



# SPEC<sup>®</sup> CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

## SPECint<sup>®</sup>\_rate2006 = 53.3

### Bull Escala PL450R+ (2100 MHz, 4 CPU)

## SPECint\_rate\_base2006 = 47.9

CPU2006 license: 20

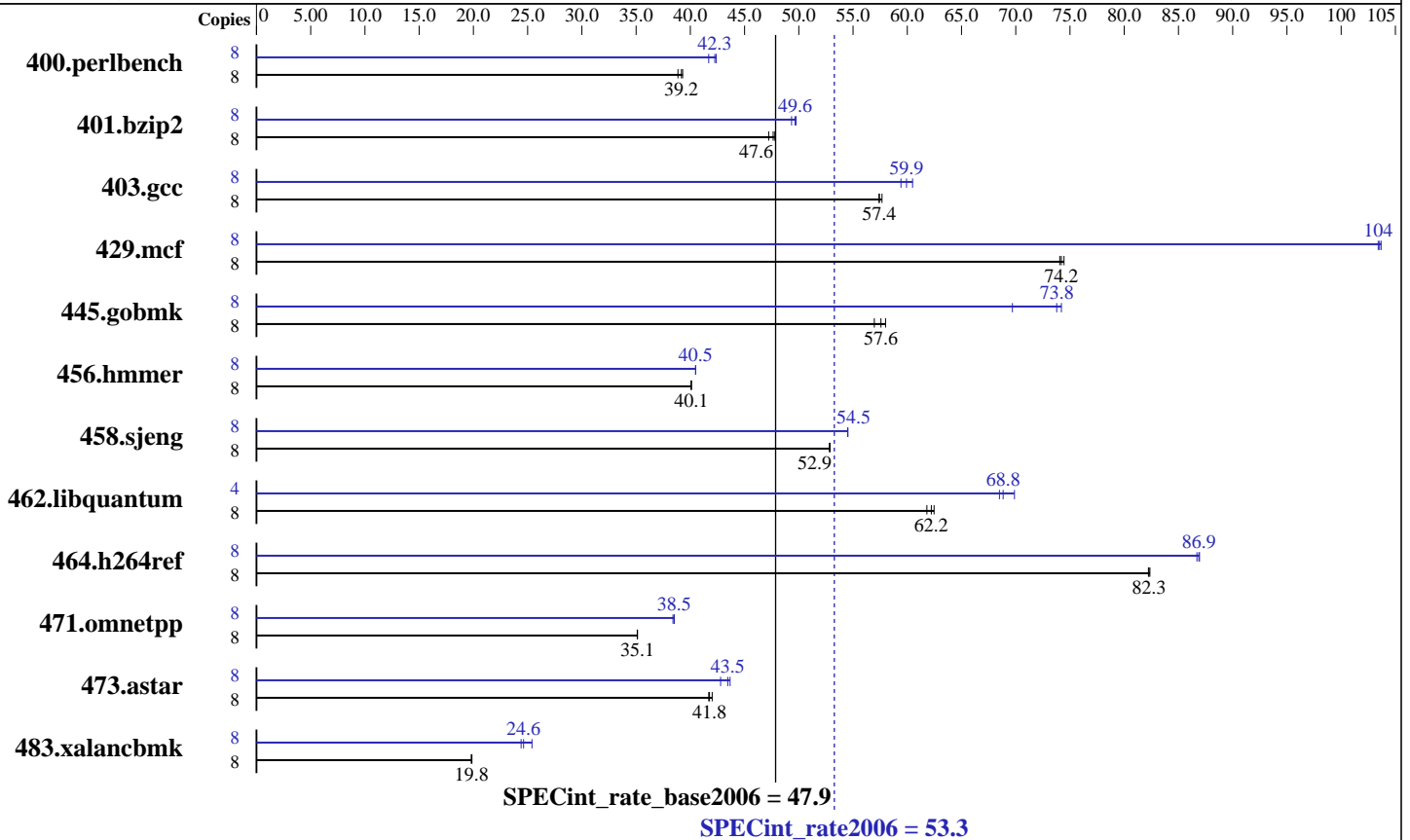
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Jan-2007

Hardware Availability: Feb-2006

Software Availability: Dec-2006



### Hardware

CPU Name: POWER5+  
 CPU Characteristics: 2100  
 CPU MHz: 2100  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip, 2 threads/core  
 CPU(s) orderable: 1, 2 chips  
 Primary Cache: 64 KB I + 32 KB D on chip per core  
 Secondary Cache: 1920 KB I+D on chip per chip  
 L3 Cache: 36 MB I+D off chip per chip  
 Other Cache: None  
 Memory: 32 GB (8x4 GB)  
 Disk Subsystem: 2x73 GB SCSI, 15K RPM  
 Other Hardware: None

