



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon X5450, 3.00 GHz)

SPECint®\_rate2006 = 70.2

SPECint\_rate\_base2006 = 59.3

CPU2006 license: 20

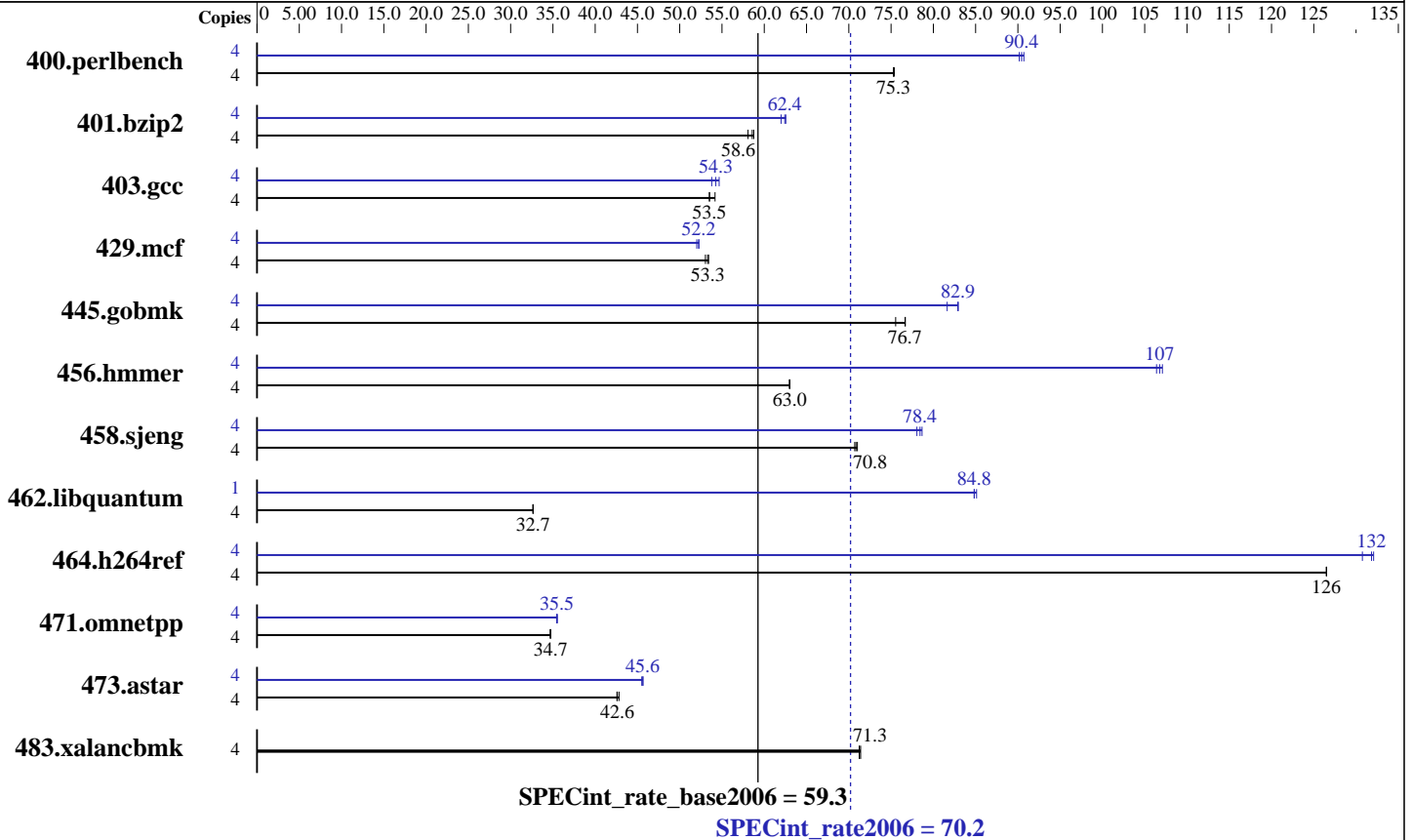
Test sponsor: Bull SAS

Tested by: NEC Corporation

Test date: Jun-2008

Hardware Availability: Apr-2008

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon X5450  
 CPU Characteristics: 3.00 GHz, 2x6 MB L2 shared, 1333 MHz bus  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 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) SP1, Kernel 2.6.16.46-0.12-smp  
 Compiler: Intel C++ Compiler for Linux version 10.1 Build 20070913 Package ID: l\_cc\_p\_10.1.008  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: MicroQuill SmartHeap library 8.1  
 binutils 2.17



