SPEC® CINT2006 Result

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Bull SAS

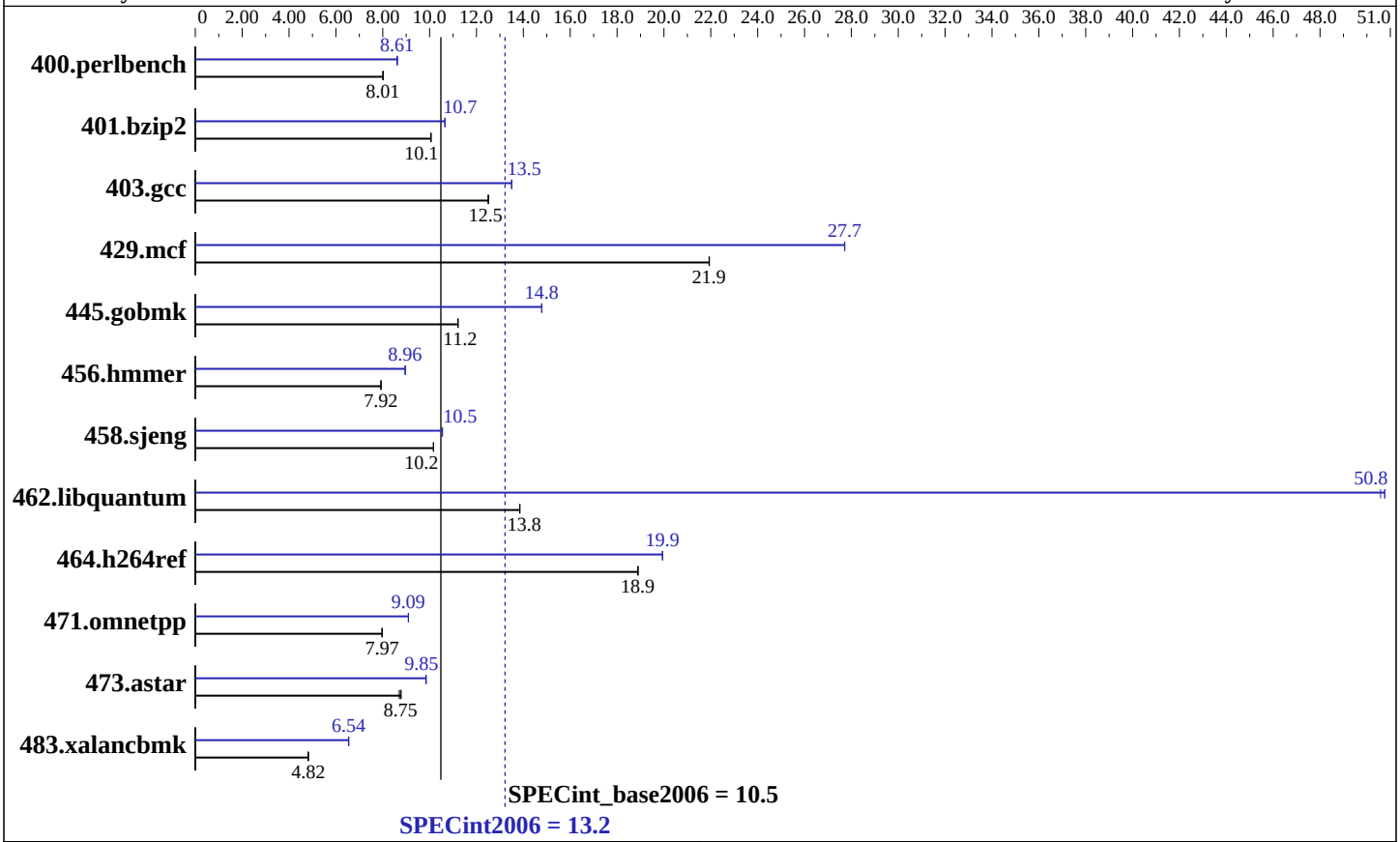
Bull Escala PL1650R+ (2200 MHz, 1 CPU)

SPECint®2006 = 13.2

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.hmmer	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 lgpg_regions=800 -o lgpg_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
```

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

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

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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