



SPEC[®] CINT2006 Result

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Bull SAS

NovaScale B240
(Intel Xeon X3323, 2.50 GHz)

SPECint[®]2006 = 19.9

SPECint_base2006 = 17.2

CPU2006 license: 20

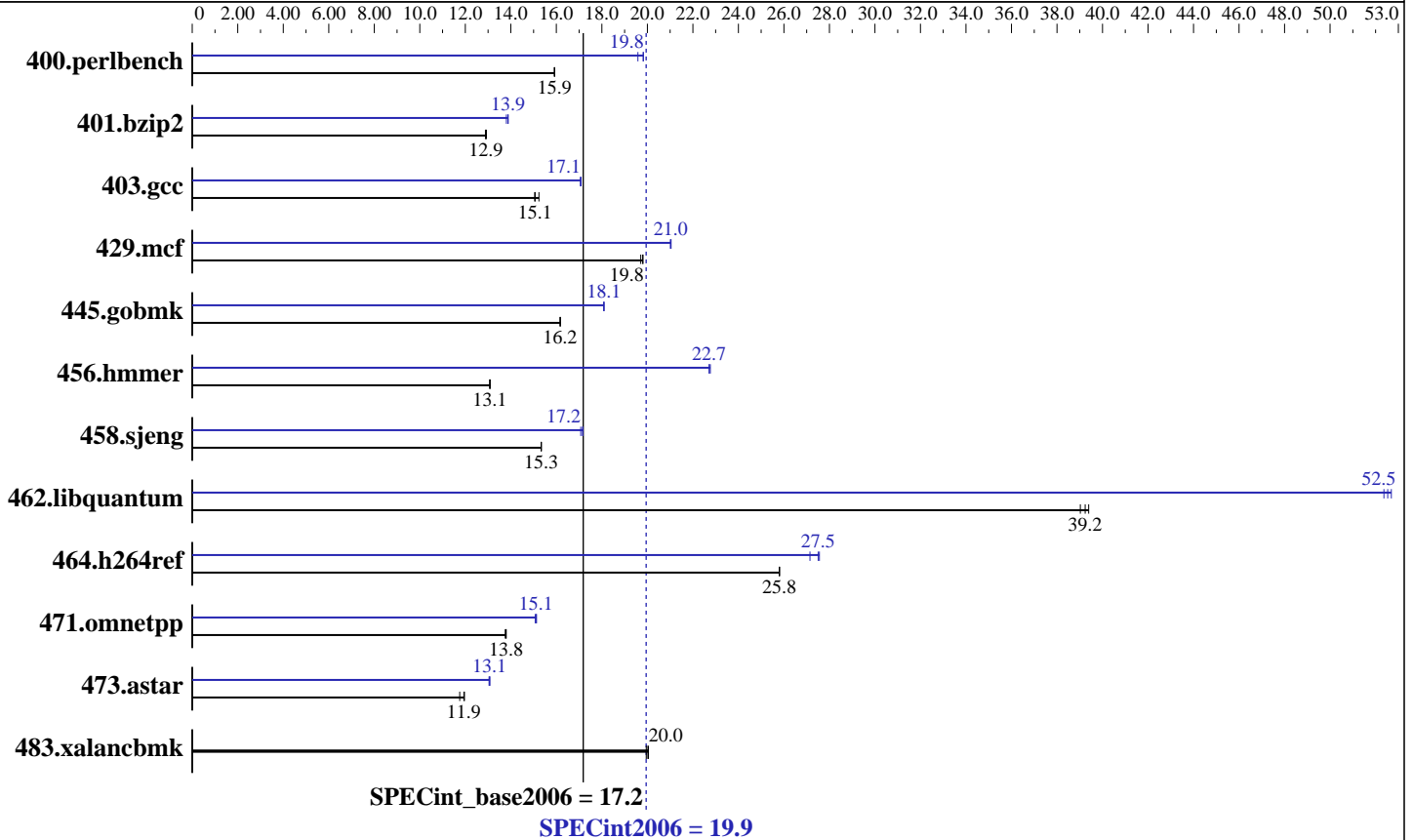
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Oct-2008

Hardware Availability: Jun-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X3323
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 2500
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 6 MB I+D on chip per chip, 3 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 8 GB (4x2 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 (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: ReiserFS
 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	614	15.9	614	15.9	613	15.9	499	19.6	493	19.8	493	19.8
401.bzip2	747	12.9	748	12.9	749	12.9	695	13.9	699	13.8	695	13.9
403.gcc	535	15.0	534	15.1	528	15.2	472	17.1	471	17.1	472	17.1
429.mcf	463	19.7	461	19.8	460	19.8	434	21.0	434	21.0	433	21.0
445.gobmk	648	16.2	649	16.2	649	16.2	580	18.1	580	18.1	580	18.1
456.hammer	714	13.1	713	13.1	713	13.1	411	22.7	411	22.7	410	22.8
458.sjeng	789	15.3	789	15.3	789	15.3	709	17.1	705	17.2	705	17.2
462.libquantum	531	39.0	528	39.2	526	39.4	394	52.5	393	52.7	396	52.4
464.h264ref	858	25.8	858	25.8	858	25.8	815	27.1	803	27.6	805	27.5
471.omnetpp	453	13.8	454	13.8	453	13.8	415	15.1	414	15.1	413	15.1
473.astar	588	11.9	597	11.8	587	12.0	538	13.0	537	13.1	537	13.1
483.xalancbmk	346	19.9	345	20.0	344	20.0	346	19.9	345	20.0	344	20.0

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
```

Platform Notes

BIOS Settings:
Hardware Prefetcher = Enabled
Adjacent Cache Line Prefetch = Enabled

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32

Continued on next page



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Base Portability Flags (Continued)

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.hmmer: /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.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX



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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.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_Intel101_int_flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/EM64T_Intel101_int_flags.xml

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