



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale T860 E1  
(Intel Xeon X5470, 3.33 GHz)

SPECint®2006 = 30.2

SPECint\_base2006 = 26.3

CPU2006 license: 20

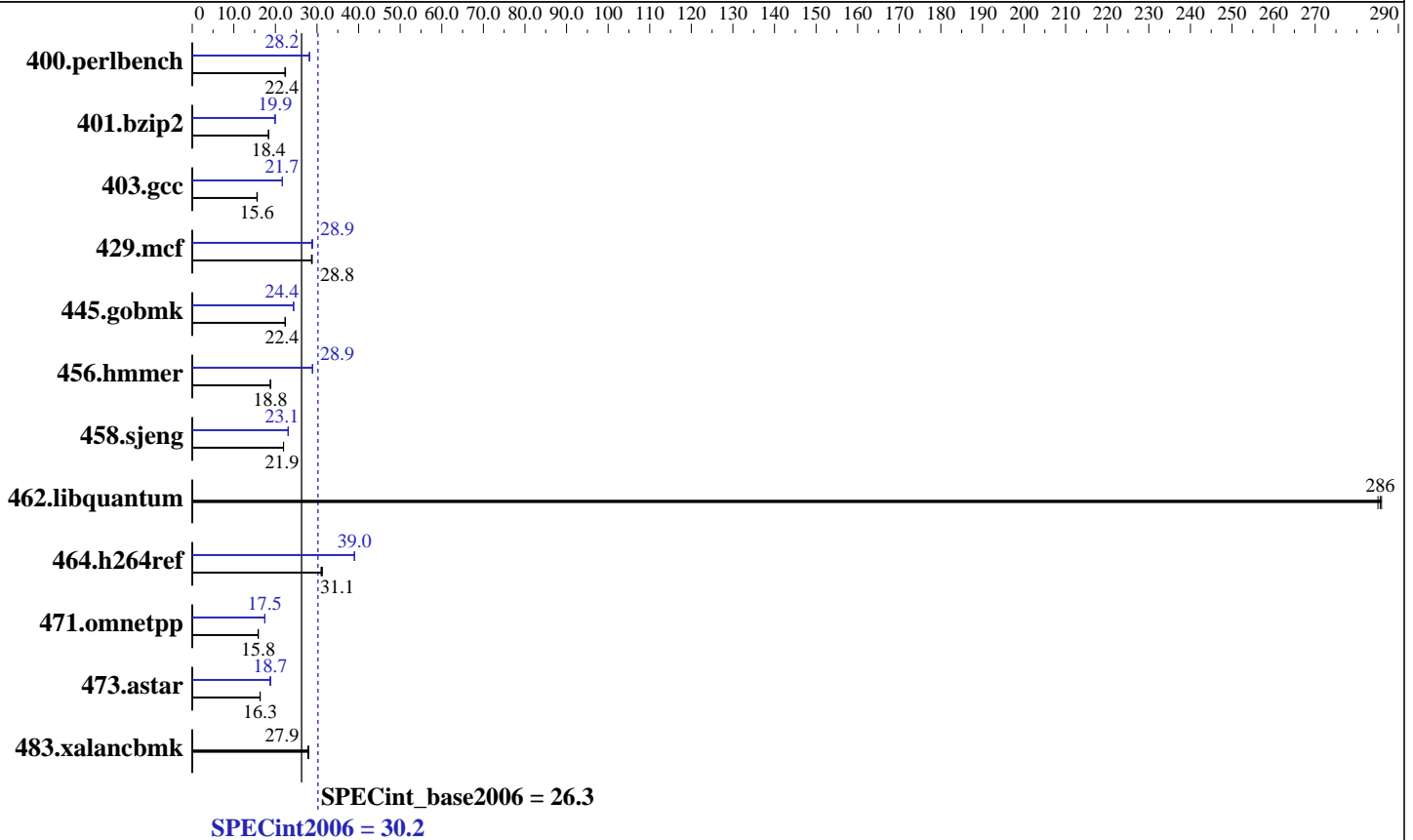
Test sponsor: Bull SAS

Tested by: NEC Corporation

Test date: Nov-2008

Hardware Availability: Oct-2008

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Xeon X5470  
 CPU Characteristics: 3.33 GHz, 2x6 MB L2 shared, 1333 MHz system bus  
 CPU MHz: 3333  
 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 PC2-5300F, 2 rank, CL5-5-5, ECC)  
 Disk Subsystem: 1x73.2 GB SAS, 15000RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP2, Kernel 2.6.16.60-0.21-smp  
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20080730 Package ID: l\_cproc\_b\_11.0.044  
 Auto Parallel: Yes  
 File System: ext2  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: MicroQuill SmartHeap Library 8.1 Binutils 2.18.50.0.7.20080502



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale T860 E1  
(Intel Xeon X5470, 3.33 GHz)

SPECint2006 = 30.2

SPECint\_base2006 = 26.3

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

Test date: Nov-2008  
Hardware Availability: Oct-2008  
Software Availability: Nov-2008

