



# SPEC<sup>®</sup> CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

SPECint<sup>®</sup>2006 = 40.5

### BL265+ (Intel Xeon X5570, 2.93 GHz)

SPECint\_base2006 = 38.8

CPU2006 license: 20

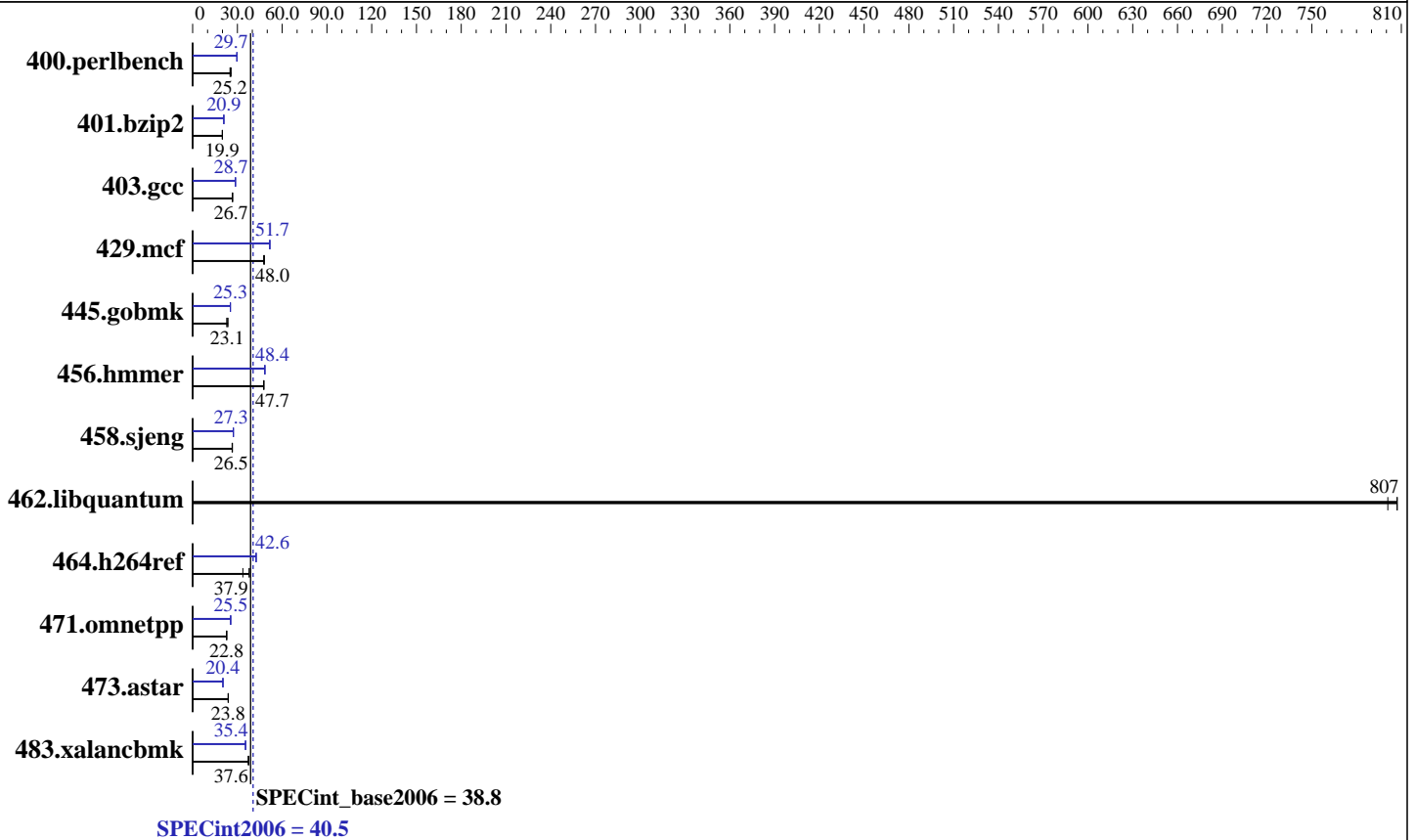
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Feb-2011

Hardware Availability: May-2010

Software Availability: Nov-2010



### Hardware

CPU Name: Intel Xeon X5570  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz  
 CPU MHz: 2933  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chips  
 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: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)  
 Disk Subsystem: 1 x 73 GB SAS, 10000 RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) SP1, Kernel 2.6.32.12-0.7-default  
 Compiler: Intel C++ Intel 64 Compiler XE for applications running on Intel 64 Version 12.0.1.116 Build 20101116  
 Auto Parallel: Yes  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V9.01



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

SPECint2006 = **40.5**

## BL265+ (Intel Xeon X5570, 2.93 GHz)

SPECint\_base2006 = **38.8**

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

Test date: Feb-2011  
Hardware Availability: May-2010  
Software Availability: Nov-2010

### Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	379	25.8	390	25.1	<b>387</b>	<b>25.2</b>	330	29.6	<b>329</b>	<b>29.7</b>	328	29.8
401.bzip2	484	19.9	<b>484</b>	<b>19.9</b>	485	19.9	<b>462</b>	<b>20.9</b>	461	20.9	462	20.9
403.gcc	302	26.7	<b>302</b>	<b>26.7</b>	301	26.8	280	28.7	281	28.7	<b>281</b>	<b>28.7</b>
429.mcf	<b>190</b>	<b>48.0</b>	190	48.1	192	47.6	176	51.8	<b>176</b>	<b>51.7</b>	177	51.6
445.gobmk	<b>455</b>	<b>23.1</b>	442	23.7	458	22.9	415	25.3	<b>415</b>	<b>25.3</b>	414	25.3
456.hammer	<b>196</b>	<b>47.7</b>	196	47.6	196	47.7	193	48.3	<b>193</b>	<b>48.4</b>	192	48.5
458.sjeng	457	26.5	453	26.7	<b>456</b>	<b>26.5</b>	<b>443</b>	<b>27.3</b>	444	27.3	443	27.3
462.libquantum	<b>25.7</b>	<b>807</b>	25.7	807	25.9	801	<b>25.7</b>	<b>807</b>	25.7	807	25.9	801
464.h264ref	<b>585</b>	<b>37.9</b>	657	33.7	582	38.0	<b>520</b>	<b>42.6</b>	521	42.5	520	42.6
471.omnetpp	<b>274</b>	<b>22.8</b>	274	22.8	274	22.8	245	25.5	246	25.4	<b>245</b>	<b>25.5</b>
473.astar	295	23.8	293	23.9	<b>295</b>	<b>23.8</b>	348	20.2	<b>345</b>	<b>20.4</b>	345	20.4
483.xalancbmk	<b>184</b>	<b>37.6</b>	185	37.2	183	37.6	195	35.5	195	35.4	<b>195</b>	<b>35.4</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
Hugepages was enabled with the following:
'nodenv /mnt/hugepages hugetlbfs defaults 0 0' added to /etc/fstab
echo 900 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

### Platform Notes

```
Turbo Mode enabled in BIOS
Turbo Boost set to Traditional in BIOS
Power C-states enabled in BIOS
Demand Scrub disabled in BIOS
```

### General Notes

```
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
```

### Base Compiler Invocation

```
C benchmarks:
icc -m64
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Bull SAS**

**SPECint2006 = 40.5**

**BL265+ (Intel Xeon X5570, 2.93 GHz)**

**SPECint\_base2006 = 38.8**

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

**Test date:** Feb-2011  
**Hardware Availability:** May-2010  
**Software Availability:** Nov-2010

## Base Compiler Invocation (Continued)

C++ benchmarks:  
icpc -m64

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
403.gcc: -DSPEC\_CPU\_LP64  
429.mcf: -DSPEC\_CPU\_LP64  
445.gobmk: -DSPEC\_CPU\_LP64  
456.hmmr: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
464.h264ref: -DSPEC\_CPU\_LP64  
471.omnetpp: -DSPEC\_CPU\_LP64  
473.astar: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/smartheap -lsmartheap64  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m64  
400.perlbench: icc -m32

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Bull SAS**

**SPECint2006 = 40.5**

**BL265+ (Intel Xeon X5570, 2.93 GHz)**

**SPECint\_base2006 = 38.8**

**CPU2006 license:** 20

**Test sponsor:** Bull SAS

**Tested by:** Bull SAS

**Test date:** Feb-2011

**Hardware Availability:** May-2010

**Software Availability:** Nov-2010

## Peak Compiler Invocation (Continued)

429.mcf: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):

`icpc -m32`

473.astar: `icpc -m64`

## Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`

401.bzip2: `-DSPEC_CPU_LP64`

403.gcc: `-DSPEC_CPU_LP64`

456.hammer: `-DSPEC_CPU_LP64`

458.sjeng: `-DSPEC_CPU_LP64`

462.libquantum: `-DSPEC_CPU_LP64 -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) -prof-use(pass 2) -opt-prefetch -ansi-alias -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT`

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

403.gcc: `-xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc -opt-malloc-options=3 -auto-ilp32 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

429.mcf: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -auto-ilp32 -ansi-alias -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT`

445.gobmk: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -auto-ilp32 -ansi-alias -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT`

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Bull SAS**

**SPECint2006 = 40.5**

**BL265+ (Intel Xeon X5570, 2.93 GHz)**

**SPECint\_base2006 = 38.8**

**CPU2006 license:** 20

**Test sponsor:** Bull SAS

**Tested by:** Bull SAS

**Test date:** Feb-2011

**Hardware Availability:** May-2010

**Software Availability:** Nov-2010

## Peak Optimization Flags (Continued)

456.hmmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-ansi-alias  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

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

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll2 -ansi-alias  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

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)  
-opt-ra-region-strategy=block -ansi-alias -Wl,-z,muldefs  
-L/smartheap -lsmartheap  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

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)  
-opt-ra-region-strategy=routine -Wl,-z,muldefs  
-L/smartheap -lsmartheap64

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias  
-Wl,-z,muldefs -L/smartheap -lsmartheap  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

## 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-ic12.0-linux64-revB.html>  
<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20110308.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>  
<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20110308.xml>



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Bull SAS**

**SPECint2006 = 40.5**

**BL265+ (Intel Xeon X5570, 2.93 GHz)**

**SPECint\_base2006 = 38.8**

**CPU2006 license:** 20

**Test sponsor:** Bull SAS

**Tested by:** Bull SAS

**Test date:** Feb-2011

**Hardware Availability:** May-2010

**Software Availability:** Nov-2010

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 Wed Jul 23 16:43:20 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 16 March 2011.