



SPEC® CINT2006 Result

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Bull SAS

NovaScale B280
(Intel Xeon E5405, 2.00 GHz)

SPECint®_rate2006 = 101

SPECint_rate_base2006 = 83.4

CPU2006 license: 20

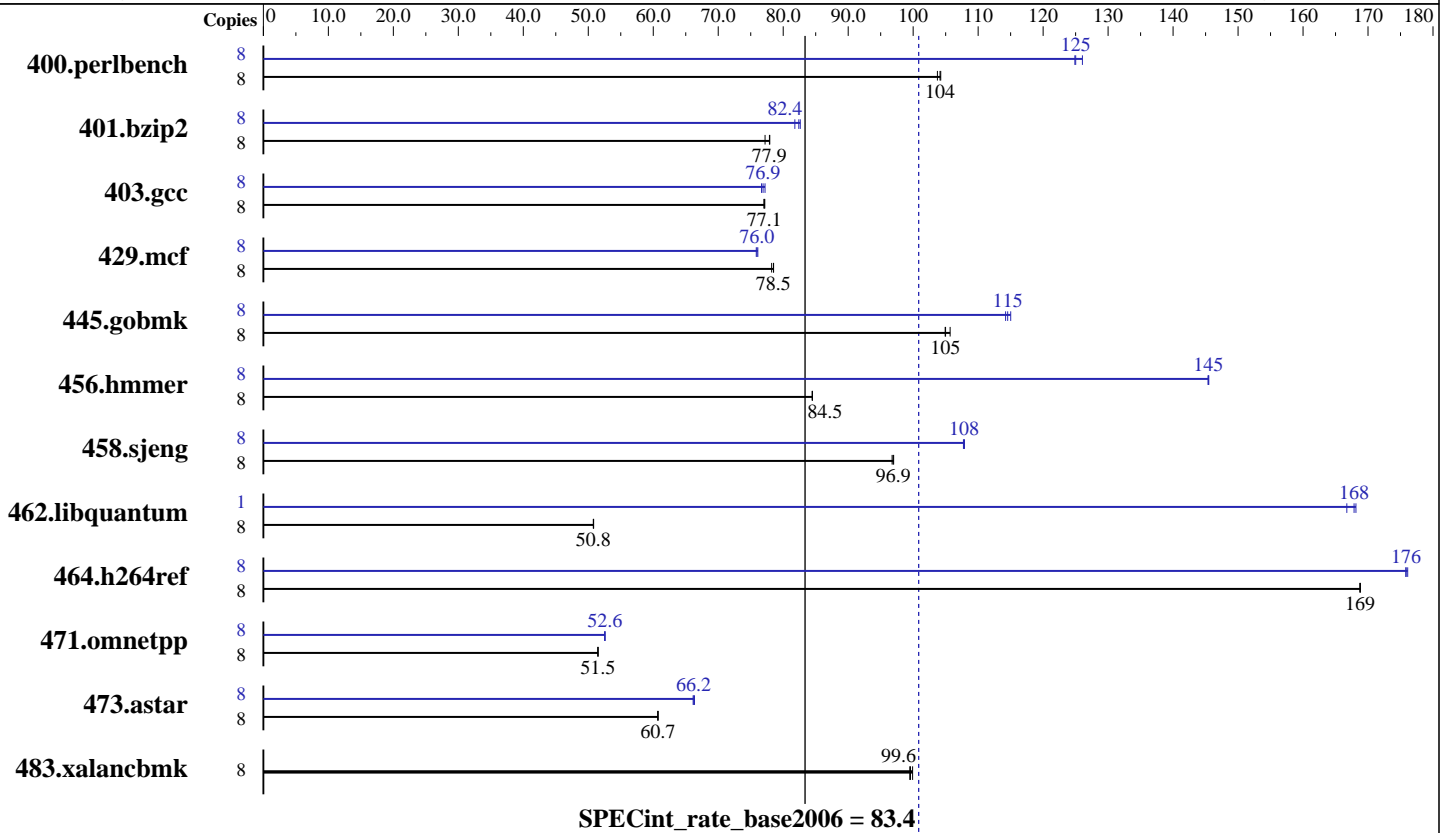
Test sponsor: Bull SAS

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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	750	104	754	104	<u>751</u>	<u>104</u>	8	626	125	620	126	<u>625</u>	<u>125</u>
401.bzip2	8	991	77.9	1000	77.2	<u>991</u>	<u>77.9</u>	8	934	82.6	944	81.8	<u>937</u>	<u>82.4</u>
403.gcc	8	<u>835</u>	<u>77.1</u>	835	77.2	836	77.0	8	<u>837</u>	<u>76.9</u>	834	77.2	840	76.7
429.mcf	8	933	78.2	<u>929</u>	<u>78.5</u>	929	78.5	8	962	75.9	<u>960</u>	<u>76.0</u>	959	76.1
445.gobmk	8	<u>799</u>	<u>105</u>	794	106	800	105	8	730	115	<u>733</u>	<u>115</u>	735	114
456.hmmer	8	883	84.5	884	84.5	<u>884</u>	<u>84.5</u>	8	513	145	513	145	<u>513</u>	<u>145</u>
458.sjeng	8	<u>999</u>	<u>96.9</u>	998	97.0	1000	96.8	8	<u>898</u>	<u>108</u>	898	108	897	108
462.libquantum	8	<u>3264</u>	<u>50.8</u>	3261	50.8	3264	50.8	1	123	168	124	167	<u>123</u>	<u>168</u>
464.h264ref	8	1049	169	1049	169	<u>1049</u>	<u>169</u>	8	<u>1007</u>	<u>176</u>	1005	176	1007	176
471.omnetpp	8	<u>971</u>	<u>51.5</u>	971	51.5	971	51.5	8	951	52.6	<u>951</u>	<u>52.6</u>	952	52.5
473.astar	8	925	60.7	<u>925</u>	<u>60.7</u>	925	60.7	8	849	66.1	846	66.3	<u>848</u>	<u>66.2</u>
483.xalancbmk	8	552	99.9	555	99.5	<u>554</u>	<u>99.6</u>	8	552	99.9	555	99.5	<u>554</u>	<u>99.6</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 64M

Platform Notes

BIOS configuration:
Hardware Prefetcher Enabled
Adjacent Cache-Line Prefetch Disabled

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 -inline-calloc -opt-malloc-options=3

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.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 -prefetch

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.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

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.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

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Peak Other Flags (Continued)

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_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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For other inquiries, please contact webmaster@spec.org.

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