



# SPEC® CINT2006 Result

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## Bull SAS

NovaScale T860  
(Intel Xeon processor E5335,2.00GHz)

SPECint®2006 = 18.1

SPECint\_base2006 = 15.5

CPU2006 license: 20

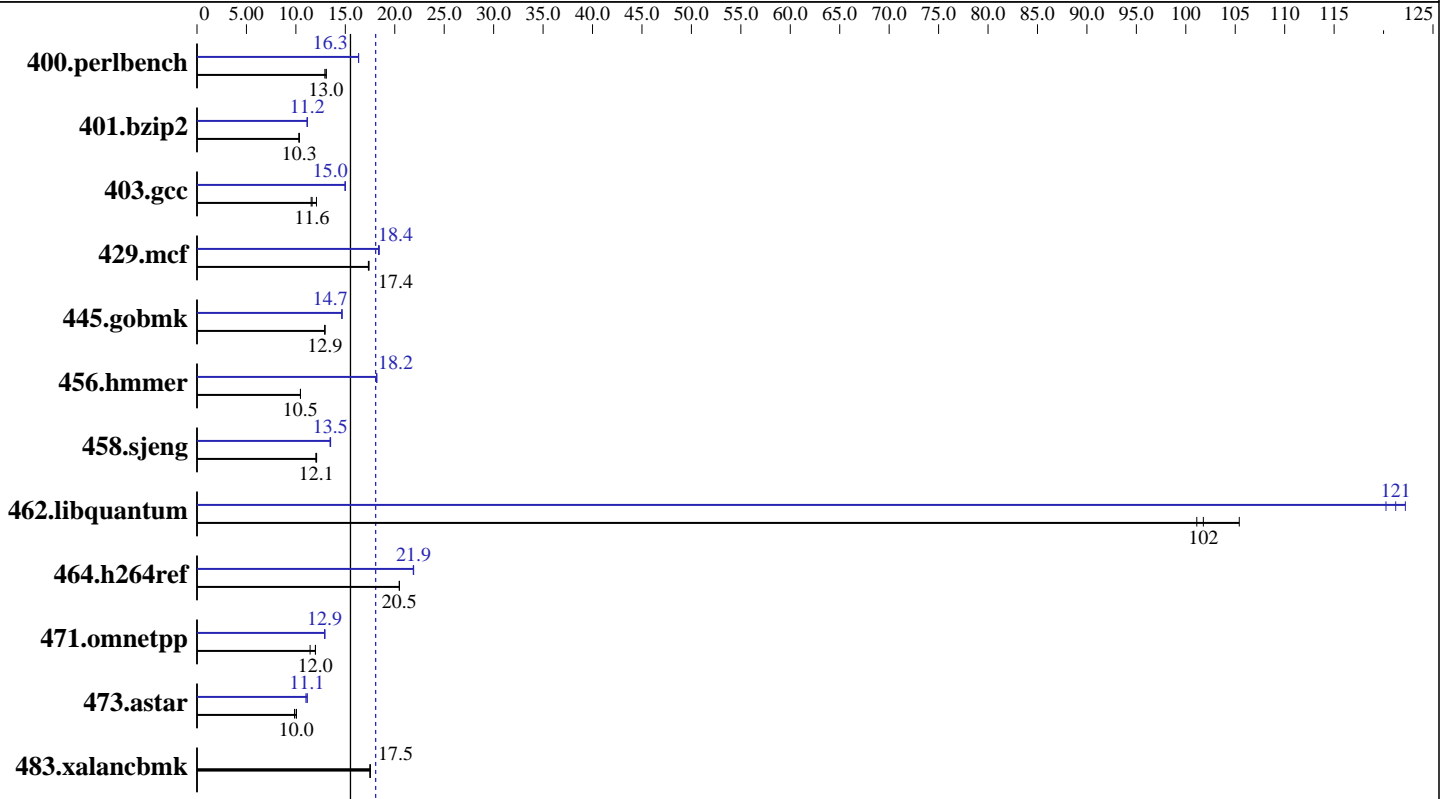
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Oct-2007

