SPEC® CINT2006 Result

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Hewlett-Packard Company

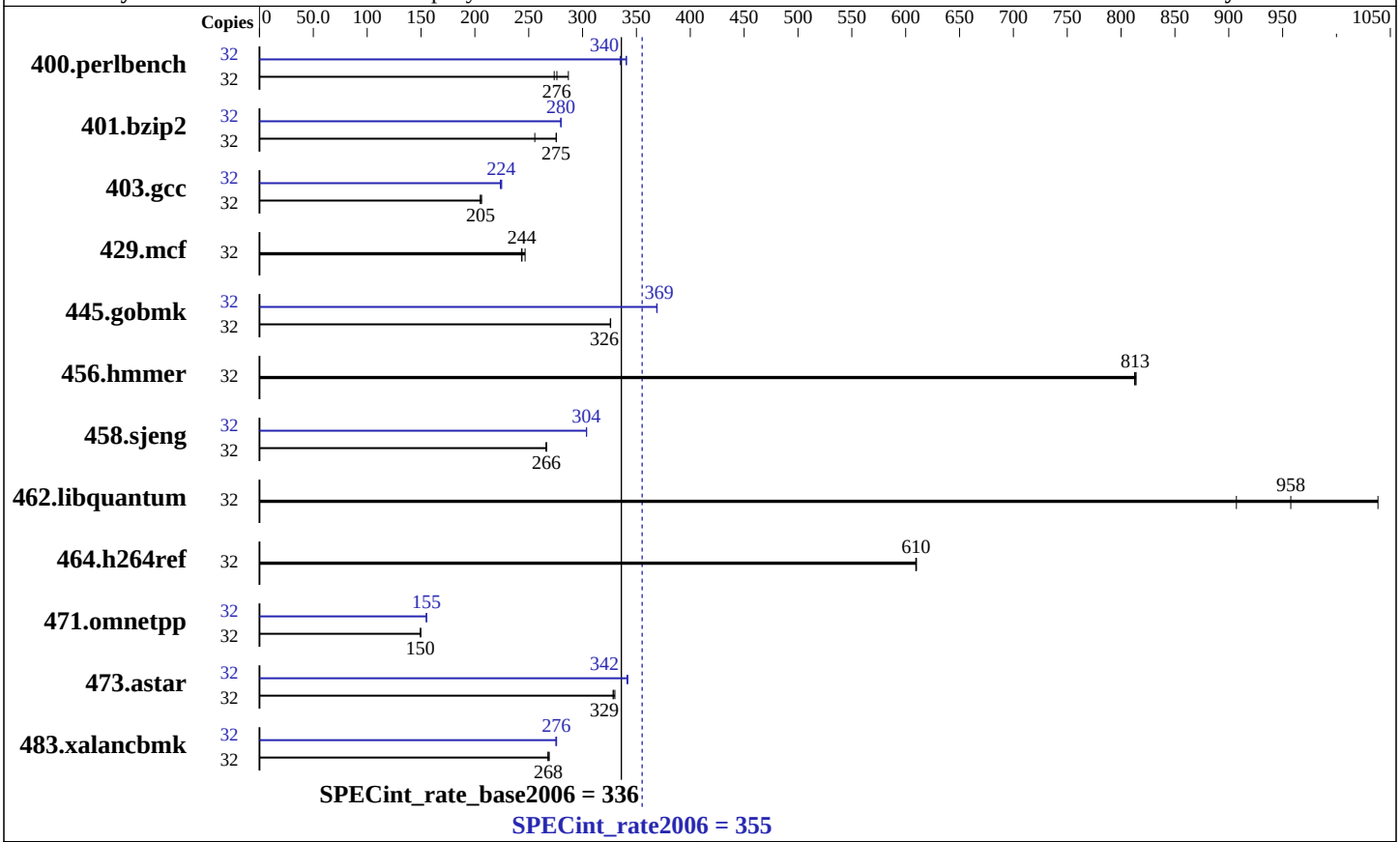
HP Integrity rx8640
(1.6GHz/24MB Dual-Core Intel Itanium 2)

SPECint®_rate2006 = 355

SPECint_rate_base2006 = 336

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:	32 cores, 16 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:	128 GB (64x2GB 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	32	1142	274	**1132**	**276**	1090	287	32	917	341	934	335	**918**	**340**
401.bzip2	32	1120	276	1208	256	**1121**	**275**	32	1103	280	**1103**	**280**	1104	280
403.gcc	32	1256	205	**1254**	**205**	1249	206	32	**1148**	**224**	1145	225	1152	224
429.mcf	32	1200	243	**1197**	**244**	1183	247	32	1200	243	**1197**	**244**	1183	247
445.gobmk	32	1029	326	**1030**	**326**	1031	326	32	909	369	910	369	**910**	**369**
456.hmmer	32	367	813	**367**	**813**	367	814	32	367	813	**367**	**813**	367	814
458.sjeng	32	1455	266	1453	267	**1454**	**266**	32	**1275**	**304**	1276	304	1275	304
462.libquantum	32	638	1040	**692**	**958**	731	907	32	638	1040	**692**	**958**	731	907
464.h264ref	32	1161	610	**1162**	**610**	1162	609	32	1161	610	**1162**	**610**	1162	609
471.omnetpp	32	1338	150	1337	150	**1337**	**150**	32	1289	155	1291	155	**1290**	**155**
473.astar	32	681	330	**683**	**329**	684	328	32	657	342	**657**	**342**	658	341
483.xalancbmk	32	821	269	**823**	**268**	825	268	32	802	275	800	276	**801**	**276**

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

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