



# SPEC® CINT2006 Result

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## Bull SAS

NovaScale B260+  
(Intel Xeon E5430, 2.66 GHz)

SPECint®2006 = 24.4

SPECint\_base2006 = 21.3

CPU2006 license: 20

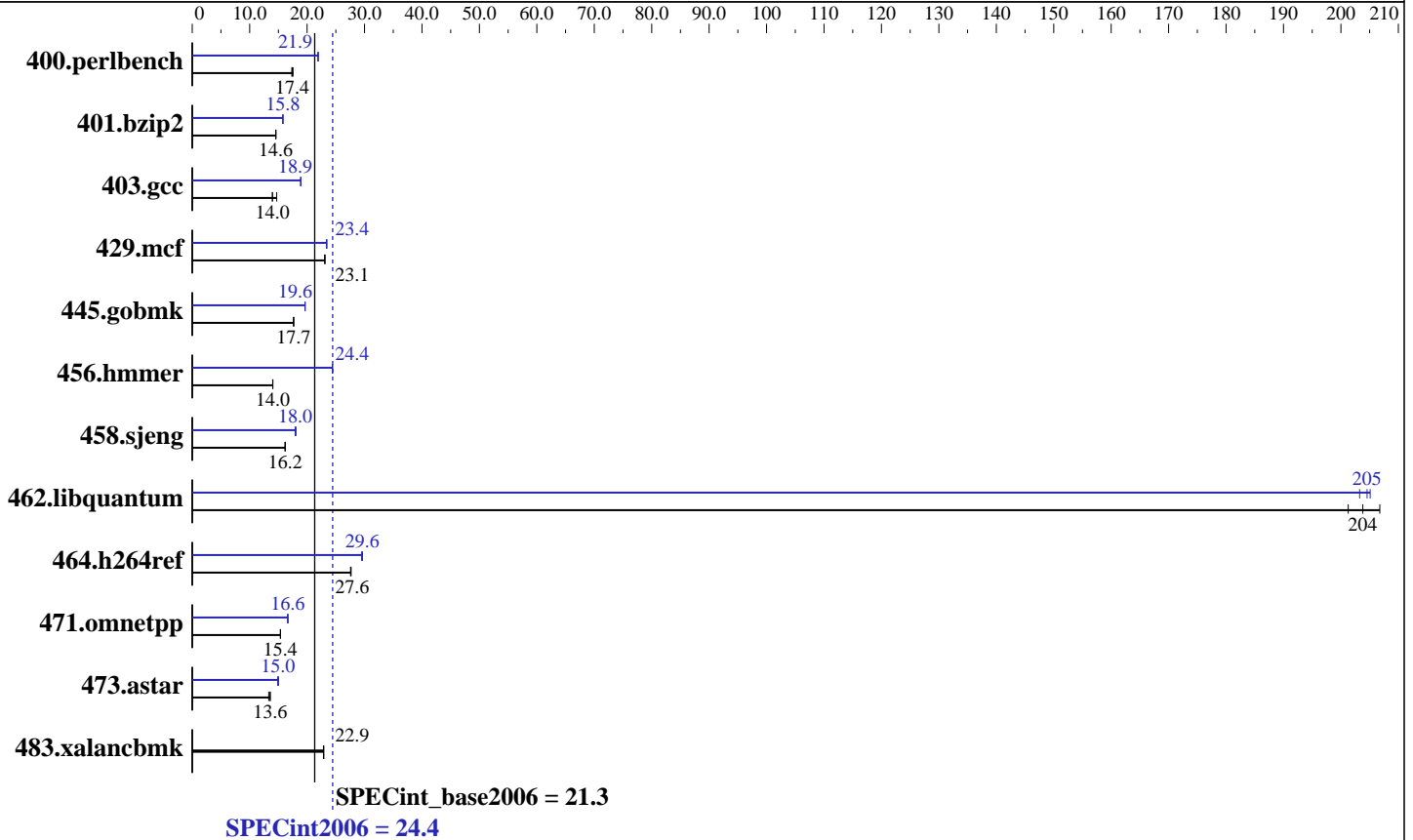
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Jul-2008

Hardware Availability: Jan-2008

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon E5430  
 CPU Characteristics: 1333 MHz system bus  
 CPU MHz: 2666  
 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	557	17.5	564	17.3	<u>561</u>	<u>17.4</u>	445	21.9	446	21.9	<u>446</u>	<u>21.9</u>
401.bzip2	<u>663</u>	<u>14.6</u>	662	14.6	664	14.5	611	15.8	<u>611</u>	<u>15.8</u>	611	15.8
403.gcc	<u>576</u>	<u>14.0</u>	547	14.7	577	14.0	425	18.9	426	18.9	<u>426</u>	<u>18.9</u>
429.mcf	395	23.1	<u>395</u>	<u>23.1</u>	395	23.1	389	23.4	<u>390</u>	<u>23.4</u>	390	23.4
445.gobmk	<u>594</u>	<u>17.7</u>	594	17.7	594	17.6	534	19.6	<u>534</u>	<u>19.6</u>	534	19.6
456.hmmer	<u>665</u>	<u>14.0</u>	665	14.0	666	14.0	382	24.4	<u>382</u>	<u>24.4</u>	382	24.4
458.sjeng	746	16.2	750	16.1	<u>746</u>	<u>16.2</u>	<u>674</u>	<u>18.0</u>	675	17.9	670	18.1
462.libquantum	100	207	103	201	<u>102</u>	<u>204</u>	<u>101</u>	<u>205</u>	101	205	102	203
464.h264ref	800	27.7	803	27.6	<u>801</u>	<u>27.6</u>	<u>747</u>	<u>29.6</u>	750	29.5	747	29.6
471.omnetpp	406	15.4	408	15.3	<u>407</u>	<u>15.4</u>	376	16.6	375	16.7	<u>375</u>	<u>16.6</u>
473.astar	517	13.6	<u>518</u>	<u>13.6</u>	527	13.3	<u>469</u>	<u>15.0</u>	471	14.9	467	15.0
483.xalancbmk	301	22.9	<u>301</u>	<u>22.9</u>	302	22.8	301	22.9	<u>301</u>	<u>22.9</u>	302	22.8

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

## 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.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  
-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



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## 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/EM64T\\_Intel101\\_int\\_flags.20090714.html](http://www.spec.org/cpu2006/flags/EM64T_Intel101_int_flags.20090714.html)

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

[http://www.spec.org/cpu2006/flags/EM64T\\_Intel101\\_int\\_flags.20090714.xml](http://www.spec.org/cpu2006/flags/EM64T_Intel101_int_flags.20090714.xml)

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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