



SPEC[®] CINT2006 Result

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Bull SAS

SPECint[®]2006 = 13.2

Bull Escala PL1650R+ (2200 MHz, 1 CPU)

SPECint_base2006 = 10.5

CPU2006 license: 20

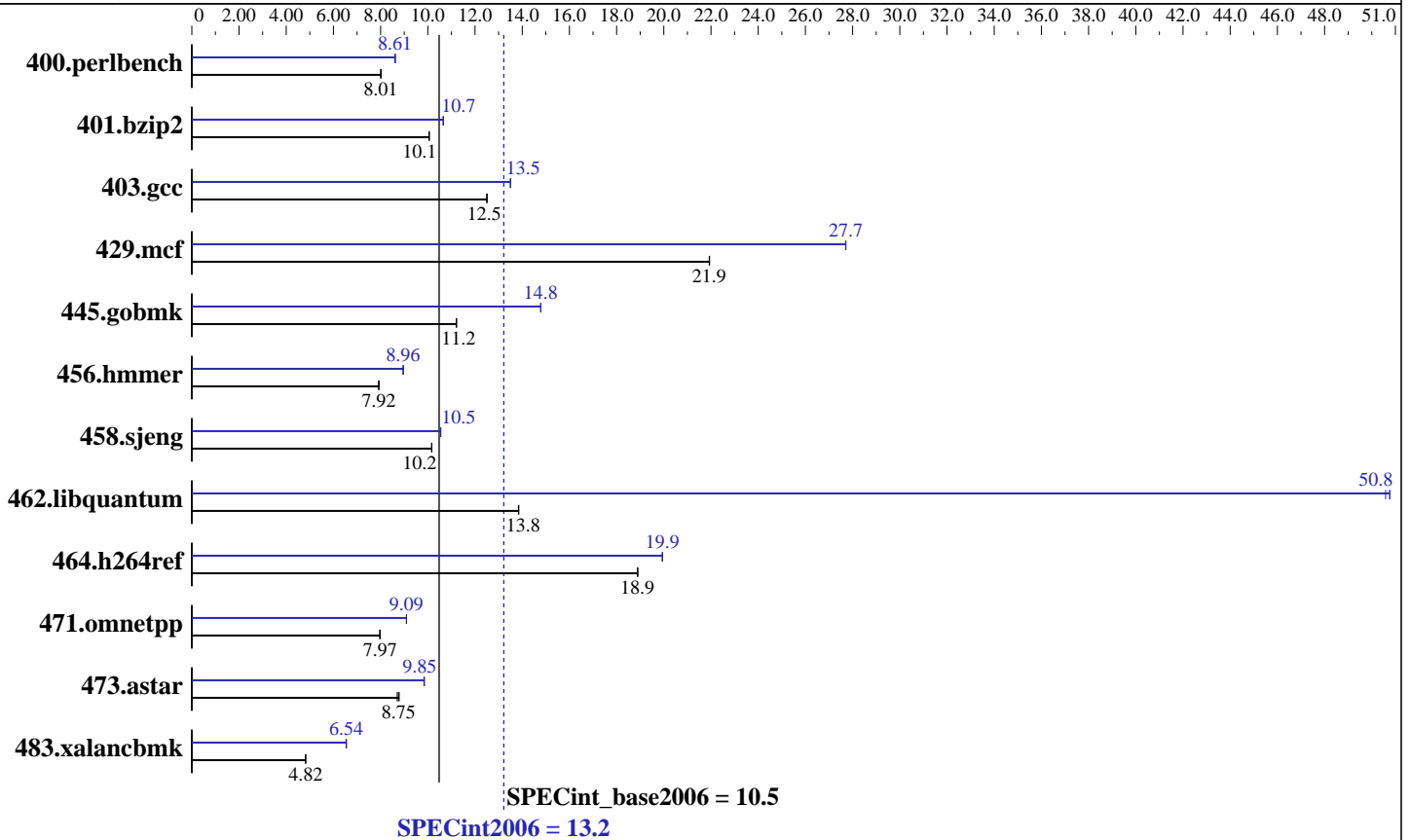
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Feb-2007

Hardware Availability: Feb-2006

Software Availability: Dec-2006



Hardware

CPU Name: POWER5+
 CPU Characteristics:
 CPU MHz: 2200
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip
 CPU(s) orderable: 2, 4, 6, 8 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: 128 GB (32x4 GB)
 Disk Subsystem: 1x73 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



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	1220	8.01	1218	8.02	1220	8.01	1134	8.61	1132	8.63	1135	8.60
401.bzip2	960	10.1	960	10.1	960	10.1	905	10.7	905	10.7	907	10.6
403.gcc	644	12.5	644	12.5	644	12.5	596	13.5	596	13.5	596	13.5
429.mcf	416	21.9	416	21.9	416	21.9	329	27.7	329	27.7	329	27.7
445.gobmk	936	11.2	935	11.2	936	11.2	709	14.8	710	14.8	709	14.8
456.hammer	1178	7.92	1177	7.93	1177	7.92	1042	8.96	1041	8.96	1041	8.96
458.sjeng	1190	10.2	1190	10.2	1190	10.2	1147	10.5	1147	10.5	1147	10.5
462.libquantum	1496	13.9	1497	13.8	1496	13.8	408	50.8	410	50.6	408	50.8
464.h264ref	1172	18.9	1172	18.9	1171	18.9	1109	20.0	1110	19.9	1110	19.9
471.omnetpp	784	7.97	784	7.97	784	7.97	687	9.09	687	9.10	687	9.09
473.astar	799	8.79	802	8.75	807	8.70	713	9.85	713	9.85	714	9.84
483.xalancbmk	1432	4.82	1430	4.82	1431	4.82	1055	6.54	1056	6.54	1053	6.55

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

Operating System Notes

```
ulimits set to unlimited
```

```
Large page mode was set as follows:
vmo -r -o lpgg_regions=800 -o lpgg_size=16777216
15 cores were deconfigured and SMT disabled using the AIX commands
smtctl -m off -w boot
bosboot -aD
shutdown -rF
drmgr -r -c cpu (15 times)
```

Base Compiler Invocation

C benchmarks:
/usr/vac/bin/xlc

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



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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
```



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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

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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

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.15.xml

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