SPEC® CINT2006 Result

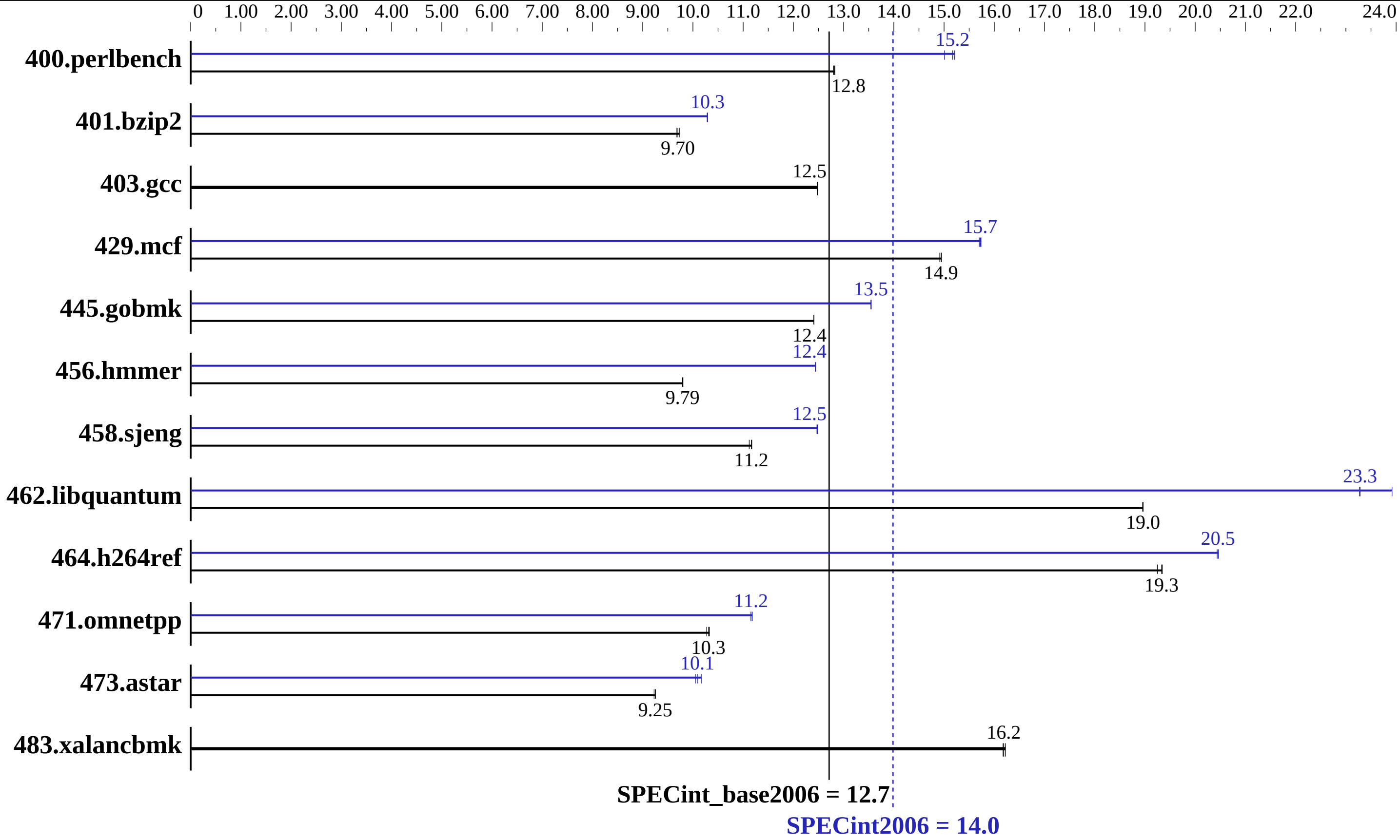
Bull SAS

NovaScale R440
(Intel Xeon processor E5320,1.86GHz)

SPECint®2006 = 14.0

SPECint_base2006 = 12.7

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 E5320
CPU Characteristics:	1.86 GHz, 8 MB L2, 1066 MHz system bus
CPU MHz:	1866
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

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	762	12.8	**762**	**12.8**	763	12.8	**644**	**15.2**	651	15.0	642	15.2
401.bzip2	998	9.67	992	9.73	**995**	**9.70**	938	10.3	**938**	**10.3**	938	10.3
403.gcc	645	12.5	645	12.5	**645**	**12.5**	645	12.5	645	12.5	**645**	**12.5**
429.mcf	611	14.9	610	14.9	**610**	**14.9**	**580**	**15.7**	581	15.7	580	15.7
445.gobmk	845	12.4	845	12.4	**845**	**12.4**	775	13.5	**774**	**13.5**	774	13.6
456.hmmer	952	9.80	953	9.79	**953**	**9.79**	**750**	**12.4**	750	12.4	750	12.4
458.sjeng	1088	11.1	1083	11.2	**1084**	**11.2**	**969**	**12.5**	970	12.5	969	12.5
462.libquantum	1093	19.0	1093	19.0	**1093**	**19.0**	866	23.9	890	23.3	**890**	**23.3**
464.h264ref	**1145**	**19.3**	1150	19.2	1144	19.3	1083	20.4	1081	20.5	**1082**	**20.5**
471.omnetpp	605	10.3	**606**	**10.3**	608	10.3	560	11.2	559	11.2	**560**	**11.2**
473.astar	761	9.23	**759**	**9.25**	759	9.25	690	10.2	699	10.0	**696**	**10.1**
483.xalancbmk	425	16.2	**426**	**16.2**	427	16.2	425	16.2	**426**	**16.2**	427	16.2

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

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'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,
for peak, are compiled in 64-bit mode
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General Notes

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

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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 -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

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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.

Tested with SPEC CPU2006 v1.0.
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