### Software

Operating System: AIX 5L V5.3  
 Compiler: XL C/C++ Enterprise Edition Version 8.0 for AIX with the December 2006 PTF  
 XL Fortran Enterprise Edition Version 10.1 for AIX with the November 2006 PTF  
 Auto Parallel: No  
 File System: AIX/JFS2  
 System State: Multi-user  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: ESSL 4.2.0.4



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

SPECint\_rate2006 = 53.3

## Bull Escala PL450R+ (2100 MHz, 4 CPU)

SPECint\_rate\_base2006 = 47.9

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

Test date: Jan-2007  
Hardware Availability: Feb-2006  
Software Availability: Dec-2006

### Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	2011	38.9	<u>1995</u>	<u>39.2</u>	1989	39.3	8	1875	41.7	<u>1850</u>	<u>42.3</u>	1844	42.4
401.bzip2	8	1635	47.2	1615	47.8	<u>1621</u>	<u>47.6</u>	8	1565	49.3	1552	49.8	<u>1555</u>	<u>49.6</u>
403.gcc	8	<u>1121</u>	<u>57.4</u>	1122	57.4	1117	57.7	8	1065	60.5	<u>1075</u>	<u>59.9</u>	1084	59.4
429.mcf	8	985	74.1	<u>983</u>	<u>74.2</u>	980	74.4	8	<u>705</u>	<u>104</u>	706	103	704	104
445.gobmk	8	1447	58.0	1473	57.0	<u>1458</u>	<u>57.6</u>	8	<u>1137</u>	<u>73.8</u>	1131	74.2	1204	69.7
456.hammer	8	1862	40.1	1862	40.1	<u>1862</u>	<u>40.1</u>	8	1844	40.5	<u>1843</u>	<u>40.5</u>	1843	40.5
458.sjeng	8	<u>1831</u>	<u>52.9</u>	1832	52.8	1831	52.9	8	1775	54.5	<u>1776</u>	<u>54.5</u>	1776	54.5
462.libquantum	8	2653	62.5	2682	61.8	<u>2664</u>	<u>62.2</u>	4	<u>1204</u>	<u>68.8</u>	1186	69.9	1210	68.5
464.h264ref	8	2153	82.2	2149	82.4	<u>2152</u>	<u>82.3</u>	8	2036	86.9	<u>2038</u>	<u>86.9</u>	2042	86.7
471.omnetpp	8	1423	35.1	<u>1424</u>	<u>35.1</u>	1424	35.1	8	1302	38.4	<u>1298</u>	<u>38.5</u>	1298	38.5
473.astar	8	1337	42.0	<u>1345</u>	<u>41.8</u>	1347	41.7	8	1312	42.8	1286	43.7	<u>1292</u>	<u>43.5</u>
483.xalancbmk	8	2779	19.9	<u>2783</u>	<u>19.8</u>	2786	19.8	8	<u>2241</u>	<u>24.6</u>	2173	25.4	2263	24.4

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

### Operating System Notes

ulimits set to unlimited

bindprocessor command used on submit to bind each copy to a unique processor.

Large page mode was set as follows:  
vmo -r -o lpgg\_regions=900 -o lpgg\_size=16777216  
SMT was enabled using the AIX commands  
smtctl -m on -w boot  
bosboot -aD  
shutdown -rF

### Base Compiler Invocation

C benchmarks:  
/usr/vac/bin/xlc

C++ benchmarks:  
/usr/vacpp/bin/xlC



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Bull SAS**

**SPECint\_rate2006 = 53.3**

**Bull Escala PL450R+ (2100 MHz, 4 CPU)**

**SPECint\_rate\_base2006 = 47.9**

**CPU2006 license:** 20

**Test sponsor:** Bull SAS

**Tested by:** Bull SAS

**Test date:** Jan-2007

**Hardware Availability:** Feb-2006

**Software Availability:** Dec-2006

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_AIX  
462.libquantum: -DSPEC\_CPU\_AIX  
464.h264ref: -DSPEC\_CPU\_AIX -qchars=signed  
483.xalancbmk: -DSPEC\_CPU\_AIX

