SPEC® CINT2006 Result

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Hewlett-Packard Company

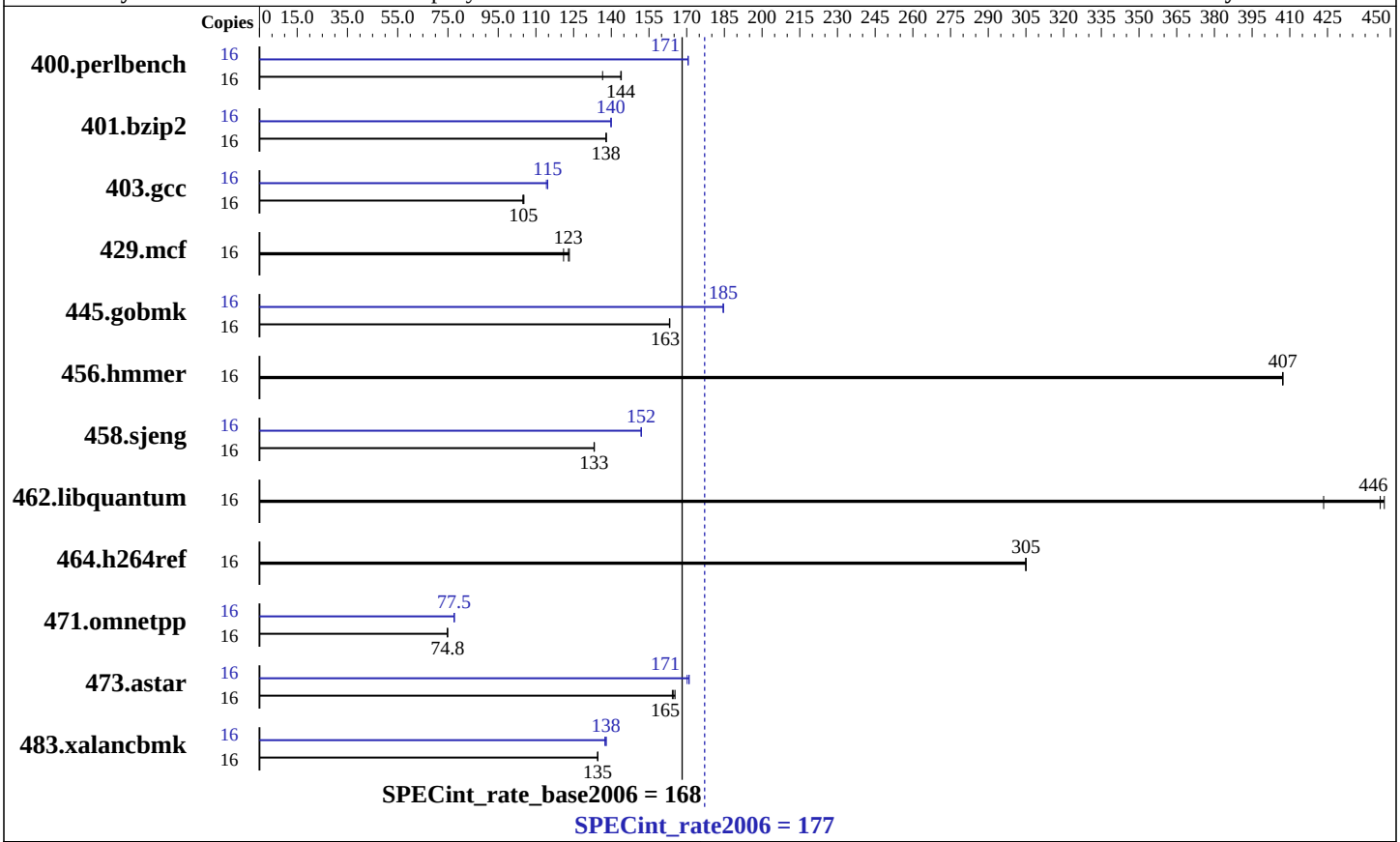
HP Integrity rx8640
(1.6GHz/24MB Dual-Core Intel Itanium 2)

SPECint®_rate2006 = 177

SPECint_rate_base2006 = 168

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

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



Hardware

CPU Name:	Dual-Core Intel Itanium 2 9050
CPU Characteristics:	1.6GHz/24MB, 533MHz FSB
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chip
CPU(s) orderable:	1-16 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:	64 GB (32x2GB DIMMs)
Disk Subsystem:	73GB 15K RPM SCSI
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux AS release 4 (Update 4)
Compiler:	Intel C++ Compiler 9.1 for Linux (Build 20061105)
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	16	1145	137	1086	144	**1087**	**144**	16	**917**	**171**	917	171	916	171
401.bzip2	16	1119	138	1119	138	**1119**	**138**	16	1104	140	**1104**	**140**	1103	140
403.gcc	16	1229	105	1224	105	**1225**	**105**	16	1128	114	**1123**	**115**	1123	115
429.mcf	16	1206	121	1183	123	**1187**	**123**	16	1206	121	1183	123	**1187**	**123**
445.gobmk	16	1028	163	1029	163	**1028**	**163**	16	909	185	910	184	**909**	**185**
456.hmmer	16	367	407	**367**	**407**	367	407	16	367	407	**367**	**407**	367	407
458.sjeng	16	**1453**	**133**	1454	133	1453	133	16	**1274**	**152**	1275	152	1274	152
462.libquantum	16	741	448	783	423	**743**	**446**	16	741	448	783	423	**743**	**446**
464.h264ref	16	1161	305	1161	305	**1161**	**305**	16	1161	305	1161	305	**1161**	**305**
471.omnetpp	16	1336	74.8	1337	74.8	**1337**	**74.8**	16	1290	77.5	**1290**	**77.5**	1291	77.5
473.astar	16	**682**	**165**	679	165	684	164	16	657	171	**657**	**171**	660	170
483.xalancbmk	16	**820**	**135**	820	135	820	135	16	800	138	**801**	**138**	803	137

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
```

Platform Notes

```
System was configured as a single partition with
2 cells and 4 processors (8 cores) per cell.
Memory was configured as 100% cell local.

The following config file entry was used to bind
processes to cores using the Linux "numactl" utility:
submit = let "MYNUM=$SPECCOPYNUM" ; let "NODE=\$MYNUM/8" ; numactl --cpubind \$NODE --membind \$NODE $command
```

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
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

Continued on next page

Peak Optimization Flags (Continued)

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

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.20090715.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/IPF_intel91_flags.20090715.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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