



SPEC® CINT2006 Result

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Bull SAS

SPECint®_rate2006 = 89.4

NovaScale T820 F2 (Intel Xeon X3430, 2.40 GHz)

SPECint_rate_base2006 = 81.7

CPU2006 license: 20

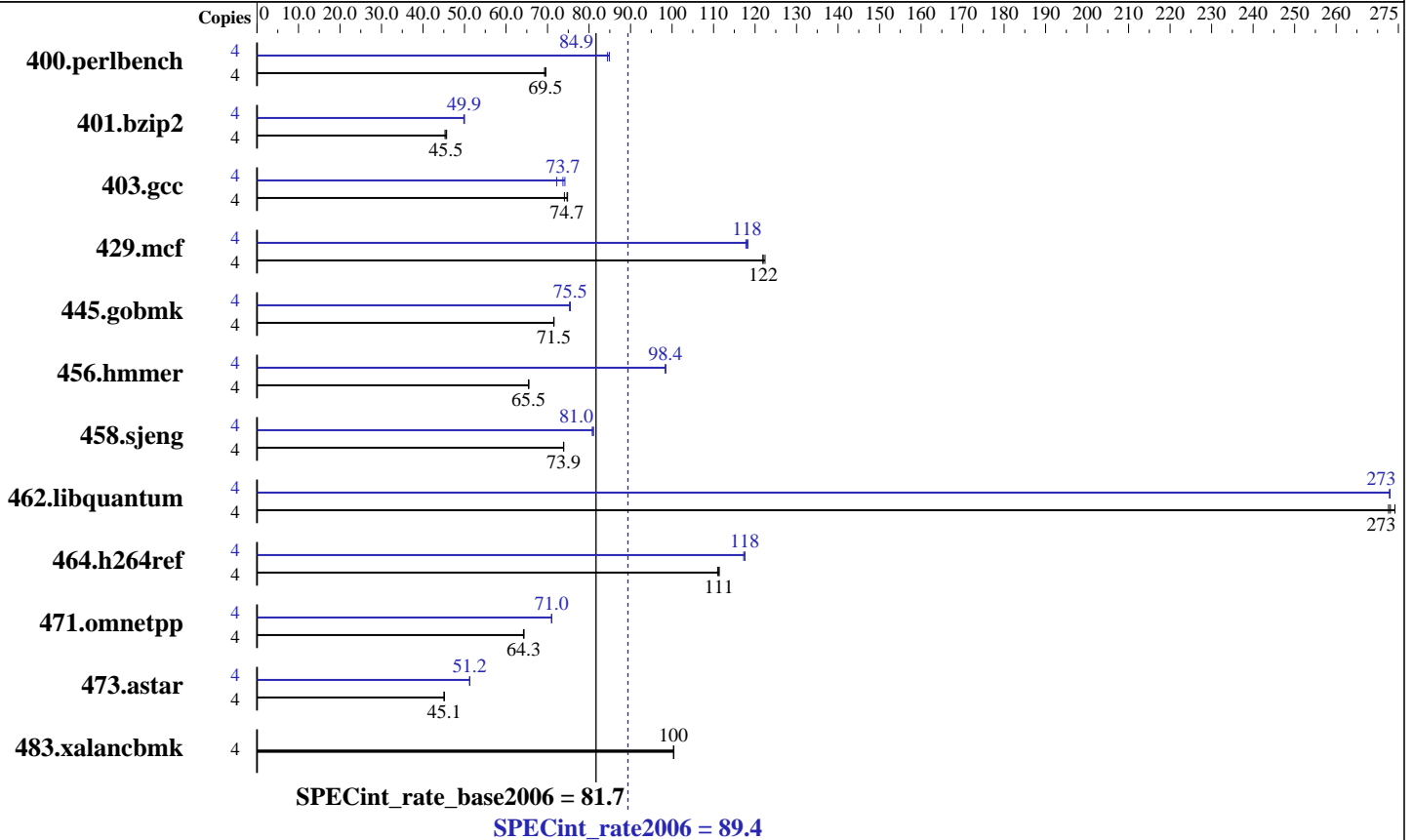
Test sponsor: Bull SAS

Tested by: Dell Inc.

