



SPEC[®] CINT2006 Result

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Bull SAS

NovaScale B280
(Intel Xeon L5420, 2.50 GHz)

SPECint[®]2006 = 23.0

SPECint_base2006 = 20.1

CPU2006 license: 20

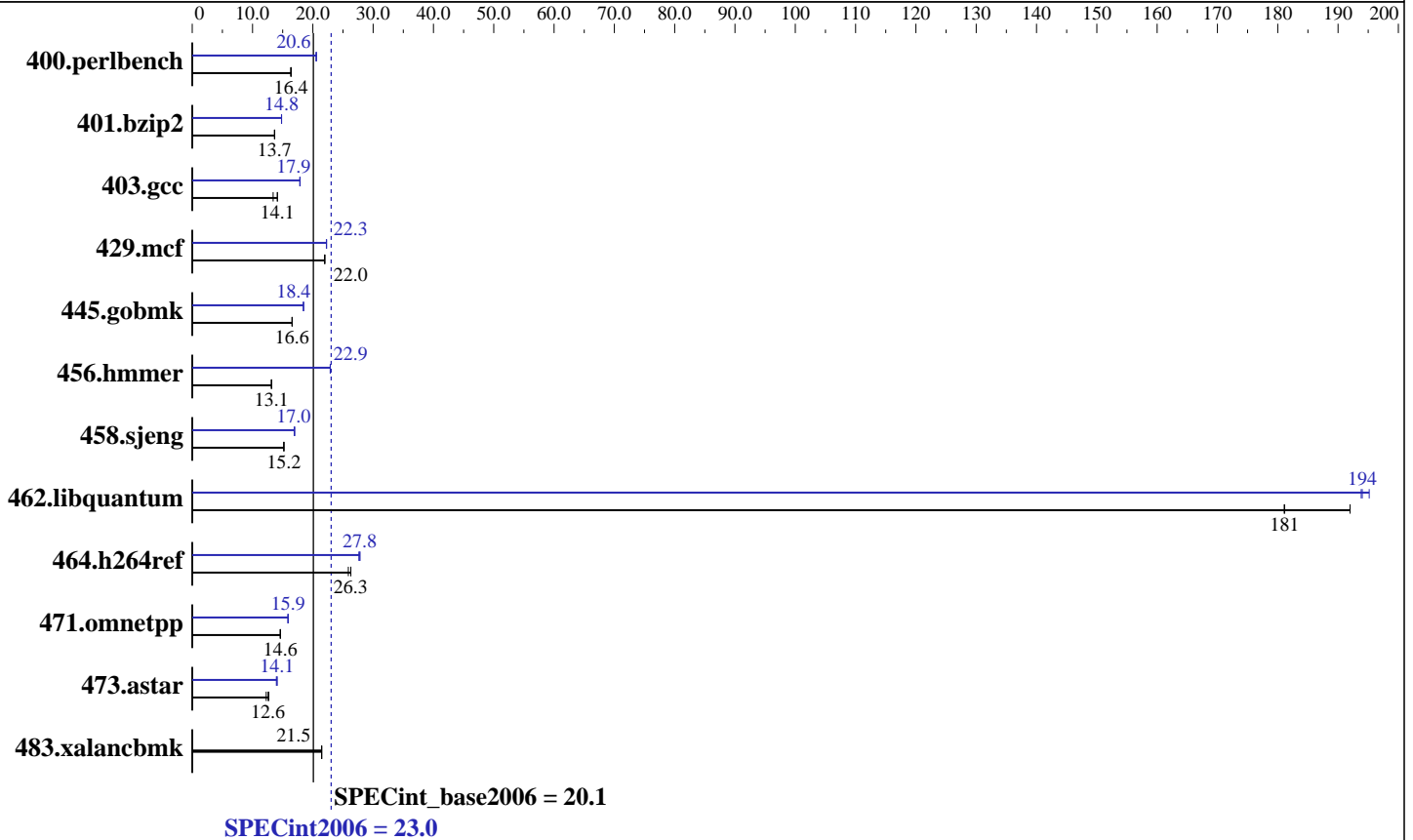
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Jul-2008

Hardware Availability: Jan-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon L5420
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 2500
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 12 MB I+D on chip per chip, 6 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, 10000 RPM
 Other Hardware: None

Software

Operating System: SUSE LINUX Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008
 Auto Parallel: Yes
 File System: ext2
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Binutils 2.17.50.0.15
 SmartHeap library V8.1



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<u>597</u>	<u>16.4</u>	595	16.4	598	16.3	<u>475</u>	<u>20.6</u>	474	20.6	476	20.5
401.bzip2	705	13.7	708	13.6	<u>706</u>	<u>13.7</u>	651	14.8	<u>651</u>	<u>14.8</u>	652	14.8
403.gcc	570	14.1	<u>571</u>	<u>14.1</u>	600	13.4	<u>451</u>	<u>17.9</u>	451	17.8	450	17.9
429.mcf	<u>415</u>	<u>22.0</u>	416	21.9	415	22.0	409	22.3	<u>410</u>	<u>22.3</u>	410	22.2
445.gobmk	<u>633</u>	<u>16.6</u>	634	16.6	633	16.6	<u>569</u>	<u>18.4</u>	569	18.4	569	18.4
456.hmmer	<u>710</u>	<u>13.1</u>	710	13.1	710	13.1	407	22.9	<u>408</u>	<u>22.9</u>	408	22.9
458.sjeng	795	15.2	797	15.2	<u>797</u>	<u>15.2</u>	712	17.0	<u>713</u>	<u>17.0</u>	716	16.9
462.libquantum	<u>114</u>	<u>181</u>	114	181	108	192	<u>107</u>	<u>194</u>	107	194	106	195
464.h264ref	841	26.3	<u>842</u>	<u>26.3</u>	855	25.9	801	27.6	796	27.8	<u>796</u>	<u>27.8</u>
471.omnetpp	<u>428</u>	<u>14.6</u>	429	14.6	427	14.6	393	15.9	<u>393</u>	<u>15.9</u>	393	15.9
473.astar	572	12.3	553	12.7	<u>558</u>	<u>12.6</u>	503	14.0	<u>499</u>	<u>14.1</u>	499	14.1
483.xalancbmk	321	21.5	322	21.4	<u>322</u>	<u>21.5</u>	321	21.5	322	21.4	<u>322</u>	<u>21.5</u>

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
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to null

General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer, for peak, are compiled in 64-bit mode
BIOS settings :
Hardware Prefetcher : Enabled
Adjacent Cache-Line Prefetch : Enabled

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc



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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 -vec-guard-write -parallel -par-runtime-control

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/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

456.hmmmer: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX

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Peak Portability Flags (Continued)

483.xalanbmk: -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 -prefetch
-auto-ilp32

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo
-no-prec-div -ansi-alias

456.hmmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive
-auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch
-opt-streaming-stores always -vec-guard-write
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=block
-Wl,-z,muldefs -L/spec/cpu2006/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine
-Wl,-z,muldefs -L/spec/cpu2006/lib -lsmartheap

483.xalanbmk: basepeak = yes



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Peak Other Flags

Same as Base Other Flags

The flags file that was used to format this result can be browsed at

http://www.spec.org/cpu2006/flags/EM64T_Intel101_int_flags.20090713.00.html

You can also download the XML flags source by saving the following link:

http://www.spec.org/cpu2006/flags/EM64T_Intel101_int_flags.20090713.00.xml

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