SPEC® CINT2006 Result

Bull SAS

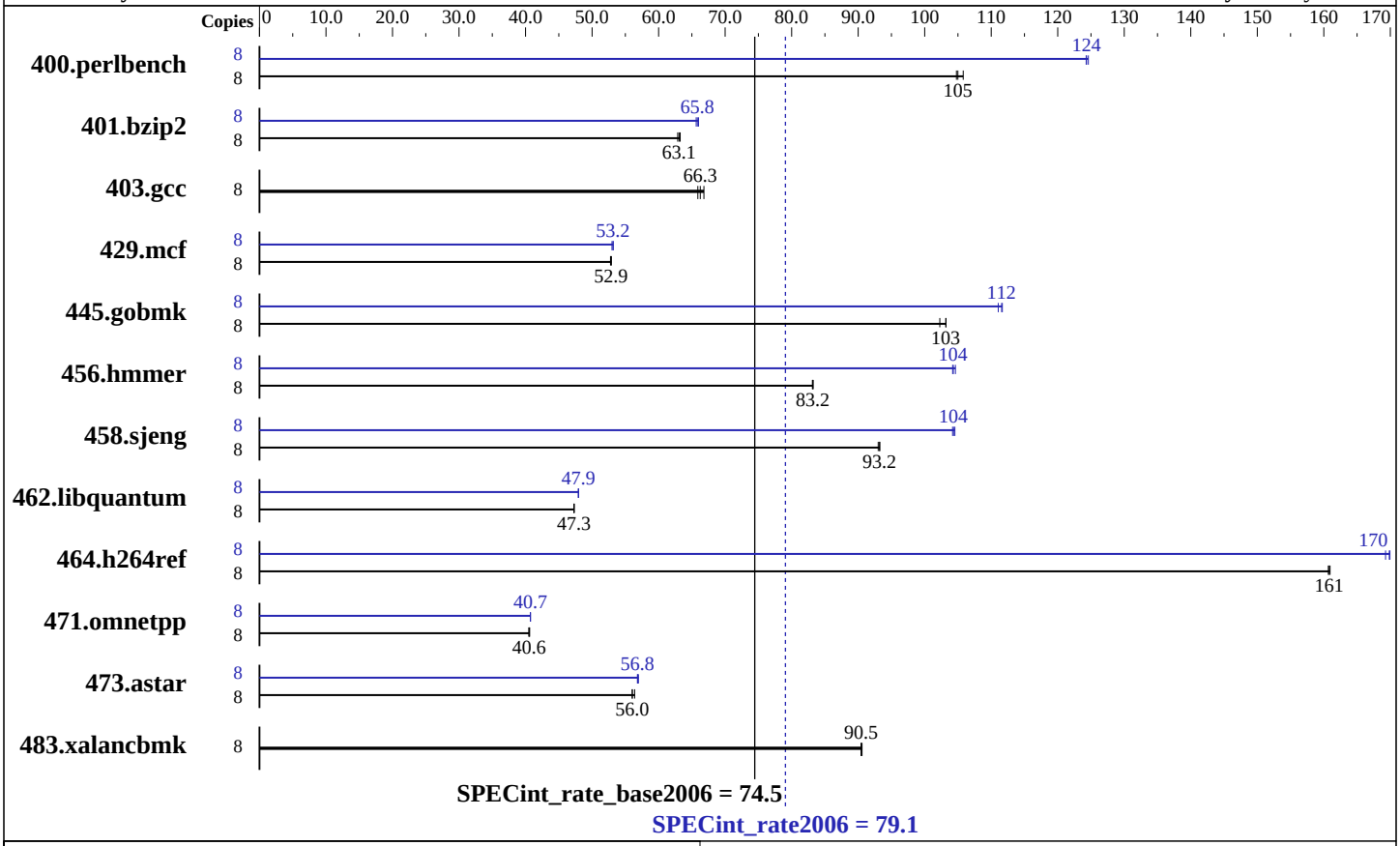
NovaScale R440
(Intel Xeon processor E5335,2.00GHz)

SPECint®_rate2006 = 79.1

SPECint_rate_base2006 = 74.5

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Jul-2007
Hardware Availability: Mar-2007
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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