SPEC® CINT2006 Result

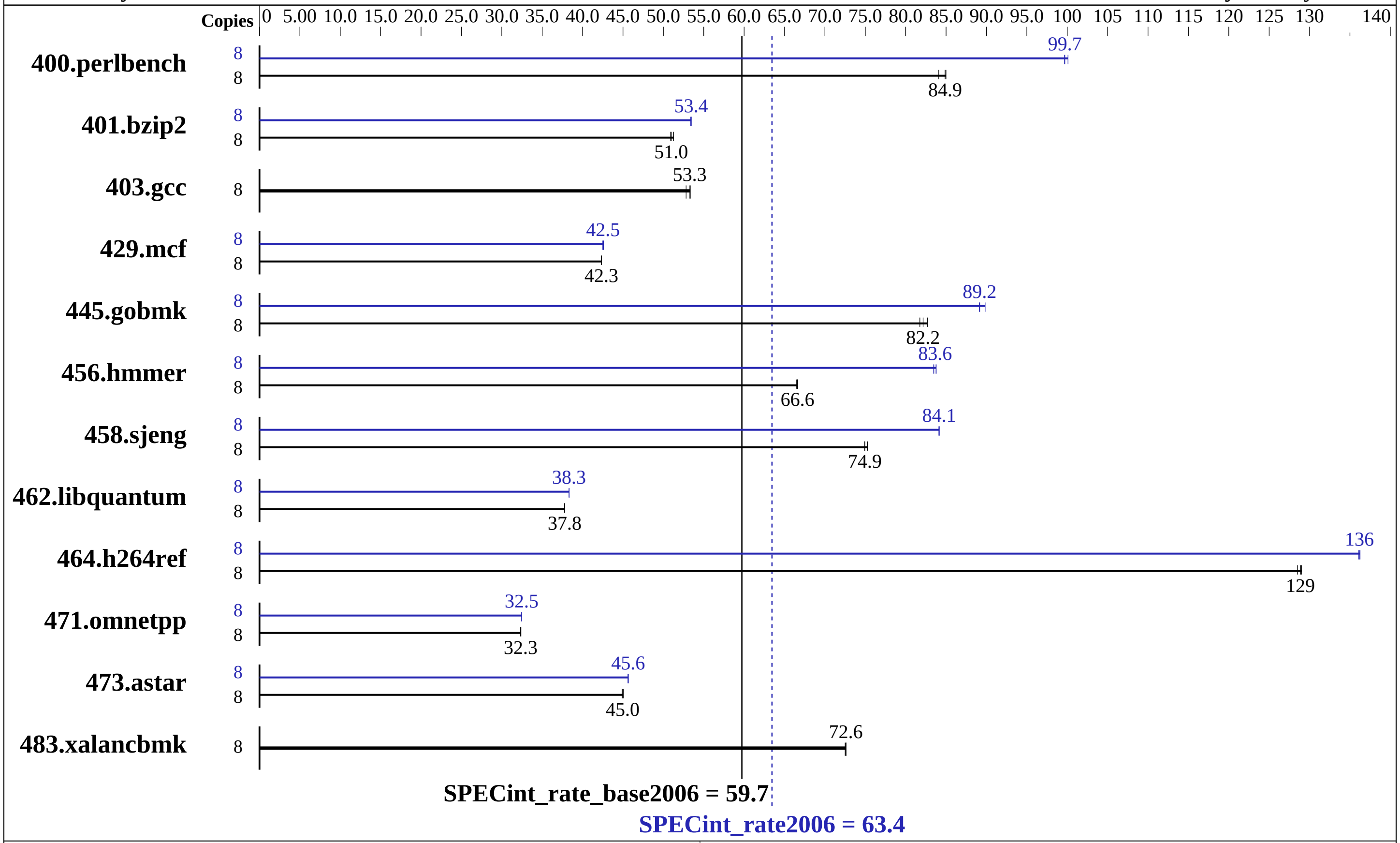
Bull SAS

NovaScale R440
(Intel Xeon processor E5310,1.60GHz)