Hardware Availability: Mar-2007

Software Availability: Nov-2007



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### Hardware

CPU Name: Intel Xeon E5335  
 CPU Characteristics: 2.00 GHz, 8 MB L2, 1333 MHz system bus  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 1 to 2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 8 GB (4x2 GB) FB-DIMM PC2-5300F ECC CL5  
 Disk Subsystem: 1x147 GB SAS, 15000 RPM  
 Other Hardware: None

### Software

Operating System: SUSE LINUX Enterprise Server 10  
 Kernel 2.6.16.21-0.8-smp for x86\_64  
 Compiler: Intel C++ Compiler for Linux32 and Linux64  
 version 10.1  
 Build 20070725  
 Auto Parallel: Yes  
 File System: ext2  
 System State: Multi-user run level 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap library V8.1  
 Binutils 2.17.50.0.15



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	747	13.1	<b><u>749</u></b>	<b><u>13.0</u></b>	756	12.9	598	16.3	598	16.3	<b><u>598</u></b>	<b><u>16.3</u></b>
401.bzip2	936	10.3	933	10.3	<b><u>934</u></b>	<b><u>10.3</u></b>	<b><u>864</u></b>	<b><u>11.2</u></b>	864	11.2	867	11.1
403.gcc	697	11.5	666	12.1	<b><u>692</u></b>	<b><u>11.6</u></b>	537	15.0	537	15.0	<b><u>537</u></b>	<b><u>15.0</u></b>
429.mcf	526	17.3	<b><u>525</u></b>	<b><u>17.4</u></b>	525	17.4	<b><u>496</u></b>	<b><u>18.4</u></b>	497	18.4	495	18.4
445.gobmk	811	12.9	<b><u>811</u></b>	<b><u>12.9</u></b>	812	12.9	716	14.6	<b><u>716</u></b>	<b><u>14.7</u></b>	715	14.7
456.hmmer	892	10.5	891	10.5	<b><u>892</u></b>	<b><u>10.5</u></b>	513	18.2	514	18.2	<b><u>513</u></b>	<b><u>18.2</u></b>
458.sjeng	1006	12.0	1000	12.1	<b><u>1003</u></b>	<b><u>12.1</u></b>	<b><u>897</u></b>	<b><u>13.5</u></b>	895	13.5	899	13.5
462.libquantum	<b><u>204</u></b>	<b><u>102</u></b>	205	101	197	105	<b><u>171</u></b>	<b><u>121</u></b>	172	120	170	122
464.h264ref	1082	20.5	<b><u>1081</u></b>	<b><u>20.5</u></b>	1081	20.5	<b><u>1010</u></b>	<b><u>21.9</u></b>	1010	21.9	1012	21.9
471.omnetpp	<b><u>522</u></b>	<b><u>12.0</u></b>	546	11.4	522	12.0	<b><u>484</u></b>	<b><u>12.9</u></b>	483	12.9	484	12.9
473.astar	<b><u>700</u></b>	<b><u>10.0</u></b>	712	9.86	698	10.1	630	11.1	637	11.0	<b><u>631</u></b>	<b><u>11.1</u></b>
483.xalancbmk	394	17.5	<b><u>394</u></b>	<b><u>17.5</u></b>	394	17.5	394	17.5	<b><u>394</u></b>	<b><u>17.5</u></b>	394	17.5

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

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

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX



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## 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/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/include

456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/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

## Peak Optimization Flags

C benchmarks:

Continued on next page



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## Peak Optimization Flags (Continued)

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/home/cmplr/usr3/alrahate/cpu2006.1.0/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/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

483.xalancbmk: basepeak = yes

## 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\\_flags.20090714.00.html](http://www.spec.org/cpu2006/flags/EM64T_Intel101_flags.20090714.00.html)



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

[http://www.spec.org/cpu2006/flags/EM64T\\_Intel101\\_flags.20090714.00.xml](http://www.spec.org/cpu2006/flags/EM64T_Intel101_flags.20090714.00.xml)

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

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