



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

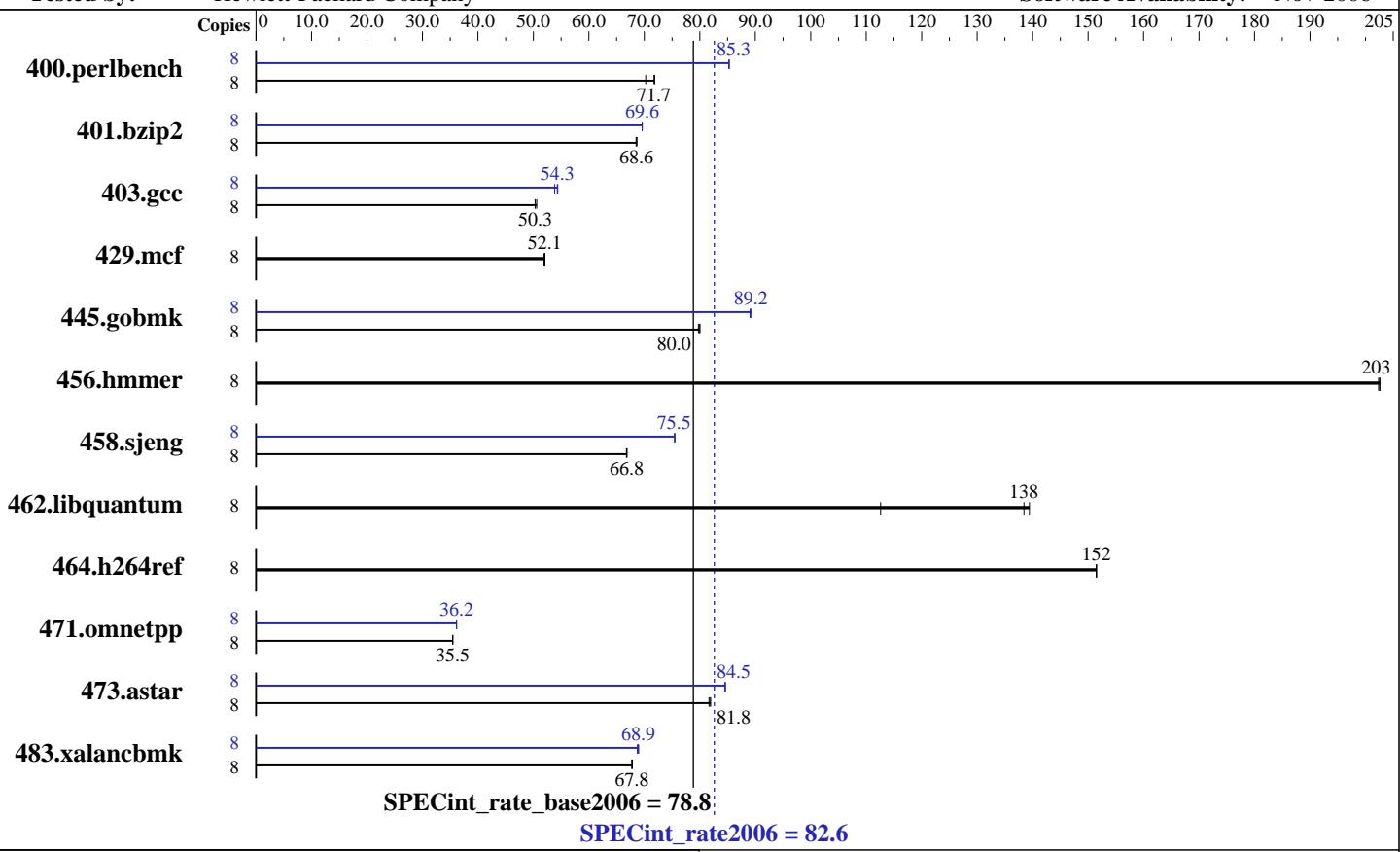
Test sponsor: Hewlett-Packard Company

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.hammer	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.hammer: -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.hmmr: basepeak = yes

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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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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.