SPEC® CINT2006 Result

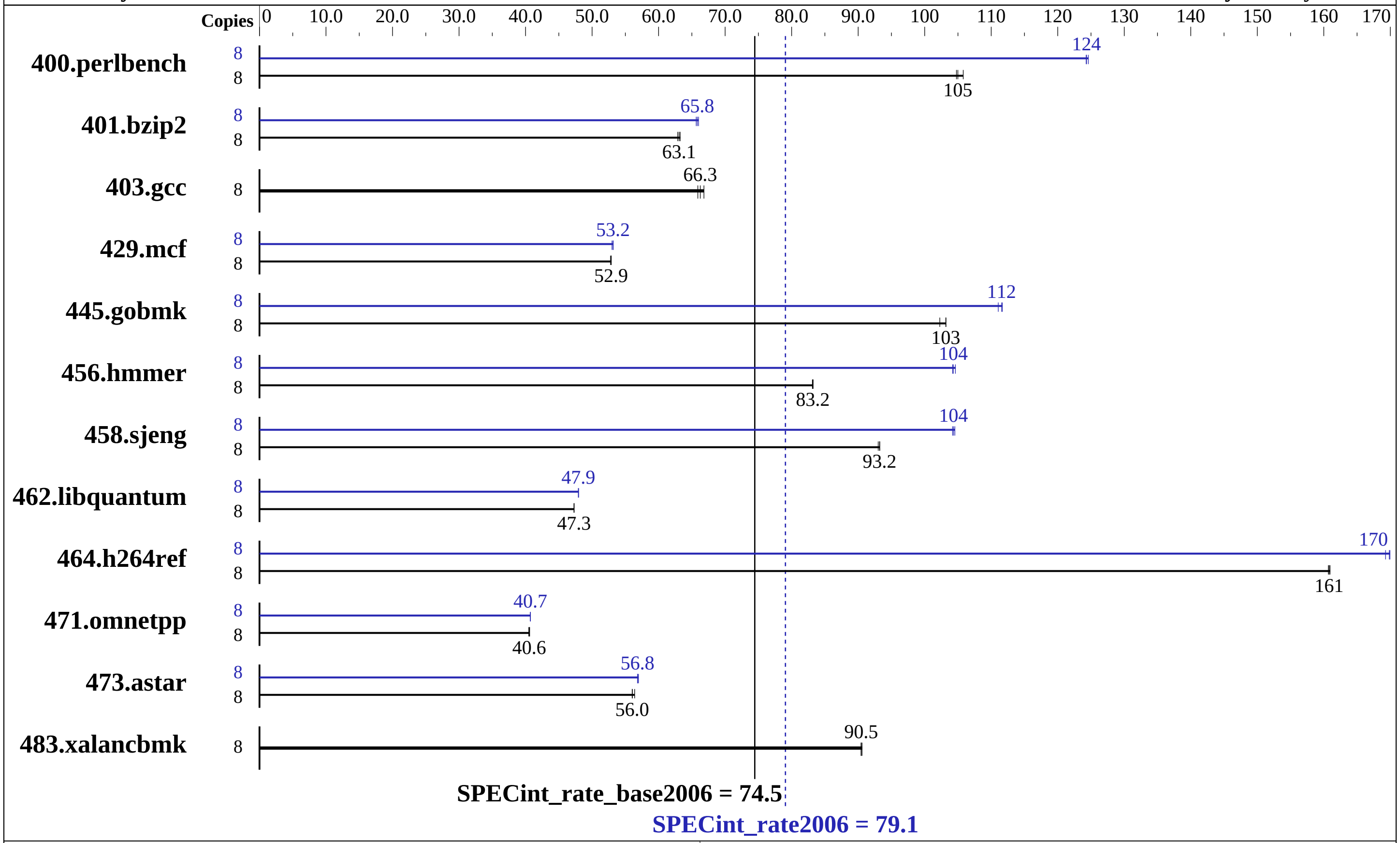
Bull SAS

NovaScale R440
(Intel Xeon processor E5335,2.00GHz)

SPECint®_rate2006 = 79.1

SPECint_rate_base2006 = 74.5

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 E5335
CPU Characteristics:	2.00 GHz, 8 MB L2, 1333 MHz system bus
CPU MHz:	2000
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:	16 GB (8x2 GB) FB-DIMM PC2-5300F ECC CL5
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

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	739	106	746	105	**744**	**105**	8	629	124	627	125	**629**	**124**
401.bzip2	8	1221	63.2	1228	62.9	**1224**	**63.1**	8	1176	65.7	**1173**	**65.8**	1170	66.0
403.gcc	8	**972**	**66.3**	977	65.9	964	66.8	8	**972**	**66.3**	977	65.9	964	66.8
429.mcf	8	**1380**	**52.9**	1380	52.9	1383	52.8	8	1377	53.0	1372	53.2	**1373**	**53.2**
445.gobmk	8	821	102	813	103	**813**	**103**	8	756	111	751	112	**752**	**112**
456.hmmer	8	897	83.2	**897**	**83.2**	898	83.1	8	716	104	713	105	**716**	**104**
458.sjeng	8	1041	93.0	**1038**	**93.2**	1038	93.3	8	926	105	929	104	**928**	**104**
462.libquantum	8	3506	47.3	3504	47.3	**3505**	**47.3**	8	3458	47.9	**3457**	**47.9**	3455	48.0
464.h264ref	8	1102	161	**1101**	**161**	1100	161	8	1042	170	**1042**	**170**	1046	169
471.omnetpp	8	1235	40.5	**1233**	**40.6**	1231	40.6	8	1227	40.7	1228	40.7	**1228**	**40.7**
473.astar	8	**1002**	**56.0**	996	56.4	1002	56.0	8	986	57.0	**988**	**56.8**	988	56.8
483.xalancbmk	8	609	90.6	**610**	**90.5**	610	90.4	8	609	90.6	**610**	**90.5**	610	90.4

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 -Wl,-z,muldefs

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -ansi-alias -Wl,-z,muldefs
-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` `-Wl,-z,muldefs`

401.bzip2: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast` `-Wl,-z,muldefs`

403.gcc: `basepeak = yes`

429.mcf: `-fast` `-prefetch` `-Wl,-z,muldefs`

445.gobmk: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-xT` `-O2` `-ipo` `-no-prec_div` `-ansi-alias` `-Wl,-z,muldefs`

456.hmmer: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast` `-unroll2` `-ansi-alias` `-Wl,-z,muldefs`

458.sjeng: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast` `-unroll4` `-Wl,-z,muldefs`

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

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` `-Wl,-z,muldefs` `-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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