



SPEC® CINT2006 Result

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Bull SAS

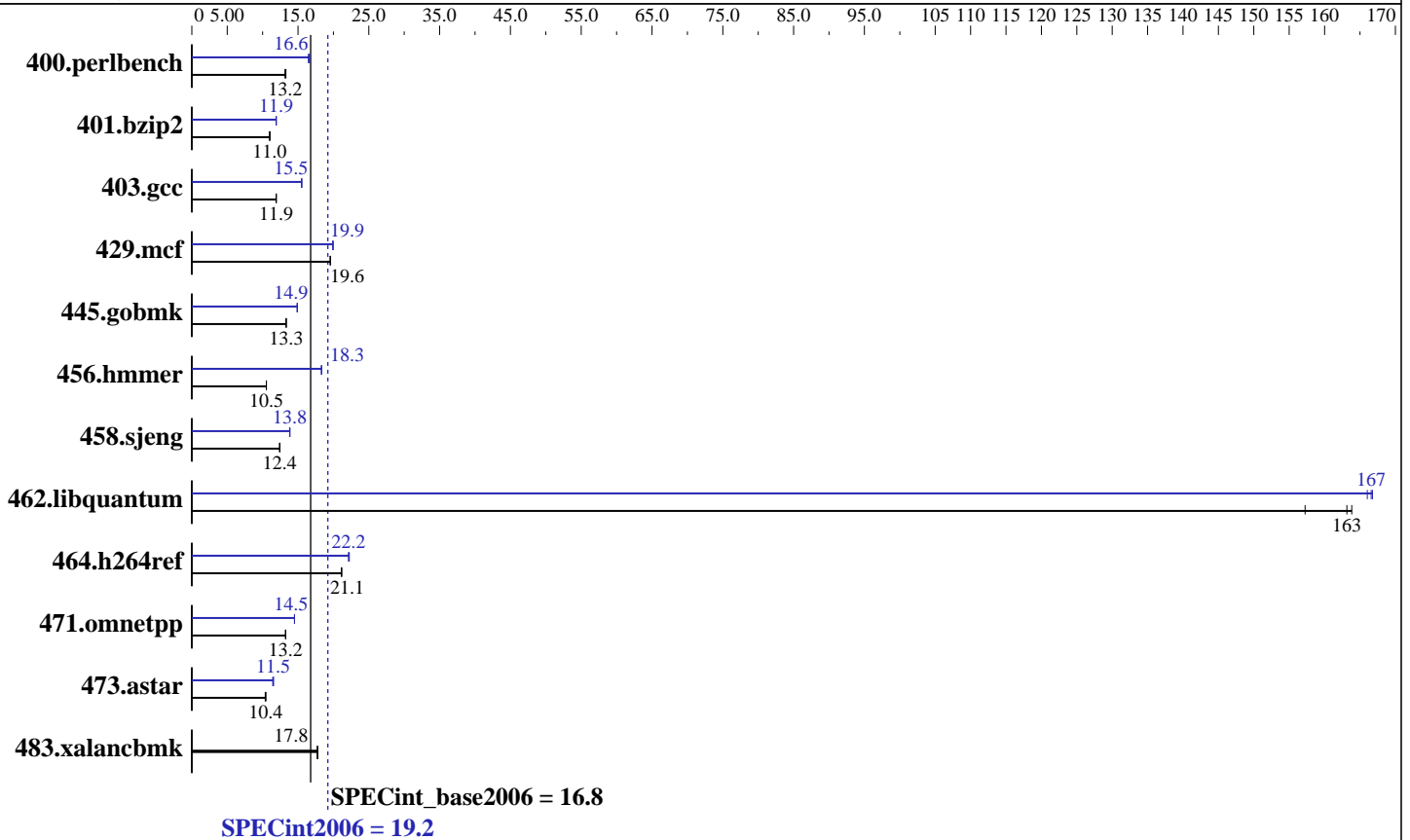
NovaScale B280
(Intel Xeon E5405, 2.00 GHz)

SPECint®2006 = 19.2

SPECint_base2006 = 16.8

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

Test date: Sep-2008
Hardware Availability: Jan-2008
Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon E5405
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 2000
 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, 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: 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	735	13.3	740	13.2	742	13.2	590	16.6	587	16.6	593	16.5
401.bzip2	874	11.0	877	11.0	880	11.0	809	11.9	811	11.9	810	11.9
403.gcc	676	11.9	676	11.9	675	11.9	520	15.5	519	15.5	518	15.5
429.mcf	466	19.6	466	19.6	466	19.6	458	19.9	457	20.0	458	19.9
445.gobmk	787	13.3	787	13.3	787	13.3	704	14.9	704	14.9	704	14.9
456.hmmer	887	10.5	886	10.5	885	10.5	509	18.3	509	18.3	510	18.3
458.sjeng	975	12.4	974	12.4	975	12.4	875	13.8	874	13.9	874	13.8
462.libquantum	126	164	132	157	127	163	124	167	125	166	124	167
464.h264ref	1047	21.1	1045	21.2	1048	21.1	995	22.2	999	22.1	999	22.2
471.omnetpp	471	13.3	472	13.2	472	13.2	431	14.5	431	14.5	431	14.5
473.astar	677	10.4	672	10.4	672	10.5	614	11.4	609	11.5	609	11.5
483.xalancbmk	389	17.7	389	17.8	388	17.8	389	17.7	389	17.8	388	17.8

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 configuration:
Hardware Prefetcher Enabled
Adjacent Cache-Line Prefetch Enabled

General Notes

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

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.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

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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.hmmr: -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 -lsmarheap

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 -lsmarheap

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.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.xml

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