Test date: Oct-2009

Hardware Availability: Dec-2009

Software Availability: Jul-2009



Hardware

CPU Name: Intel Xeon X3430
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 GB (4 x 2 GB DDR3-1333 DR RDIMM)
 Disk Subsystem: 1 x 160 GB 7200 RPM SATA
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 5.3, Kernel 2.6.18-128.el5
 Compiler: Intel C++ Compiler Professional Edition 11.1 for Linux Build 20090511 Package ID: I_cproc_p_11.1.040
 Auto Parallel: No
 File System: ReiserFS
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502



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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	4	564	69.3	<u>562</u>	<u>69.5</u>	562	69.6	4	463	84.4	<u>460</u>	<u>84.9</u>	460	84.9
401.bzip2	4	<u>848</u>	<u>45.5</u>	852	45.3	845	45.7	4	775	49.8	772	50.0	<u>774</u>	<u>49.9</u>
403.gcc	4	<u>431</u>	<u>74.7</u>	430	74.8	435	74.1	4	434	74.2	446	72.2	<u>437</u>	<u>73.7</u>
429.mcf	4	<u>299</u>	<u>122</u>	299	122	298	122	4	310	118	<u>309</u>	<u>118</u>	308	118
445.gobmk	4	<u>587</u>	<u>71.5</u>	586	71.6	587	71.5	4	557	75.3	556	75.5	<u>556</u>	<u>75.5</u>
456.hammer	4	570	65.4	<u>570</u>	<u>65.5</u>	570	65.5	4	379	98.4	<u>379</u>	<u>98.4</u>	379	98.5
458.sjeng	4	<u>655</u>	<u>73.9</u>	655	73.9	655	73.8	4	599	80.8	597	81.0	<u>597</u>	<u>81.0</u>
462.libquantum	4	<u>304</u>	<u>273</u>	304	273	302	274	4	<u>304</u>	<u>273</u>	304	273	304	273
464.h264ref	4	798	111	795	111	<u>795</u>	<u>111</u>	4	755	117	<u>753</u>	<u>118</u>	753	118
471.omnetpp	4	<u>389</u>	<u>64.3</u>	389	64.3	389	64.2	4	<u>352</u>	<u>71.0</u>	352	71.0	352	71.0
473.astar	4	622	45.1	623	45.1	<u>623</u>	<u>45.1</u>	4	548	51.2	<u>548</u>	<u>51.2</u>	548	51.3
483.xalancbmk	4	275	100	<u>275</u>	<u>100</u>	275	100	4	275	100	<u>275</u>	<u>100</u>	275	100

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

Submit Notes

The config file option 'submit' was used.
numactl was used to bind copies to the cores

Operating System Notes

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

Platform Notes

BIOS Settings:
Power Management = Maximum Performance (Default = Active Power Controller)

General Notes

The Dell PowerEdge T310 (Intel Xeon X3430, 2.40 GHz) and the Bull NovaScale T820 F2 (Intel Xeon X3430, 2.40 GHz) models are electronically equivalent. The results have been measured on a Dell PowerEdge T310 (Intel Xeon X3430, 2.40 GHz) model.

Base Compiler Invocation

C benchmarks:
icc -m32

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Base Compiler Invocation (Continued)

C++ benchmarks:
icpc -m32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -inline-alloc
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/spec/cpu2006.1.1/lib -lsmartheap

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks (except as noted below):
icpc -m32

473.astar: icpc -m64



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Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -ansi-alias -opt-prefetch

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -opt-prefetch -auto-ilp32

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3

429.mcf: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -opt-prefetch

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2
-ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
-ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static
-opt-malloc-options=3 -opt-prefetch

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs

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Peak Optimization Flags (Continued)

471.omnetpp (continued):

-L/spec/cpu2006.1.1/lib -lsmartheap

473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)

-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)

-ansi-alias -opt-ra-region-strategy=routine -auto-ilp32

-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap64

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-int-linux64-revA.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-int-linux64-revA.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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