## Base Optimization Flags

C benchmarks:  
-qlanglvl=extc99 -O4 -qlargepage -D\_ILS\_MACROS -qalloca  
-qipa=noobject -blpdata -qipa=threads

C++ benchmarks:  
-O4 -qlargepage -D\_ILS\_MACROS -qrtti=all -qipa=noobject -blpdata  
-qipa=threads

## Base Other Flags

C benchmarks:  
-bmaxdata:0x50000000 -qalias=noansi -qsuppress=1500-036

C++ benchmarks:  
-bmaxdata:0x20000000 -qsuppress=1500-036

## Peak Compiler Invocation

C benchmarks:  
/usr/vac/bin/xlc

C++ benchmarks:  
/usr/vacpp/bin/xlc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_AIX  
462.libquantum: -DSPEC\_CPU\_AIX  
464.h264ref: -DSPEC\_CPU\_AIX -qchars=signed  
483.xalancbmk: -DSPEC\_CPU\_AIX



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Bull SAS**

**SPECint\_rate2006 = 53.3**

**Bull Escala PL450R+ (2100 MHz, 4 CPU)**

**SPECint\_rate\_base2006 = 47.9**

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

**Test date:** Jan-2007  
**Hardware Availability:** Feb-2006  
**Software Availability:** Dec-2006

## Peak Optimization Flags

C benchmarks:

400.perlbench: -qlanglvl=extc99 -qpdf1(pass 1) -qpdf2(pass 2) -O5  
-qlargepage -D\_ILS\_MACROS -qipa=noobject -blpdata  
-qipa=threads

401.bzip2: Same as 400.perlbench

403.gcc: -qlanglvl=extc99 -qpdf1(pass 1) -qpdf2(pass 2) -O5  
-qlargepage -D\_ILS\_MACROS -qalloca -qipa=noobject  
-blpdata -qipa=threads

429.mcf: -qlanglvl=extc99 -O5 -qlargepage -D\_ILS\_MACROS  
-qarch=pwr4 -qipa=noobject -blpdata -qipa=threads

445.gobmk: -qlanglvl=extc99 -qpdf1(pass 1) -qpdf2(pass 2) -O4  
-qlargepage -D\_ILS\_MACROS -qipa=noobject -blpdata  
-qipa=threads

456.hmmer: -qlanglvl=extc99 -O4 -qlargepage -D\_ILS\_MACROS  
-qipa=noobject -blpdata -qipa=threads

458.sjeng: Same as 445.gobmk

462.libquantum: -qlanglvl=extc99 -qpdf1(pass 1) -qpdf2(pass 2) -O4  
-qlargepage -D\_ILS\_MACROS -q64 -qipa=noobject -blpdata  
-qipa=threads

464.h264ref: Same as 400.perlbench

C++ benchmarks:

471.omnetpp: -qpdf1(pass 1) -qpdf2(pass 2) -O5 -qlargepage  
-D\_ILS\_MACROS -qalign=natural -qrtti=all  
-D\_\_IBM\_FAST\_VECTOR -qipa=noobject -blpdata -qipa=threads

473.astar: -qpdf1(pass 1) -qpdf2(pass 2) -O5 -qlargepage  
-D\_ILS\_MACROS -D\_\_IBM\_ENABLE\_POOLED\_ALLOCATORS\_\_  
-qipa=noobject -blpdata -qipa=threads

483.xalancbmk: Same as 473.astar

## Peak Other Flags

C benchmarks (except as noted below):  
-qfdpr -qsuppress=1500-036

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Bull SAS**

**SPECint\_rate2006 = 53.3**

**Bull Escala PL450R+ (2100 MHz, 4 CPU)**

**SPECint\_rate\_base2006 = 47.9**

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

**Test date:** Jan-2007  
**Hardware Availability:** Feb-2006  
**Software Availability:** Dec-2006

## Peak Other Flags (Continued)

400.perlbench: -bmaxdata:0x50000000 -qalias=noansi -qsuppress=1500-036

401.bzip2: -bmaxdata:0x50000000 -qsuppress=1500-036

403.gcc: -bmaxdata:0x50000000 -qsuppress=1500-036

429.mcf: -bmaxdata:0x50000000 -qfdpr -qsuppress=1500-036

458.sjeng: -qsuppress=1500-036

464.h264ref: -qsuppress=1500-036

C++ benchmarks:  
-bmaxdata:0x20000000 -qsuppress=1500-036

The flags file that was used to format this result can be browsed at

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090715.15.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.15.html)

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090715.15.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.15.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 10:51:43 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 21 February 2007.