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon X5450, 3.00 GHz)

SPECint\_rate2006 = 70.2

SPECint\_rate\_base2006 = 59.3

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

Test date: Jun-2008  
Hardware Availability: Apr-2008  
Software Availability: Nov-2007

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	518	75.4	<u>519</u>	<u>75.3</u>	519	75.3	4	<u>432</u>	<u>90.4</u>	433	90.2	431	90.7
401.bzip2	4	657	58.8	665	58.1	<u>659</u>	<u>58.6</u>	4	<u>618</u>	<u>62.4</u>	617	62.5	623	62.0
403.gcc	4	602	53.5	<u>602</u>	<u>53.5</u>	594	54.2	4	<u>593</u>	<u>54.3</u>	599	53.8	589	54.7
429.mcf	4	683	53.4	688	53.0	<u>684</u>	<u>53.3</u>	4	701	52.0	<u>698</u>	<u>52.2</u>	698	52.3
445.gobmk	4	<u>547</u>	<u>76.7</u>	555	75.5	547	76.7	4	506	83.0	<u>506</u>	<u>82.9</u>	514	81.6
456.hmmer	4	<u>592</u>	<u>63.0</u>	593	63.0	592	63.0	4	<u>350</u>	<u>107</u>	348	107	351	106
458.sjeng	4	685	70.7	682	71.0	<u>683</u>	<u>70.8</u>	4	<u>617</u>	<u>78.4</u>	615	78.7	620	78.1
462.libquantum	4	2538	32.7	<u>2538</u>	<u>32.7</u>	2538	32.7	1	<u>244</u>	<u>84.8</u>	244	84.8	243	85.1
464.h264ref	4	700	127	<u>700</u>	<u>126</u>	700	126	4	670	132	<u>671</u>	<u>132</u>	677	131
471.omnetpp	4	721	34.7	<u>720</u>	<u>34.7</u>	720	34.7	4	<u>705</u>	<u>35.5</u>	706	35.4	704	35.5
473.astar	4	660	42.6	656	42.8	<u>659</u>	<u>42.6</u>	4	617	45.5	615	45.7	<u>615</u>	<u>45.6</u>
483.xalancbmk	4	387	71.2	<u>387</u>	<u>71.3</u>	387	71.4	4	387	71.2	<u>387</u>	<u>71.3</u>	387	71.4

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

## Platform Notes

Bios settings:  
Hardware Prefetcher: Enabled  
Adjacent Cache Line Prefetch: Disabled  
Intel SpeedStep Technology: Disabled

## General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2, 456.hmmer, for peak, are compiled in 64-bit mode

The NEC Express5800/120Rh-1(Intel Xeon X5450),  
the NEC Express5800/120Rj-2(Intel Xeon X5450),  
the Bull NovaScale R440 E1 (Intel Xeon X5450,3.00GHz) and  
the Bull NovaScale R460 E1 (Intel Xeon X5450,3.00GHz) models are electronically equivalent.  
The results have been measured on a NEC Express5800/120Rj-2(Intel Xeon X5450) model.

## Base Compiler Invocation

C benchmarks:  
icc

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon X5450, 3.00 GHz)

SPECint\_rate2006 = 70.2

SPECint\_rate\_base2006 = 59.3

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

Test date: Jun-2008  
Hardware Availability: Apr-2008  
Software Availability: Nov-2007

## Base Compiler Invocation (Continued)

C++ benchmarks:  
icpc

## 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 -inline-calloc -opt-malloc-options=3

C++ benchmarks:  
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/opt/SmartHeap\_8.1/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.hmmer: /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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon X5450, 3.00 GHz)

SPECint\_rate2006 = 70.2

SPECint\_rate\_base2006 = 59.3

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

**Test date:** Jun-2008  
**Hardware Availability:** Apr-2008  
**Software Availability:** Nov-2007

## 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:

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  
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.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive  
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/opt/SmartHeap\_8.1/lib -lsmarheap  
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/opt/SmartHeap\_8.1/lib -lsmarheap  
483.xalancbmk: basepeak = yes



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon X5450, 3.00 GHz)

SPECint\_rate2006 = 70.2

SPECint\_rate\_base2006 = 59.3

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

**Test date:** Jun-2008  
**Hardware Availability:** Apr-2008  
**Software Availability:** Nov-2007

## 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/NEC-Intel-ic10.1-INT-ia32-linux-flags.html>

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

<http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-INT-ia32-linux-flags.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 v1.0.  
Report generated on Tue Jul 22 19:52:33 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 8 July 2008.