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	438	22.3	<b><u>437</u></b>	<b><u>22.4</u></b>	436	22.4	<b><u>347</u></b>	<b><u>28.2</u></b>	347	28.1	346	28.2
401.bzip2	<b><u>526</u></b>	<b><u>18.4</u></b>	525	18.4	527	18.3	485	19.9	483	20.0	<b><u>484</u></b>	<b><u>19.9</u></b>
403.gcc	517	15.6	<b><u>517</u></b>	<b><u>15.6</u></b>	514	15.7	<b><u>372</u></b>	<b><u>21.7</u></b>	372	21.7	371	21.7
429.mcf	318	28.7	<b><u>317</u></b>	<b><u>28.8</u></b>	317	28.8	<b><u>316</u></b>	<b><u>28.9</u></b>	318	28.7	315	28.9
445.gobmk	<b><u>469</u></b>	<b><u>22.4</u></b>	469	22.4	469	22.4	<b><u>430</u></b>	<b><u>24.4</u></b>	431	24.3	430	24.4
456.hammer	<b><u>496</u></b>	<b><u>18.8</u></b>	496	18.8	496	18.8	323	28.9	322	29.0	<b><u>323</u></b>	<b><u>28.9</u></b>
458.sjeng	551	22.0	<b><u>551</u></b>	<b><u>21.9</u></b>	552	21.9	<b><u>525</u></b>	<b><u>23.1</u></b>	524	23.1	525	23.0
462.libquantum	72.7	285	<b><u>72.5</u></b>	<b><u>286</u></b>	72.5	286	72.7	285	<b><u>72.5</u></b>	<b><u>286</u></b>	72.5	286
464.h264ref	707	31.3	715	31.0	<b><u>711</u></b>	<b><u>31.1</u></b>	568	39.0	567	39.0	<b><u>567</u></b>	<b><u>39.0</u></b>
471.omnetpp	<b><u>394</u></b>	<b><u>15.8</u></b>	393	15.9	395	15.8	359	17.4	358	17.5	<b><u>358</u></b>	<b><u>17.5</u></b>
473.astar	<b><u>430</u></b>	<b><u>16.3</u></b>	430	16.3	430	16.3	372	18.9	375	18.7	<b><u>375</u></b>	<b><u>18.7</u></b>
483.xalancbmk	248	27.8	247	28.0	<b><u>247</u></b>	<b><u>27.9</u></b>	248	27.8	247	28.0	<b><u>247</u></b>	<b><u>27.9</u></b>

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"

## Platform Notes

Bios settings:  
Hardware Prefetcher: Enabled  
Adjacent Cache Line Prefetch: Enabled

## General Notes

The NEC Express5800/120Lj(Intel Xeon X5470) and the Bull NovaScale T860 E1(Intel Xeon X5470, 3.33 GHz) models are electronically equivalent. The results have been measured on a NEC Express5800/120Lj(Intel Xeon X5470) model.

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale T860 E1  
(Intel Xeon X5470, 3.33 GHz)

SPECint2006 = 30.2

SPECint\_base2006 = 26.3

CPU2006 license: 20

Test sponsor: Bull SAS

Tested by: NEC Corporation

Test date: Nov-2008

Hardware Availability: Oct-2008

Software Availability: Nov-2008

## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel  
-par-runtime-control -opt-prefetch

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/opt/SmartHeap\_8.1/lib -lsmarheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /opt/intel/Compiler/11.0/044/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/044/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/044/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/044/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/044/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/044/ipp/em64t/include

C++ benchmarks:

icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale T860 E1  
(Intel Xeon X5470, 3.33 GHz)

SPECint2006 = 30.2

SPECint\_base2006 = 26.3

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

Test date: Nov-2008  
Hardware Availability: Oct-2008  
Software Availability: Nov-2008

## Peak Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

### C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -ansi-alias -opt-prefetch  
401.bzp2: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -auto-ilp32 -opt-prefetch  
-ansi-alias  
403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-alloc  
-opt-malloc-options=3  
429.mcf: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch  
445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -O2 -ipo  
-no-prec-div -ansi-alias  
456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2  
-ansi-alias -auto-ilp32  
458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll4  
462.libquantum: basepeak = yes  
464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll2 -ansi-alias

### C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs -L/opt/SmartHeap\_8.1/lib -lsmarheap  
473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs -L/opt/SmartHeap\_8.1/lib -lsmarheap  
483.xalancbmk: basepeak = yes



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale T860 E1  
(Intel Xeon X5470, 3.33 GHz)

SPECint2006 = 30.2

SPECint\_base2006 = 26.3

**CPU2006 license:** 20  
**Test sponsor:** Bull SAS  
**Tested by:** NEC Corporation

**Test date:** Nov-2008  
**Hardware Availability:** Oct-2008  
**Software Availability:** Nov-2008

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revD.20090713.html>  
<http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revB.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revD.20090713.xml>  
<http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revB.xml>

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.  
Report generated on Tue Jul 22 22:56:28 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 6 January 2009.