SPECint®_rate2006 = 63.4

SPECint_rate_base2006 = 59.7

CPU2006 license: 20		**Test date:**	Jul-2007
Test sponsor:	Bull SAS	**Hardware Availability:**	Mar-2007
Tested by:	Bull SAS	**Software Availability:**	May-2007



Hardware

CPU Name:	Intel Xeon E5310
CPU Characteristics:	1.60 GHz, 8 MB L2, 1066 MHz system bus
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1 to 2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 4 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	12 GB (12x1 GB) FB-DIMM PC2-4200F ECC CL4
Disk Subsystem:	1x73 GB SAS, 15000 RPM
Other Hardware:	None

Software

Operating System:	SUSE LINUX Enterprise Server 10 Kernel 2.6.16.21-0.8-smp for x86_64
Compiler:	Intel C++ Compiler for Linux32 and Linux64 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:	SmartHeap library V8.1 Binutils 2.17.50.0.15

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Results Table

	Base							Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	8	920	85.0	929	84.1	**921**	**84.9**	8	**784**	**99.7**	781	100	784	99.7
401.bzip2	8	1517	50.9	**1514**	**51.0**	1506	51.3	8	1444	53.5	1446	53.4	**1444**	**53.4**
403.gcc	8	1207	53.3	**1209**	**53.3**	1219	52.8	8	1207	53.3	**1209**	**53.3**	1219	52.8
429.mcf	8	1724	42.3	1723	42.3	**1723**	**42.3**	8	1713	42.6	1717	42.5	**1715**	**42.5**
445.gobmk	8	1015	82.7	**1021**	**82.2**	1026	81.8	8	942	89.1	934	89.8	**941**	**89.2**
456.hmmer	8	1122	66.5	1121	66.6	**1121**	**66.6**	8	**892**	**83.6**	891	83.8	895	83.4
458.sjeng	8	1292	74.9	**1292**	**74.9**	1286	75.3	8	**1150**	**84.1**	1150	84.2	1152	84.0
462.libquantum	8	4390	37.8	4385	37.8	**4386**	**37.8**	8	**4324**	**38.3**	4325	38.3	4323	38.3
464.h264ref	8	1372	129	1378	128	**1374**	**129**	8	1299	136	1301	136	**1300**	**136**
471.omnetpp	8	1545	32.4	1547	32.3	**1546**	**32.3**	8	1540	32.5	**1540**	**32.5**	1540	32.5
473.astar	8	1251	44.9	1247	45.0	**1249**	**45.0**	8	1230	45.7	1231	45.6	**1230**	**45.6**
483.xalancbmk	8	761	72.5	760	72.6	**760**	**72.6**	8	761	72.5	760	72.6	**760**	**72.6**

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
 '/usr/bin/taskset' used to bind processes to CPUs
All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,
for peak, are compiled in 64-bit mode
```

General Notes

```
 The NovaScale R440 and the NovaScale R460 models are
 electronically equivalent.
 The results have been measured on a NovaScale R460 model.
```

Base Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
`-fast`

C++ benchmarks:
`-xT -ipo -O3 -no-prec-div -ansi-alias`
`-L/spec/cpu2006/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`

Continued on next page

Peak Portability Flags (Continued)

483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

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

401.bzip2: -prof_gen(pass 1) -prof_use(pass 2) -fast

403.gcc: basepeak = yes

429.mcf: -fast -prefetch

445.gobmk: -prof_gen(pass 1) -prof_use(pass 2) -xT -O2 -ipo -no-prec_div -ansi-alias

456.hmmer: -prof_gen(pass 1) -prof_use(pass 2) -fast -unroll2 -ansi-alias

458.sjeng: -prof_gen(pass 1) -prof_use(pass 2) -fast -unroll4

462.libquantum: -prof_gen(pass 1) -prof_use(pass 2) -fast -unroll4 -Ob0 -prefetch -opt-streaming-stores always

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: -prof_gen(pass 1) -prof_use(pass 2) -xT -O3 -ipo -no-prec_div -ansi-alias -L/spec/cpu2006/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/EM64T_Intel100_flags.20090714.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/EM64T_Intel100_flags.20090714.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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