



SPEC® CINT2006 Result

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Bull SAS

SPECint®_rate2006 = 26.9

Bull Escala PL250R+ (2100 MHz, 2 CPU)

SPECint_rate_base2006 = 24.1

CPU2006 license: 20

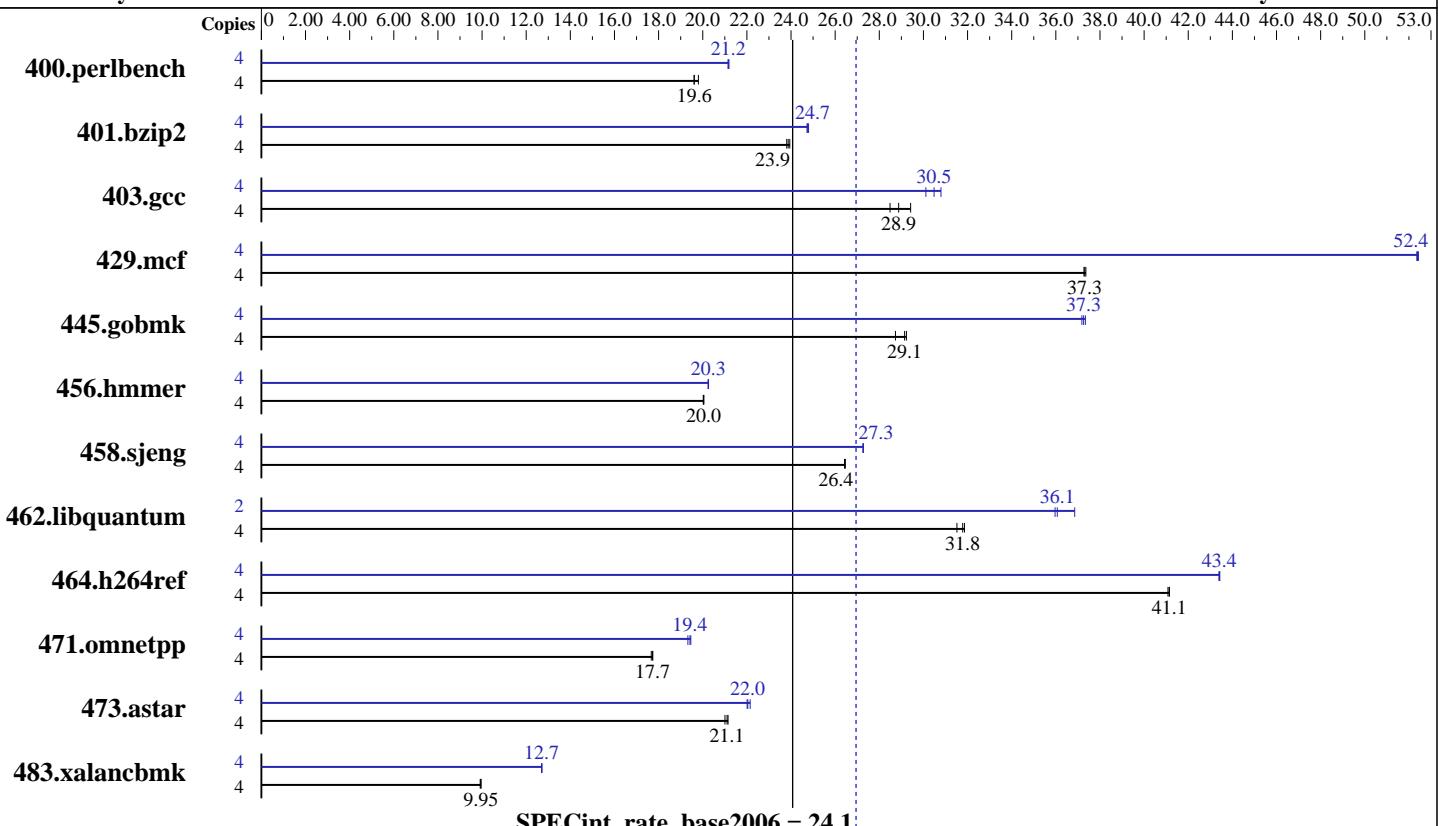
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Feb-2007

Hardware Availability: Feb-2006

Software Availability: Dec-2006



Hardware		Software	
CPU Name:	POWER5+	Operating System:	AIX 5L V5.3
CPU Characteristics:		Compiler:	XL C/C++ Enterprise Edition Version 8.0 for AIX with the December 2006 PTF
CPU MHz:	2100		XL Fortran Enterprise Edition Version 10.1 for AIX with the November 2006 PTF
FPU:	Integrated	Auto Parallel:	No
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip, 2 threads/core	File System:	AIX/JFS2
CPU(s) orderable:	1 chip	System State:	Multi-user
Primary Cache:	64 KB I + 32 KB D on chip per core	Base Pointers:	32-bit
Secondary Cache:	1920 KB I+D on chip per chip	Peak Pointers:	32/64-bit
L3 Cache:	36 MB I+D off chip per chip	Other Software:	ESSL 4.2.0.4
Other Cache:	None		
Memory:	32 GB (8x4 GB)		
Disk Subsystem:	1x73 GB SCSI, 15K RPM		
Other Hardware:	None		



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	1993	19.6	1992	19.6	1974	19.8	4	1844	21.2	1847	21.2	1848	21.1
401.bzip2	4	1617	23.9	1612	23.9	1622	23.8	4	1557	24.8	1561	24.7	1560	24.7
403.gcc	4	1094	29.4	1115	28.9	1130	28.5	4	1056	30.5	1046	30.8	1069	30.1
429.mcf	4	976	37.4	979	37.3	978	37.3	4	696	52.4	696	52.4	697	52.4
445.gobmk	4	1440	29.1	1460	28.7	1436	29.2	4	1129	37.2	1124	37.3	1126	37.3
456.hammer	4	1862	20.0	1864	20.0	1861	20.1	4	1844	20.2	1843	20.3	1842	20.3
458.sjeng	4	1830	26.4	1831	26.4	1830	26.5	4	1775	27.3	1775	27.3	1774	27.3
462.libquantum	4	2601	31.9	2608	31.8	2630	31.5	2	1124	36.9	1149	36.1	1152	36.0
464.h264ref	4	2155	41.1	2151	41.1	2152	41.1	4	2038	43.4	2039	43.4	2040	43.4
471.omnetpp	4	1410	17.7	1410	17.7	1415	17.7	4	1285	19.5	1294	19.3	1287	19.4
473.astar	4	1328	21.1	1331	21.1	1337	21.0	4	1276	22.0	1268	22.1	1274	22.0
483.xalancbmk	4	2775	9.95	2773	9.95	2783	9.92	4	2174	12.7	2172	12.7	2172	12.7

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 lgpg_regions=900 -o lgpg_size=16777216
SMT was enabled using the AIX commands
smctl -m on -w boot
bosboot -ad
shutdown -rf

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 -qalloc -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.20090715.19.html

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.19.xml

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For other inquiries, please contact webmaster@spec.org.

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