**	**67.8**	815	67.7	8	**801**	**68.9**	800	69.0	803	68.7

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

Operating System Notes

```
stacksize set to unlimited prior to run
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_IA64
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
471.omnetpp: -DSPEC_CPU_LP64

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Base Portability Flags (Continued)

473.astar: `-DSPEC_CPU_LP64`
483.xalancbmk: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
`-fast -IPF_fp_relaxed -ansi-alias`

C++ benchmarks:
`-fast -IPF_fp_relaxed -ansi-alias -Wl,-z,muldefs`
`/opt/SmartHeap_8/lib/libsmartheapC64.a`
`/opt/SmartHeap_8/lib/libsmartheap64.a`

Peak Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

Peak Portability Flags

`Same as Base Portability Flags`

Peak Optimization Flags

C benchmarks:

400.perlbench: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast -IPF_fp_relaxed -ansi-alias`

401.bzip2: `Same as 400.perlbench`

403.gcc: `Same as 400.perlbench`

429.mcf: `basepeak = yes`

445.gobmk: `Same as 400.perlbench`

456.hmmer: `basepeak = yes`

Continued on next page

Peak Optimization Flags (Continued)

458.sjeng: Same as 400.perlbench

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
-ansi-alias -Wl,-z,muldefs
/opt/SmartHeap_8/lib/libsmartheapC64.a
/opt/SmartHeap_8/lib/libsmartheap64.a

473.astar: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
-ansi-alias -inline-factor=150 -Wl,-z,muldefs
/opt/SmartHeap_8/lib/libsmartheapC64.a
/opt/SmartHeap_8/lib/libsmartheap64.a

483.xalancbmk: Same as 471.omnetpp

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/IPF_intel91_flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/IPF_intel91_flags.xml

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 10:04:20 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 28 November 2006.